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FOREWORD

The 2010 Annual Communicating Nursing Research Conference title began a focus on the role nursing science plays in informing practice and driving policy. This year, we are advancing that focus with the theme, "Transitions: Unifying Practice, Education and Research to Improve Health".

The recently released IOM Report, "The Future of Nursing: Leading Change, Advancing Health" clearly calls on the nursing profession to serve a leadership role in practice, education, research – and policy. The national health care reform legislation is a year old and in initial implementation. This legislation provides opportunities for nursing to demonstrate leadership and contribute to improving the health care system, particularly because nursing is not only the largest health profession, but we have an unique view of the health care system. We are the only providers who exist in every social institution and who are with patients 24 hours/day. Nursing has the knowledge, research and will to make a difference.

In the pages of these proceedings, a number of suggestions have been made about ways to unify practice, education and research to improve health and to effect policy changes. The proceedings reveal that nurses have taken action at the institutional, state and national levels to make a difference in health outcomes. Nurses and nursing can, and do, make a difference in improving health through practice, education, research and good policy!

Paula McNeil, RN, MS
Executive Director
March 2011

PREFACE

The 44th Annual Communicating Nursing Research Conference, "Transitions: Unifying Practice, Education, and Research to Improve Health," was held April 13-16, 2011 at the Rio All-Suites Hotel, Las Vegas, Nevada. Following is a description of the contents of these proceedings.

The plenary sessions focused on the development and integration of nursing science into practice and policy. The keynote speech was made by **Michael Bleich**, PhD, RN, FAAN, Dean and Carol A. Lindeman Distinguished Professor, School of Nursing, Oregon Health & Science University, Portland, Oregon. Three State of the Science presentations were made by: **Amy J. Barton**, PhD, RN, FAAN, Professor and Associate Dean for Clinical and Community Affairs, University of Colorado College of Nursing, Aurora, Colorado; **Nancy Staggers**, PhD, RN, FAAN, Professor, Organizational Systems and Adult Health, School of Nursing, University of Maryland, Baltimore, MD; and **Joyce A. Verran**, PhD, RN, Professor Emerita of Nursing, Research Professor, College of Nursing, The University of Arizona, Tucson, Arizona and Professor, University of Colorado College of Nursing, Aurora, Colorado.

Two award papers were presented:

- **Distinguished Research Lectureship Award: Bernadette A. Melnyk**, PhD, RN, CPNP/PMHNP, FNAP, FAAN, Dean and Distinguished Foundation Professor in Nursing, College of Nursing & Health Innovation, Arizona State University, Phoenix, Arizona; and
- **Carol A. Lindeman Award for a New Researcher: Connie Kim Yen Nguyen-Truong**, BSN, RN, PCCN, PhD Candidate, School of Nursing, Oregon Health & Science University, Portland, Oregon.

The **Western Academy of Nurses** panel focused on the Institute of Medicine report, "The Future of Nursing: Leading Change, Advancing Health" from the perspective of the California Regional Action Coalition (CA-RAC). Speakers included: **Heather M. Young**, PhD, RN, FAAN, Associate Vice Chancellor for Nursing, UC Health System and Dean – Betty Irene Moore School of Nursing, University of California Davis Health System, Sacramento, California; **Casey R. Shillam**, PhD, RN-BC, Postdoctoral Fellow, Betty Irene Moore School of Nursing, University of California Davis Health System, Sacramento, CA; and **Nancy E. Donaldson**, RN, DNSc, FAAN, Clinical Professor, School of Nursing, University of California San Francisco, San Francisco, California.

The Proceedings include the abstracts of symposium, podium, and poster presentations. One hundred eighty-five papers were presented in podium sessions on a wide variety of topics, including completed research, theoretical papers, and projects. Ninety-nine papers were presented in twenty symposia, and eighty-six papers were organized in eighteen other concurrent sessions. Two hundred and twenty posters were exhibited in four poster sessions, and represented research, completed or in progress, and projects. In addition, a total of one hundred thirty-two posters were submitted for the Research & Information Exchange by students from member schools and by nurses from member health care agencies.

Awards were given to eight WIN individual and agency members during the 2011 conference. Please consult the Table of Contents for the location of the aforementioned papers, the list of awardees honored by WIN, and the name and subject indexes.

The conference was planned and organized by the WIN Program Committee. The 2011 committee identified speakers and topics to address the ways in which practice, education and research unify to inform transitions in care and improve health in the Western region. The committee has created a stimulating program. We make special recognition of, and extend our gratitude to the Program Committee members: Marie Lobo, Chair, NM; Judith Berg, AZ/CA; Doris Boutain, WA; Lauren Clark, UT; Tina DeLapp, AK; Marie Driever, OR/WA; Anne Marie Kotzer, CO; Martha Lentz, WA; Lori Loan, WA; Barbara Mandleco, UT; Jan Schultz, HI; Donna Velasquez, AZ; and Karen Zulkowski, MT. The Committee deeply appreciated the participation of Julie Johnson, UT and WIN Secretary-Treasurer in its November, 2010 deliberations.

We extend special appreciation to:

Michael Bleich, Dean, Oregon Health & Science University (OHSU) School of Nursing, for his support of WIN;

Elizabeth Woods, MA, MSLS, who created the name and subject indexes for the proceedings;

Amy Tomlinson, Graphic Designer; and

Charlotte Woodward, Graphic Designer.

We extend our gratitude to the WIN Executive Director, Paula McNeil, and her staff, Bo Perry, Conference Manager, and Hillary Panzer, Administrative Coordinator, for their work in bringing the Committee's plans to reality. Finally, we thank all the nurse researchers across the West and from other parts of the country and world who submitted papers, and all who participated in the 2011 conference.

The 44th Annual Communicating Nursing Research Conference provided an opportunity to focus on the many ways that the work of nurse researchers, educators, practitioners and interdisciplinary colleagues unifies practice, education and research to improve care.

Marie J. Driever, PhD, RN, President
Western Institute of Nursing

Marie Lobo, PhD, RN, FAAN, Chair
WIN Program Committee

Keynote Presentation

THE RESEARCH IMPERATIVE AND THE IOM FUTURE OF NURSING: STRENGTHENING NURSING'S CONTRIBUTION TO LEADING CHANGE AND ADVANCING HEALTH

Michael R. Bleich, PhD, RN, FAAN
Dean and Dr. Carol A. Lindeman Vice Provost for Interprofessional Education and Development Professor of Nursing
Oregon Health & Science University
Portland, OR

THE RESEARCH IMPERATIVE AND THE IOM FUTURE OF NURSING: STRENGTHENING NURSING'S CONTRIBUTIONS TO LEADING CHANGE AND ADVANCING HEALTH

Michael R. Bleich, PhD, RN, FAAN
Dean and Dr. Carol A. Lindeman Professor of Nursing
Vice Provost for Interprofessional Education and Development
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Portland, OR

Nursing's collective science has come of age. Four regional research societies now exist, exemplified by the Western Institute of Nursing (WIN). In 2000, the Council for Advancement of Nursing Science came on the scene to be a strong voice for nursing science. In addition, most non-research-oriented nursing specialty organizations promote and advance a research agenda, not only in clinical science but also in support of educational, organizational, and policy-derived research. Program evaluation research has also played a critical, but often unsung role, contributing to outcomes that reflect intentional innovation and change within care delivery models. It is this collective of research and science that formed the foundation for the first comprehensive and evidence-based report on nursing.

Complementing our success in research, the dissemination of research findings has also matured. Dissemination outlets now extend beyond journal publications and translational research is slowly making headway in lay literature. The social media, particularly those with search engines, are useful in connecting information seekers with critical research findings. While some academics may spurn less traditional dissemination methods, discriminating professionals acknowledge the fact that there has never been a better time to get critical information to the field. This is the *research* context under which the Robert Wood Johnson Foundation approached the Institute of Medicine (IOM) to examine the future of nursing.

The *social* context is even more powerful. Health reform is underway, there are marked changes in the nation's population demographics and nurses continue to grow in numbers, remaining the largest segment of the healthcare workforce. Nurses know the trilogy of concerns: limited access to care by a growing number of citizens, national concern for the cost of care, and a demand for quality care for those fortunate enough to receive it. For these reasons, along with the gravitas of the IOM, I find it to the public's good and to the nursing discipline's benefit in fulfilling our social contract that the IOM report, *The Future of Nursing: Leading Change, Advancing Health* (2011) was undertaken. To have been a part of the process was a career highlight and a milestone, for which I am both grateful and I am humbled to have experienced.

The National Academies are composed of four organizations: the National Academy of Sciences, the National Academy of Engineering, the National Research Council, and the Institute of Medicine, the youngest of the four, founded in 1970. Currently more than 1800 members from varied health care disciplines volunteer their expertise to help meet the IOM's mission of advancing the nation's health. As stated on the IOM's

website, the IOM

> . . . take[s] our missions very seriously, and in all our work, we seek to make a real difference in the world. We do not shy away from making honest calls and from demanding the most from our leaders. We provide information to decision makers so that they can change regulation or policy and to other influential groups who can change behavior, all aimed eventually at improving health. Through the actions of government and other organizations, our work has a large impact on the health of the nation and the world (Institute of Medicine, 2011).

What gives the IOM credibility is that what is written and recommended in a study is based on a rigorous *research* process composed of balanced, non-partisan ,and non-provincial expertise, and independent consensus-derived findings. While public input is sought and even encouraged, the committees deliberate in private to minimize external influences. As a final check for objectivity, all IOM report findings undergo an independent external review by a second, independent group of experts whose comments are fed back to the committee members. So when I state that our collective science has come of age, it is a testament to the depth and breadth of our research that I make that proclamation. Our science has evolved through the work of WIN and its members and the other research societies. Each of you who have conducted, disseminated, and implemented research findings should celebrate being in a community of scholars that marks this milestone.

As you can imagine, it was an incredibly complex task to capture the essence of nursing given the rich tapestry of where and how we serve the public, where and how we prepare competent nurses, and where and how we lead and influence innovation in health delivery. To write a compelling report, our committee seriously studied the impact of previous IOM reports – with an aim that this particular report would endure in its usefulness. To this end, we knew that we could not have a limitless number of messages and recommendations. Borrowing from Maeda's *The Laws of Simplicity* (2006), weaving consensus out of mountains of evidence and transforming evidence into simple, cohesive and memorable messages and recommendations was critical to building stakeholder trust and a passion to act. With this in mind, let's re-examine *The Future of Nursing: Leading Change, Advancing Health* (2011) report's focus and the simplicity of the key messages and the recommendations:

Key Messages (p. 4)

1. Nurses should practice to the full extent of their education and training.
2. Nurses should achieve higher levels of education and training through an improved education system that promotes seamless academic progression.
3. Nurses should be full partners, with physicians and other health professionals, in redesigning healthcare in the United States.
4. Effective workforce planning and policy making require better data collection and an improved information infrastructure.

Recommendations (pp. 4-15)

1. Remove scope-of-practice barriers.
2. Expand opportunities for nurses to lead and diffuse collaborative improvement efforts.
3. Implement nurse residency programs.
4. Increase the proportion of nurses with a baccalaureate degree to 80% by 2020.
5. Double the number of nurses with a doctorate by 2020.

6. Ensure that nurses engage in lifelong learning.
7. Prepare and enable nurses to lead change to advance health.
8. Build an infrastructure for the collection and analysis of inter-professional health care workforce data.

How do these messages and recommendations speak to researchers and nurse scientists? Are there deeper messages that underlie the research agenda that have been set forth? I suggest that the research community, like those in teaching and in service, should attend to the depth and breadth of the IOM's language as well as what is obvious. What follows are examples.

Practicing to the Full Extent of Education and Training

Much has been heralded about the scope of practice recommendation linking it to Advanced Practice Registered Nurses (APRNs). The public case for the attention to APRNs relates to the political constraints placed upon APRNs as they cross state lines regardless of the comparably high level of education and training that they receive. The IOM studied the evidence and the results reveal that APRNs provide safe, quality, and efficient primary care but are politically constrained in using their knowledge.

I would point out that scope of practice is not restricted to APRNs – but is relevant to other health professions roles, including physicians. For instance, hospitals can restrict nursing by being overly zealous in building care policies and procedures and clinical algorithms to accommodate the "weakest link." How would hospital nursing be different if care models were driven by the *optimum* level of care that our most expert nurse clinicians could deliver? Or, that variability could exist to accommodate a range of clinician knowledge, skill, and ability? The *Checklist Manifesto,* a recent publication by surgeon Gawande (2009), reflects a strong orientation to ensure safe and efficient care through the use of checklist cues. But this is based on an assumption that all care is linear and sequential and that care can always be designed to cue practitioners. In nursing, care has *both* linear and non-linear dimensions to it. Tailored care and an ability to enact care at an optimal level would unleash the kind of human capital that we only catch glimpses of in times when disaster conditions unleash optimal human performance such as the bombing of the World Trade Center, Hurricane Katrina, and the Japanese tsunami. I suggest that insuring an additional 32 million individuals will create a healthcare tsunami where we must live in a constant mode of functioning to our capacity.

What constraints exist on nurse researchers and scientists? This is a serious question. We know that many who hold the PhD are dormant in conducting research, in spite of their preparation. How do we call these individuals back to science or inquiry? How do academic institutions allow for flexibility and innovation in a researcher's career? Models that suggest that researchers need "protected time" are well intentioned, but also, paradoxically, they create a restriction on what is needed to model creativity and to expand skills.

Gibbons (1999) wrote in *Science's New Social Contract with Society* that the relationship between science and society has changed, from one where science was accountable for producing "reliable knowledge that . . . communicates discoveries to society" to a new contract that ensures that "scientific knowledge is 'socially robust,' and that its production is seen by society to be both transparent and participative"

(p. 11). Gibbons discussed the idea that four inter-related processes are needed in this new model: co-evolution, contextualization, the production of socially robust knowledge, and the construction of narratives of expertise. It is in this spirit that I offer two examples where individuals with a research doctorate are needed to stretch boundaries – quality science and the emerging field of analytics.

Nursing once led the field of quality science, but it is surprising that academics possess an arrested mental model of quality science at the level of an "audit" orientation and the tie in to informatics is narrowly defined as computer technology applications. I risk when I say this, because it is a generalization. But in my experience, it is only with the advent of the clinical nurse leader and the doctor of nursing practice (DNP) that there is a resumed sense of leadership *in the practice setting* where quality science manifests itself at the point of care. The application of quality science includes improving micro-, meso-, and macro-systems and the use of statistical process control and other analytic tools to *iteratively drill down* until high standards of care are met. At the point of care, informal hypotheses are tested, variables cannot be controlled for, and care practices may or may not produce intended results. This environment has not been the playing field for our PhD-prepared nurses and that is noticeable.

Similarly the field of analytics is growing. Davenport and Harris (2007) stated, "By analytics we mean the extensive use of data, statistical and qualitative analysis, explanatory and predictive models, and fact-base management to drive decisions and actions" (p. 7). Just the definition begs the question, "Who in nursing would *best* be able to take a leadership seat at an organizational table to move an organization toward excellence?" In this case, I don't mean just *any* organization, but those with a social mandate to deliver healthcare. Who possesses the statistical knowledge that includes modeling skills, coupled with clinical knowledge, and an ability to contextualize clinical and business operations? *It would have to be a PhD-prepared nurse.* In practice settings of the recent past, lesser-prepared individuals were adequate to perform decision-science tasks. These tasks were oriented to justifying care retrospectively, or preparing an occasional ad hoc report, or conducting a "drill down" surrounding a sentinel event. The underlying assumption was that nursing had to justify its actions and most computer systems were oriented as data collection devices for capturing data to justify payments, staffing, and errors.

Contrast this to what is needed in a reformed health system with more robust information systems, and the kinds of PhD-level expertise that is needed to answer questions becomes apparent:

- Why is this happening? (forecasting and extrapolating what will shape decision-making)
- What if these trends continue? (creating predictive modeling that will inform administrators and clinicians)
- What happens next?
- What's the best that can happen?

It is these last four areas that outline the field of analytics. Researchers, we need you, if not to enter the organizational decision-making arena, then to prepare a new kind

of researcher that will engage with other organizational, statistical, and complexity scientists to shape our clinical care delivery systems toward the goal of *informed excellence.* If this happens, then the link to key message three and recommendation seven can occur: nurses can be full partners in reforming the health system. Perhaps, it would be nurses who would lead reform. But without quality, analytic, and complexity science knowledge (which deals with nonlinearity), we won't be able to achieve what the public needs us to do.

Effective Workforce Planning and Policy Making

Perhaps no area needs a stronger base of science than that of workforce planning. Who will be the next generation to follow Peter Buerhaus, Linda Aiken, and Jack Needleman? At first glance, workforce data would appear to be about survey research on the existing workforce. Not true. In the downturn of our economy, we have all become starkly aware that many variables can suddenly affect the supply and demand of nurses and other health professionals. Workforce planning requires attention to any number of critical variables: economic patterns; shifting demographics – such as those associated with aging; the role of technology in adding or reducing clinical practice and decision-science complexities; regional variations; and shifting competencies required to provide safe and effective care. To put it bluntly, whether clinical discoveries even make it into the care system is influenced by workforce – and workplace dynamics.

One of my personal nurse heroes, and I'm sure I am not alone, is Mary Naylor. Dr. Naylor's work has a clinical basis, but it ties directly to the workforce availability and testing of the APRN role, and it goes beyond that. Mary is known on Capitol Hill in Washington, a rarity in nursing, because she has elevated clinical research to drive healthcare policy. We need to study her career and research trajectory, thought processes, and lived experiences so that we can replicate movement within the practice – workforce – policy triad. This triad will define the work of nurse scientists in the next quarter century.

The practice – workforce – policy triad brings us to the field of knowledge management. No longer are the results of research stand-alone initiatives – even when linked by technology for easy access. Researchers must appreciate their work as part of the organizational value chain; where knowledge is what creates a return on investment (ROI) and is a tangible organizational asset from which not only patients benefit, but also the organization itself, or collaborative intra-organizational assets are realized. Allee (2002) wrote that business and economic models are based on old thinking. She noted that knowledge – and research is a knowledge-generating proposition – is "slippery and connected to everything; it multiplies and replicates faster than rabbits" (Higgison & Allee, 2011, p. X). This is a remarkably different way of seeing research utilized and many nursing researchers may struggle with the idea that research is linked to organizational value chains. Knowledge is powerful and brings specific value to innovation. Why can't nursing research be viewed through this powerful lens?

Leading Change to Advance Health

Although the researcher typically is not an organizational change agent, with some exceptions, there are specific contributions that the PhD-prepared researcher can make to accelerate change. PhD researchers benefit through partnerships with

organizational change agents. Early in my nursing administration career, I formed a special bond working with an oncology nurse scientist from the University of Wisconsin – Milwaukee. I helped review her grants and wrote support letters for funding and together we talked about how her work translated to inform our clinical practice. This was a relationship that was mutually meaningful and genuine. Another researcher spent time examining our quality improvement projects, which ultimately led to theory-developing research. As a nursing administrator, I benefitted first-hand from this unique synergy and how it directly influenced care.

Most research manuscripts fail to adequately discuss several critical areas. If I could wave a wand over all research journals, I would require manuscripts to include making explicit:

- What the public utility of the research is *now*, including the anticipated vision of research plans.
- What the reported study findings can contribute to practice *today.*
- What entrepreneurial aspects of the research could be applied to the market *today.*
- A lay description of the value contribution of the work.

I offer this, because all too often the researcher's aim is to get to the next level of funding, or to get to the next study. Nurse researchers tend to sit on valuable information, with tepid confidence that what has already been discovered has merit or "is good enough." If we are going to lead change, advance health, and keep our social contract, we must refrain from hoarding critical findings or harboring an attitude that research is only for the sake of research. As nurse researchers and scientists, we must give voice to our work and improve our messaging and dissemination skills to a broader public.

The Last Chapter – Research Recommendations from the IOM

In an upcoming editorial for *Research in Nursing and Health* (in press), I comment on the importance of the last chapter in the IOM *Future of Nursing* report. Whereas other IOM reports may have set aside important topics or areas of concern for which there was inadequate evidence (recall that the IOM can only narrate and recommend based on evidence), I am proud that we tracked areas where insufficient evidence existed. For researchers, this last chapter is rich in the direction it sets for the future of nursing research. In the editorial, I comment thus:

> Chapter 7 of the IOM report, "Recommendations and Research Priorities," merits the attention of the nursing scientific community. Whereas many nurse scientists and researchers have a dedicated focus on clinical research – *much* needed in light of concerns for quality, safety, aging, chronicity, and other clinical concerns – the priorities identified in this chapter reflect an *expanded* research agenda where too few researchers focus attention: transforming nursing practice models, enhancing nursing education, and influencing nursing leadership. As a committee member, I realized first-hand the importance of these subjects as linkages for the realization and application of clinical research. If nursing practice environments are needlessly complicated, then time and attention on the implementation of clinical research findings will be stymied. If we have insufficient knowledge about

pedagogical strategies that enhance learning, then we waste critical resources in the efficient delivery of education – learners who comprise our research pipeline. If we fail to examine the complexities of leadership and its impact on patient care, systems, and education, then our science and influence are not delivered or valued in settings where nursing should be at the table. If we can accept this broader research portfolio – and I suggest it is imperative to do so – then we hold the potential to draw in nurses who have these interests. And, we do not need to do this alone. The expanded next generation of nurse scientists can build on the work of inter-professional organizational, complexity, informatics, and systems scientists.

I call for all researchers to go to the Robert Wood Johnson foundation website and read Chapter 7 with a careful eye. For our discipline to expand, we need your expertise and action on this research agenda. I'd like to conclude with these summarizing statements:

- Never doubt that the research done by nurses is of high quality and great value.
- The IOM report on the *Future of Nursing* manifests our discipline's growth, depth, and breadth.
- The future will require robust clinical research – inter-professional and high impact.
- The future will require that clinical researchers expand their practice partnerships to generate dissemination and change at a faster pace than we know today.
- The future will require researchers to expand the use of their knowledge, skills, and abilities into emerging fields of decision-science, informatics, and analytics. But we also need evaluation research to be more front and center to inform policy, education, and clinical model review.
- The future will require new paradigms to emerge, such as through a complexity science lens.
- The future will require new ways of preparing doctoral students, with courses that encompass organizational dynamics; linear and non-linear change dynamics; and entrepreneurial aspects tied to professional formation.
- More doctoral graduates are needed, so the baccalaureate pipeline is critical to the expanded educational preparation.
- This is a time for researchers to lead the broader nursing community, research, and practice settings and for inspired forward movement!

Author Note

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State of the Science Paper

QUALITY AND SAFETY COMPETENCIES IN NURSING EDUCATION: STATE OF THE SCIENCE

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QUALITY AND SAFETY COMPETENCIES IN NURSING EDUCATION: STATE OF THE SCIENCE

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The purpose of this paper is to provide a systematic review of research evaluating incorporation of curricular content concerning quality improvement and patient safety in nursing education. The paper is modeled after a similar review of medical education research by Wong and colleagues (2010).

The quality chasm reports created by the Institute of Medicine drew attention to the high occurrence of medical error (Kohn, Corrigan, and Donaldson, 2000) and the need to enhance work in providing safe, effective, patient-centered, timely, efficient, and equitable care (IOM, 2001). In order to change health systems, however, the health professions workforce must be educated to achieve competence in providing patient-centered care, working in interdisciplinary teams, employing evidence-based practice, applying quality improvement, and using informatics (Greiner and Knebel, 2003). Ten years after the seminal report, one would expect a dramatic improvement in patient safety. However, significant gaps remain (Landrigan, Parry, Bones, Hackbarth, Goldmann, & Sharek, 2010).

This foundation set the stage for the Quality and Safety Education for Nurses (QSEN) initiative, funded by the Robert Wood Johnson Foundation and led by Linda Cronenwett and colleagues. Phase I of the QSEN initiative occurred between October 2005 and March 2007 (Cronenwett, Sherwood, Barnsteiner, Disch, Johnson, Mitchell, et al., 2007) involved defining competencies for the 2003 IOM report and created knowledge, skill, and attitude elements for each. In addition, program directors, faculty, and students were surveyed using various techniques in order to determine how quality and safety competencies were taught within nursing programs. While deans and directors reported that quality and safety were being taught in their programs, results of a student focus group indicated that not only was content not presented, but they doubted the ability of their faculty to teach the content. Further, faculty "did not understand fundamental concepts related to the [QSEN] competencies and could not identify pedagogical strategies for use in teaching" (Smith, Cronenwett, & Sherwood, 2007, p. 136). The results of this prompted a move to reframe the focus of clinical nursing education to move from traditional nursing knowledge to systems knowledge.

In Phase II of the QSEN initiative, 15 schools representing diploma, associate degree, and baccalaureate degree programs from across the U.S. were selected to participate in a learning collaborative to facilitate integration of competencies and teaching strategies in nursing curricula (Cronenwett, Sherwood, & Gelmon, 2009). Faculty from these schools created innovative learning activities for classroom, skills and simulation labs, as well as clinical practicum and contributed these strategies to the QSEN website (www.qsen.org) for further dissemination.

During Phase III, which began in February 2009 and continues through February 2012, AACN joined the dissemination efforts to provide 10 regional train-the-trainer faculty development workshops. Members of the original project team continue to develop

learning activities, web-based resources, and contribute to research efforts to advance the adoption of QSEN competencies across nursing programs. The goals of Phase III are to:

- Continue to promote innovation in the development and evaluation of methods to elicit and assess student learning of KSA (Knowledge, Skills and Attitudes) of the six IOM/QSEN competencies and the widespread sharing of these competencies;
- Develop faculty expertise necessary to assist the learning and assessment of achievement of quality and safety competencies in all types of nursing programs;
- Create mechanisms to sustain the will to change among all programs through the content of textbooks, accreditation and certification standards, licensure exams and continued competence requirements (http://www.qsen.org/overview.php).

The purpose of this review is to report on research published since the call to action from IOM and identify curricular innovations that have occurred in nursing education as a result.

Method

Literature search

Medline and CINAHL databases were searched for English-language articles that appeared in the literature beginning in January 2000 through August 2010. This timeframe was selected since it coincided with release of the IOM report, "To Err is Human." The search strategies used key subject headings of quality and safety and their derivatives (such as quality management and safety management) along with nursing education and curriculum. Since this review targeted nursing education within schools of nursing, those studies described as staff development for licensed providers were excluded from this analysis.

Eligibility criteria

Articles were included if they described a curricular innovation concerning quality or safety, identified learner outcomes, and provided measurement of outcomes. Curricular content that addressed any of the QSEN competencies (patient-centered care, teamwork and collaboration, evidence-based practice, safety, quality improvement, and informatics) were included for review. If the intent of the article was promotion of quality improvement or patient safety, the article was included. Editorials, commentaries, and reviews were not included. Further, articles concerning personal safety, cultural safety, quality improvement as a process for curriculum redesign, and educational program quality or outcomes were also excluded.

Article review process

Article titles and abstracts were reviewed for initial inclusion for further review. Those that met eligibility criteria were obtained in full text and abstracted for final determination of relevance. Consistent with Wong's methodology (2010), learning outcomes for each study were classified using Kirkpatrick's model (1967). In this model, outcomes are classified as impacting learner satisfaction (Level 1), changing learner attitudes (Level 2A), measuring learner knowledge and skills (Level 2B), changing learner behavior (Level 3), changing clinical processes (Level 4A), and benefiting patients (Level 4B).

Analysis

Selected studies were summarized with respect to educational content, teaching methods, and learning outcomes and are presented in Table 1.

Table 1: Quality and Safety Study Characteristics

Source	Setting	Learners	Intervention	Teaching methods	Educational content	Learning outcomes	Main findings
Ardizzone (2009)	Single nurse anesthesia program	23 Senior level graduate nurse anesthesia students	3 lectures	Lecture and Adverse event modeling	Patient safety, mindfulness, error reporting, modeling of health care errors and quality indicators	Attitudes (Level 2A) Knowledge (Level 2B)	Overall scores, knowledge, and skills changed from pre-test to post-test, but were not statistically significant. Attitudes remained unchanged.
Aud (2006)	Single baccalaureate program	Teams of students in gerontological nursing course	Participation in quality assurance projects	Student involvement in quality assurance audits	Medication administration and Observable Indicators of Nursing Home Care Quality	Knowledge (Level 2A) Clinical process change (Level 4A)	No quantitative assessment. Students were introduced to quality issues
Bakken (2004)	Single university, Entry-to-practice and MS programs	150 ETP-BS students and 300 MS students	Use of PDAs to facilitate clinical documentation and provide access to patient safety resources	Use of clinical log	Nursing informatics competencies	Knowledge (Level 2A)	No outcome data provided
Broom (2009)	Single university in Wales	Baccalaureate students	Use of a virtual ward	Simulation, blog posts	Fever of unknown origin, environment of care	Satisfaction (Level 1)	Advantages of simulation include developing knowledge and helping with clinical practice. Disadvantages include the fact that they are not real and technical restrictions.
Currie (2009)	Post-baccalaureate students in a BS-MS advanced practice nurse program	453 students	Use of a web-based hazard and near miss reporting system	4 lectures; 1 credit decision support course	Patient safety curriculum focused on modeling, monitoring, mindfulness	Behavior (Level 3)	During a 3-year period, 453 students made 21,276 reports
DiBartolo (2009)	Single university nursing program	2nd semester junior-level nursing students enrolled in an advanced adult health course	Feature films	Assignment of reflective paper	Palliative care	Attitudes (Level 2A) Knowledge (Level 2B)	70.1% of first student group and 56.8% of 2nd student group rated assignment as positive
Gantt (2010)	Single university	194 senior clinical capstone students	Critical thinking scenarios using SimMan	Competency checklists	Blood administration, tracheostomy, suctioning, intravenous therapy	Knowledge (Level 2B)	48% of students omitted hand washing, patient identification, or both. 38% of students missed one or more required opportunities for handwashing, and 22% had omitted a patient identification check one or more times.

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Source	Setting	Learners	Intervention	Teaching methods	Educational content	Learning outcomes	Main findings
Girdley (2009)	Single university	Baccalaureate nursing students during their first or second clinical rotation	Clinical assessment checklist	Students complete assessment tool within first 30 minutes on unit; 3-hour post-conference at end of clinical day	Recognize safety risks Perform patient centered care	Behavior (Level 3)	Safety scan helped students recognize multiple sources of safety hazards
Greenfield (2006)		2nd year baccalaureate nursing students (39 experimental, 26 control group)	Dimensional analysis as the method of mathematical computation for medication calculation	Didactic course over first 4 weeks of semester	Medication calculation	Knowledge (Level 2B)	Experimental group scored higher on exam (mean=92.12, SD=6.2) and more passed (84.6%), when compared with control group (mean=86.92, SD=14.5, 61.5% passed).
Henneman (2005)	Single school of nursing	5 students	High-fidelity simulation	3 simulation experiences, 3 weeks apart within a 15-week course	Chest pain s/p MVA, asthma exacerbation, pneumonia with anaphylactic reaction from antibiotic	Satisfaction (Level 1)	Students were satisfied with learning experience (no data reported)
Horsburgh (2005)	Single health sciences center	300 nursing, medical, pharmacy students	Root cause analysis for interprofess- ional student groups	2 day learning experience	Root cause analysis	Attitudes (Level 2A)	Students felt experience deepened their understanding of quality improvement, enhanced their understanding of health problems, encouraged understanding of other health professions and helped develop teamwork skills (mean – 3.7 on 5-point scale)
Ironside (2009)	Single university system; 8 schools	Nursing students in management course	Simulation	10-week management course with 2 simulations	Patient safety competencies	Knowledge (Level 2B)	Student achievement of patient safety competencies improved with experience in multiple patient simulations
Johnson (2006)	Single health science center	Medicine, nursing, pharmacy, and public health students	Student-led interprofessional activities	6-week team competition interprofessional team root cause analysis with faculty advisor	Root cause analysis	Satisfaction (Level 1) Attitudes (Level 2A)	Deeper understanding of peers' roles Students develop common vocabulary Engagement of community practitioners
Kyrkjebo (2006)	Single university in Finland	4 teams of one medical, nursing, and intensive nursing student (n=12)	Two simulation scenarios	Video, simulation, reflective learning	Blood transfusion, basic resuscitation skills, central line management, medication administration	Satisfaction (Level 1) Attitudes (Level 2A)	Students reported high satisfaction and desire for more team training

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Source	Setting	Learners	Intervention	Teaching methods	Educational content	Learning outcomes	Main findings
Kyrkjebo (2003)	Single university in Finland	44 nursing students	Personal improvement project	8-week process using a workbook	Methods and tools for improvement in personal life	Attitudes (Level 2A) Knowledge (Level 2B) Behavior (Level 3)	45% made personal improvement; 75% reported benefit of process for future clinical practice
Kyrkjebo (2001)	Single university in Finland	52 students in 2nd year of study	Record care processes from patient perspective	2 day course on QI	Flow charts, cause/effect diagrams, and outlines of quality goals	Knowledge (Level 2B)	Students found projects useful in learning QI processes
Long (2005)	Single university school of nursing	36 students in med surg course	Simulation	4-hour lab session including psychomotor skill review and simulation	Assessment skills; psychomotor skills in tube insertion.	Satisfaction (Level 1)	Students rated use of sim from 9.3 to 9.6 on a 10-point scale
MacPhee (2009)	Single university and partner healthcare organization	Students in leadership course	Clinical practicum	Student participation in interdisciplinary quality/safety teams	Part of 12-week course; lecture on culture of safety; review of available projects; commitment of 40 hours to project work; half-day orientation to team	Knowledge (Level 2A) Clinical process change (Level 4A)	Student deliverables were beneficial to organization; Positive experiences reported via focus groups
Makinen (2010)	2 institutions in Sweden and Finland	74 nursing students	Objective Structured Clinical Examination (OSCE)	Nine hours of didactic followed by OSCE testing in pairs	National training guidelines for CPR	Knowledge (Level 2B)	47% of Swedish students and 13% of Finnish students passed the test
McKeon	Single university school of nursing	65 Students in 2nd and 3rd term of study	Simulation	Computer-based simulation with embedded web-based learning resources	Patient centered care competencies	Knowledge (Level 2B)	Significant improvement in patient care competency score by all students
Miller (2009)	Single university	32 Baccalaureate students in senior adult medical-surgical nursing course	Integration of QSEN competencies into existing curriculum	Didactic lectures, discussion, and structured clinical projects	Patient-centered care, teamwork, safety, quality improvement	Attitudes (Level 2A)	Control group mean scores of student perceptions increased by 0.18 points whereas the intervention group increased 2.81 points.
Mulready-Shick (2009)	Single university	18 students in junior level adult health course	Dedicated Education unit (DEU) for clinical practicum	Integration of quality and safety competencies at unit level	Teamwork, safety, informatics, patient-centered care, evidence-based practice, quality improvement	Satisfaction (Level 1)	Learners and staff reported positive attitudes in focus group evaluation

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Source	Setting	Learners	Intervention	Teaching methods	Educational content	Learning outcomes	Main findings
Nelson (2007)	29 US nursing schools	1201 pre-licensure nursing students	Evidence-based curriculum module for safe patient handlings	7 didactic items, 2 laboratory items, 14 hands-on practice items using safe patient handling equipment	Principles and techniques of safe patient movement; epidemiology of musculoskeletal injuries; ergonomic assessment of workplace; risk factors for musculoskeletal injuries; high risk patient care activities	Attitudes (Level 2A) Knowledge (Level 2B)	Statistically significant improvements in attitudes toward mechanical and manual lifting, knowledge and beliefs about safe patient handling; beliefs in ability to exert control in using mechanical lifts, and intentions to use mechanical lifts
Ruchiwit (2002)	Single nursing program in Thailand	49 students in a psych-mental health nursing program	Use of CQI in clinical learning	Didactic content with clinical practice application	FOCUS-PDCA methods, statistical data management	Satisfaction (Level 1) Knowledge (Level 2B)	Statistically positive correlation for cognitive and psychomotor domain outcomes between student satisfaction and achievement
Sears (2009)	Single nursing program in Canada	54 2nd year BScN student volunteers	Simulation	Replacement of early-term clinical hours with simulated case scenarios	Risk of error; medication administration safety	Behavior (Level 3)	Students who participated in simulation generated fewer medical errors
Struth (2009)	Single nursing program	Students in foundational nursing course	Curriculum redesign for effective communication	Use of structured communication assessments	60-second situation assessment; SBAR	Behavior (Level 3) Clinical process change (Level 4A)	Students demonstrated proficiency in skill performance Employers were satisfied with program graduates' abilities to collaborate and use leadership strategies.
Sullivan (2009)	17 US schools of nursing	575 pre-licensure students within 6 months of graduation	Curricular innovations using QSEN competencies	Classroom, simulation, clinical	Patient centered care, teamwork, evidence-based practice, quality improvement, safety, informatics	Satisfaction (Level 1) Attitudes (Level 2A) Knowledge (Level 2B)	Quality and safety knowledge and skills presented in curriculum; Students were most prepared in patient-centered care and informatics.
Teeley (2005)	Single institution	150 Community health nursing students	CQI projects	Lecture materials, online notes, readings, faculty-facilitated projects	System analysis, process flow assessment, system improvement strategies, using data, project leadership and facilitation	Knowledge (Level 2B) Clinical process change (Level 4A)	Journal entries and post-conference indicated satisfaction; projects made contribution to agency

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Results

Characteristics of included curricula

There were 94 citations obtained from CINAHL and 84 obtained from Medline. After eliminating duplicates and articles that did not meet inclusion criteria based on review of article title and abstract, 118 articles were abstracted. Of these, 28 articles met inclusion criteria and were included in the study sample. Pre-licensure students were involved in the majority of studies (n=25, 89.3%) and three studies (10.7%) involved graduate nursing students. Most studies included only nursing students. However, there were three studies (10.7%) that included nursing students as part of an interprofessional team. While the majority of reports came from the United States, seven (25%) were from international sites including Canada, Finland, Norway, Sweden, Thailand, and Wales. Studies were primarily conducted as pilot trials within one nursing program and had fairly small sample sizes. There were four (14.3%) studies that employed a multi-site approach ranging from two to 29 sites.

Curricular features

The curriculum innovations covered a wide range of topics, which were fairly evenly split between quality and safety concepts (Table 2). The content areas with the largest proportion were patient safety in general and quality care in general. After the general topics, CQI/PDSA was included in 12.8% of reports. Other topics included patient centered care, teamwork and collaboration, process mapping, error/incident reporting, safety culture, medication administration procedures, and root cause analysis.

The curriculum was most commonly taught in a classroom setting (42.0%), followed by clinical settings (35.4%), and laboratory settings (22.6%). The most frequently used teaching approach was experiential learning (57.1%), followed by lecture (25.1%), discussions (10.7%), and web-based modules (7.1%).

Study designs and outcomes

Overall, study designs involved one site, a convenience sample of students, and often a post-test only approach. Use of randomized designs or pre-test-post-test approaches were rare. In addition, limited descriptions of instruments used to evaluate learner outcomes as well as lack of standardized measures for outcomes of interest impede required work in replication across sites.

Table 2. Quality and Safety in Nursing Education: Curricular Features

Characteristic	Pre-licensure		Graduate		Total	
	N	%	N	%	N	%
Educational Setting						
Classroom/nonclinical	12	42.9%	1	33.3%	13	42.0%
Laboratory	7	25.0%		0.0%	7	22.6%
Inpatient hospital	4	14.3%		0.0%	4	12.9%
Mixed clinical setting	3	10.7%	2	66.7%	5	16.1%
Nursing home	1	3.6%		0.0%	1	3.2%
Community Health	1	3.6%		0.0%	1	3.2%
Teaching method						
Didactic lectures	5	20.0%	2	66.7%	7	25.1%
Small group discussion	1	4.0%		0.0%	1	3.6%

Case discussion	2	8.0%		0.0%	2	7.1%
Experiential learning	15	60.0%	1	33.3%	16	57.1%
Web-based module	2	8.0%		0.0%	2	7.1%
Educational content						
Patient-centered care	2	5.6%		0	2	5.1%
Teamwork and Communication	2	5.6%			2	5.1%
Quality topics					0	
Quality of care in general	6	16.7%			6	15.4%
CQI/PDSA	5	13.9%			5	12.8%
Audit and feedback	1	2.8%			1	2.6%
Process mapping	2	5.6%			2	5.1%
Patient safety topics						
Patient safety in general	7	19.4%	1	33.3%	8	20.5%
Systems thinking	1	2.8%			1	2.6%
Root cause analysis	2	5.6%			2	5.1%
Human factors	1	2.8%			1	2.6%
Error/incident reporting	1	2.8%	2	66.7%	3	7.7%
Safety culture	2	5.6%			2	5.1%
Medication administration	2	5.6%			2	5.1%
Procedures	2	5.6%			2	5.1%

Learner outcomes

As noted in Table 3, over three-fourths of learner outcomes were defined at levels one and two. These concerned learner satisfaction, attitudes, knowledge, and skill. Only 11.9% of curricular innovations targeted a change in learner behavior and less than 10% had an impact on changing clinical processes. There were no studies that targeted improved patient outcomes as a result of curricular innovation.

Table 3: Assessment of Learning Outcomes

Level	Descriptor	N	%
1	Impacting learner satisfaction	8	19.0%
2a	Changing learner attitudes	12	28.6%
2b	Measuring Learner Knowledge and Skill	13	31.0%
3	Changing Learner Behavior	5	11.9%
4a	Changing Clinical Processes	4	9.5%
4b	Benefitting Patients	0	

Discussion

When compared with the review of medical education studies (Wong, Etchells, Kuper, Levinson, & Shojania, 2010), the educational settings differed. In medical education, the most common venues were classroom/nonclinical setting or ambulatory care. In the nursing education studies, classroom and laboratory environments were most prominent. With respect to teaching methods, didactic and experiential learning were most common in medical education studies, whereas experiential learning was used in nursing education in twice as many studies as in medicine. This is likely linked to the fact that the lab environment within nursing schools has provided an opportunity

to study innovations concerning patient safety. The coverage of educational content is similar. However, topics not found in the medical studies were added to reflect key aspects of nursing studies. These included patient-centered care, teamwork and collaboration, medication administration, and procedures.

Results of this review of literature concerning the state of the science of quality and safety innovation in nursing education reveal a limited number of studies, small sample sizes, and a paucity of data concerning learner outcomes, but it certainly provides direction for future research and evaluation.

A number of open source resources already exist. Both the QSEN website and the Institute for Healthcare Improvement's (www.ihi.org) Open School for Health Professions provide a wealth of high quality resources to enrich student educational experiences and advance an understanding of quality improvement and patient safety within the context of a systems framework.

To advance the state of the science, a more rigorous approach to evaluation is required. While single site studies are important to pilot new techniques, rigor in evaluation of even small studies would strongly contribute to development of nursing knowledge. In order to advance the science, however, clarity about measurement and the availability of valid and reliable tools to assess desired outcomes are necessary.

Funding larger, multi-site studies is another challenge. Collaboration with partner healthcare organizations is essential for the success of evaluation efforts that lend themselves to changes in care processes or improvement in patient outcomes. Studies that extend themselves to evaluate outcomes beyond what students feel and know and assess impact on patients require new approaches but will serve to strengthen the science.

Additional partnerships with our colleagues from other health professions will also assist in advancing this work. Many academic health centers across the country are embarking on new approaches to bring students together within the educational setting with the expectation that they develop the necessary communication and teamwork skills to function effectively as a provider within the healthcare environment. Evaluation of these initiatives with the use of standardized measures and linkage to health system or patient outcomes will facilitate advancement of the science and ultimately creation of a safer environment for care.

Conclusions

Educating future nurses in quality and safety will remain essential to improving patient care outcomes. The IOM recommendations for health professions education and the QSEN initiative have laid the foundation for establishing quality and safety competencies as an essential component of nursing curriculum. The creativity and innovation generated by the authors of the reviewed studies provide a strong indication of faculty interest in building the science. With creative partnerships, appropriate study design, measures, and funding, the possibilities for building nursing knowledge and positively impacting patient outcomes are well within reach.

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State of the Science Paper

AN INTEGRATIVE REVIEW OF RESEARCH ON NURSING HANDOFFS IN ACUTE CARE SETTINGS

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Introduction

Patient care handoffs in the form of nursing change of shift reports can create significant information gaps, omissions and errors (WHO, 2007). Authors found that inadequate handoffs were related to sentinel events (Croteau, 2005), critical incidences (Pezzolesi et al., 2010), errors and near misses in novice nurses (Ebright, Urden, Patterson, & Chalko, 2004), and omissions requiring information searches before nurses could begin patient care (Lange, 1992).

World-wide, nursing handoffs are a topic of continuing interest. Unfortunately, the majority of published material is anecdotal or based upon nurses' perceptions about the merits of various methods for conducting nursing handoffs. These reports, while interesting, do not assist readers in critically analyzing findings or discriminating among available handoffs methods because reports described positive results and have informal methods and analyses.

At least eight reviews on handoffs are available (Arora et al., 2009; Cohen & Hilligoss, 2010; Hays, 2003; Matic, Davidson, & Salamonson, 2011; Messam & Pettifer, 2009; Lee Ann Riesenberg, Leitzsch, & Cunningham, 2010; Lee Ann Riesenberg, Leitzsch, & Little, 2009; Strople & Ottani, 2006). These reviews add to our knowledge but gaps in the literature remain. Authors of reviews to date have compiled results across nursing contexts despite differences in work design, information needs and technology support requirements. Two studies combined results across professions (Arora et al., 2009; Cohen & Hilligoss, 2010). Findings across different settings and professions can be difficult to generalize. Authors have recently called for information technology support for handoffs (Matic et al., 2011; Strople & Ottani, 2006). A research focus on specific contexts is paramount because understanding handoff information is a prerequisite for computerization (Messam & Pettifer, 2009; Staggers & Jennings, 2009). In two reviews (Riesenberg et al., 2010; Riesenberg et al., 2009) literature searches were limited to the U.S., eliminating the formal research conducted in the United Kingdom or Australia, a substantial number of studies. Authors of reviews also included studies of variable quality and seemingly weighted findings equally across the studies. None to date has focused specifically on findings for acute care units and no synthesized information exists to determine known findings and research needs for nursing handoffs on acute care units, i.e., medical and surgical units. Therefore, this integrative review addresses the following questions: (a) Beyond reports on nurses' perceptions, what is known about handoff research methods and findings for acute care settings, i.e. medical and surgical units? and (b) What are future directions for research on nursing handoffs for acute care units?

Background

Various terms are used to describe this communication event including at least: handoff, handover, signout, signoff, intershift report, change of shift report and simply

"report." According to Cohen and Hilligoss (2010), who compiled and analyzed an exhaustive collection of hospital-based handoff research, no clear definition for the term "handoff" is evident in the literature. Despite this, two notions emerge – handoffs are designated communication events about essential patient care information and they entail a transfer of care responsibility or accountability from one practitioner to another. In this paper, the term "handoff" is used because of its increasing prevalence in the literature. The term is defined as "the exchange between health professionals of information about a patient accompanying either a transfer of control over, or of responsibility for the patient"(Cohen & Hilligoss, p. 494).

The frequency of nursing handoffs is enormous. In the U.S. alone, shift report handoffs occur for every patient 2-3 times per day, on every inpatient unit, in every acute care facility, amounting to at least 2,000,000 handoffs annually. Clearly, the sheer numbers of this communication event bear developing a solid body of knowledge to guide its effectiveness and efficiency.

The baseline purpose of nursing handoffs is information transfer, but handoffs provide other important, implicit functions across settings: educational (Kerr, 2002), emotional (Parker, Gardner, & Wiltshire, 1992), group cohesion (Lally, 1999; Parker et al., 1992), communicating group values (Lally, 1999), accountability/transfer of responsibility (Patterson & Wears, 2010), social (Kerr, 2002; Patterson & Wears, 2010), a chance to demonstrate clinical prowess (Wolf, 1989), transparency to identify any erroneous thinking (Patterson & Wears, 2010), socializing novice nurses into the expected role of the nurse (Lally, 1999) (Wolf, 1989), and keeping nurses' anxiety at bay on units with dying patients (Evans, Pereira, & Parker, 2008). Parker and colleagues (1992) stated more broadly that handoffs were important in defining a professional identity for nursing.

A fundamental assumption of this time-honored event is that information during handoffs must be accurate and complete enough to allow nurses to plan for care and for that care to proceed efficiently and effectively. Handoffs are assumed to contribute to the quality and continuity of care; without an adequate handoff, nurses' care of patients would be comprised (Dowding, 2001). Initial research results are available to support this assumption. Authors examining 10 years of interdisciplinary sentinel events found that communication breakdowns, including handoffs, were implicated in two-thirds of the events (Croteau, 2005). A retrospective review of 36 months of critical incidents identified 334 handoff incidents with 75% (143) at change of shift. The most common issues were incomplete handoffs (45%) or no handoff at all (29%) (Pezzolesi et al., 2010). Inadequate nursing handoffs, specifically the lack of information or confusing information, were involved in seven of eight cases of novice nurses' errors or near-misses (Ebright et al., 2004) and research showed that nurses had to retrieve additional information, particularly related to medications, before they could begin patient care activities after handoffs (Lange, 1992). In a review of surgical malpractice claims, 60 cases involved 81 communication breakdowns; 43% were with handoffs and of these, the majority was with verbal communication (Greenberg et al., 2007). In a study tracing patient-centered information on surgical care in a UK gastroenterology service, Nagpal and colleagues (2010) found that only 35% of key information was retained by the time the patient was admitted to an inpatient unit and among a sample of 20 patients, 75% had incidences or adverse events.

Previous Research on Nursing Handoffs

Nursing handoffs have been a topic of interest since at least 1969 (Clair & Trussell, 1969).

A majority of authors has concentrated efforts on practical aspects of handoffs, describing the merits of the myriad of handoff methods available including: written (Baldwin & McGinnis, 1994), phoned including S-BAR (Brown, 2007), taped (Prouse, 1995), care-plan based (Clemow, 2006), bedside (Anderson & Mangino, 2006; Baker, 2010; Chaboyer, McMurray, & Wallis, 2010; Monahan, Bacha, Phelps, & Whatley, 1988; Parker et al., 1992; Webster, 1999) and reading the patient's chart at the bedside (Tucker, Brandling, & Fox, 2009). Nurses had positive perceptions about these various types of handoffs on effectiveness and efficiencies for these measures: accuracy (Monahan et al., 1988), quality (Prouse, 1995), relevancy (Prouse, 1995), conciseness (Prouse, 1995), completeness (Monahan et al., 1988; Tucker et al., 2009); improved documentation (Clemow, 2006), satisfaction with the method (Anderson & Mangino, 2006; Clemow, 2006; McKenna & Walsh, 1997); perceived effectiveness (Webster, 1999); perceived safety (Chaboyer et al., 2010), teamwork (Chaboyer et al., 2010); confidentiality (Webster, 1999); ability to care for patients (Sidlow & Katz-Sidlow, 2006); quality (Prouse, 1995) and access to information (Webster, 1999). Authors reported decreased overtime with bedside report (Anderson & Mangino, 2006; Monahan et al., 1988), taped report (Prouse, 1995), phone report (Brown, 2007) and increased efficiency and teamwork (Chaboyer et al., 2010).

Each of the eight reviews (see Table 1) addressed a different focus: a compilation of all hospital treatments for handoffs examining definitions and standardizing handoffs (Cohen & Hilligoss, 2010); barriers to effective nursing handoffs (Riesenberg et al., 2010); handoff mneumonics, (Riesenberg et al., 2009); hospitalist handoffs (Arora et al., 2009); methods, modes of nursing handoffs and explore the feasibility of computerizing handoffs (Matic et al., 2011); intended and unintended purposes and consequences of handoffs (Hays, 2003); best handoff practices for palliative care (Messam & Pettifer, 2009) and the relationship between handoffs and patient outcomes with a recommendation to add technology to handoffs (Strople & Ottani, 2006).

Table 1. Existing Reviews on Handoffs

Source	Purpose	Sample	Search	Major Findings
Arora et al., 2009	Systematic review on recommendations for hospitalist handoffs based on interventional studies from Jan 1975- Jan 2007	Search numbers not specified; 10 studies	PubMed	Verbal handoff supported by written documentation or technological solution in a structured format recommended for hospitalist handoffs. Specific content outlined.
Cohen, Hilligoss, 2010	"Extensive review" of all research treatments of handoffs in hospitals involving medical personnel 1968- 2008	Search numbers not specified; 545 studies	PubMed, "other electronic sources," reference lists	1) Handoff definition poorly delineated. 2) clarity lacking on the meaning of to "standardize" handoffs, 3) no analysis of the tradeoffs for purposes of handoffs against safety, 4) relationship between handoff standardization and patient outcomes not yet established
Hays, 2003	Literature review for an unspecific period to examine contradictions of handoffs, intended and unintended purposes and consequences	Search numbers not stated; included research and non-research	Not outlined	Handoffs are an information and relationship exchange, linked to accountable nursing practice, professionalism. Recommendations targeted to staff development educators.
Matic et al., 2010	Integrative review for an unspecified time period to examine methods, modes of handoffs, explore feasibility of computerized handoff	304 retrieved, 126 published articles	PubMed, Medline, Embase, available research on World Wide Web	Handoff is a critical dimension of clinical care. Literature lacks studies to identify handoff content, standardization requirements, core elements for computerization.

Messam, Pettifer, 2009	Literature review 1997-2007 for research on best handoff practices suitable to palliative care	19 research articles	Medline, CINAHL, British Nursing Index	Handoff important for guiding future care, emotional support useful, bedside handoffs results mixed, limited use in palliative care, need for structured guidance for key aspects of care.
Riesenberg et al., 2010	Systematic review of articles on nursing handoffs 1987- August 2008 on barriers and effective strategies for handoffs	2649 citations, 460 retrieved, 95 included in review, 20 research articles	Medline, Medline Inprocess, CINAHL, HealthSTAR, Christiana Care Full Text, reference lists	Consistency in anecdotal strategies, little evidence to support use of any specific structure, protocol or method.
Riesenberg et al., 2009	Systematic review on handoff mneumonics 1987-June 2008, uses, outcomes	2590 identified, 46 included in review, 7 research articles, 4 research studies	MEDLINE, CINAHL, HealthSTAR, reference lists	4 studies, 1 on nurses' ability to identify SBAR, describe 1 use via phone interview. Lack of rigorous research available: small sample sizes, instruments without assessed psychometrics, only 1 had IRB approval
Strople, Ottani, 2006	Literature review for an unspecified time period on the process of handoffs, related to patient outcomes	Not specified	Not specified	Current methods ineffective and may contribute to negative patient outcomes. Authors advocate use of computer technology, wireless communication devices

The disparate findings from less formal studies are not only difficult to reconcile but may provide invalid information to readers. Perceptual study results are largely based upon data from survey instruments without established psychometrics (Riesenberg, Leisch, & Cunningham, 2010). A good number of articles on handoffs are more informal reports whose authors did not intend to conform to the rigors of research. Yet, readers may and reviewers have (Hays, 2003; Matic et al., 2011; Messam & Pettifer, 2009; Riesenberg et al., 2010; Strople & Ottani, 2006) weighed findings from less formal reports equally with the findings from more formal ones. Because of these stated difficulties, studies about nurses' perceptions and informal reports were excluded from this review.

Methods

An integrative review method was chosen to synthesize study methods and findings. Integrative review is a specific method to summarize past literature and provide a comprehensive understanding of an area (Whittemore & Knafl, 2005). This technique is useful to outline the state of the science, contribute to theory development and also has applicability to practice and policy. Unlike systematic reviews that include only empirical studies, this broad review method includes both experimental and non-experimental research while still adhering to rigorous review processes.

The literature search included material from 1980 - 2010 across PubMed, CINAHL, Cochrane, PsycInfo, the hospital-based research compiled by Cohen and Hilligoss, and Scopus databases. The search terms were nurs$ and research and handoff$ or handover$ or intershift report$ or shift report$ not chemistry or biochemistry. Relevant articles were those with reported research on nursing handoffs published over the past 30 years, papers published in English in peer-reviewed journals, completed on medical and/or surgical units, using any methods, any study design or any variables except

as listed in the exclusions. Studies were included if they ranged from an admission point such as the emergency department to acute care. Any study design was deemed relevant and any method whether qualitative, descriptive or empirical. Studies were excluded if they were focused entirely on non-acute care settings such as emergency departments, critical care or perioperative areas, handoffs during patient discharges; interfacility transfers; longterm care; studies published in conference proceedings and studies with outcome variables on nurses' satisfaction, attitudes, perceptions about handoffs or articles with the major purposes on educating nurses. Articles in conference proceedings were excluded because review processes can be highly variable.

The search strategy yielded a total of 247 references, 62 of which were duplicates. All citations were rated for relevance and a set of 81 were retrieved. These articles were read because of the difficulty in determining relevance by examining only the abstract and article title. References from these articles including the reviews were assessed for inclusion by the authors. Subsequently, all retrieved articles went through another round of relevance rating, culminating in a final set of 31 research studies plus 8 reviews.

Empirical studies were evaluated for research quality using a tool designed by Weir, Staggers and Phansalkar (2009). The instrument, titled QUality ASSessment Instrument or QUASII, was developed using the 'threats to validity" taxonomy identified by Shadish, Cook and Campbell (2002). Face validity was established by expert review and inter-rater reliability ranged from 0.85 to 0.94. In this study, the QUASII was modified to remove two informatics-specific items, i.e., "To what degree was the implementation of the information system sufficient?" and "To what degree do differences in the type of providers between study groups impact the conclusions?" The rating scale was modified from 7 points to 3 to indicate low, medium and high quality research. The total number of possible points for this instrument is 34. The author completed QUASII ratings; intra-rater reliability was .93 for 6 randomly selected articles. Unfortunately, a similar tool is not available to evaluate the research quality for qualitative studies.

Results

The final set of relevant studies totals 31 and 8 reviews are displayed in an evidence table available from the author. Studies are organized by major purpose or outcome of interest– *information effectiveness and efficiency; handoff processes and structures; handoffs as ritual; and information content.* The table outlines each study's purpose, design, sample, theory, methods, major findings and a QUASII score if applicable.

Overview of Studies

The set includes 16 qualitative, 9 empirical and 6 descriptive studies. Ethnographic approaches were employed in 9 of the qualitative studies with a sampling of other techniques – unspecified with content analysis (3), grounded theory (2), phenomenology (1), and discourse analysis (1). The most frequent empirical study design was pre-experimental (7); the other 2 studies employed 2 x 2 factorial designs, both by the same researcher (Dowding, 2001; Lamond, 2000). The QUASII scores ranged from 6-29 with 4 of the 9 empirical studies scoring in the lowest third of available points, < 11 points; 3 scored in the middle third and only 2 had scores above 21, both by Dowding/ Lamond scoring 29 of 34 possible points.

Authors conducted studies most frequently in the UK (14), then the US (7), Australia

(5), Scandinavia (3) and single studies completed in Israel and Mauritius. All used convenience samples of nurses except Fenton (2006) who randomly selected 15 patients from a convenience sample of handoffs, Wilson, Galliers and Fone (2007) who randomly selected 250 taped handoffs and Lamond (2000) who randomly selected 60 patient charts for analysis as part of a larger study.

The majority of authors (20) did not specify an underlying theory for their studies. Of those who did, authors used information processing/schema theory (2), change management theory (2), symbolic interaction theory (2), psychoanalytic theory on rituals (1), action research (1), linear communication (1), "information overload" (1), and knowledge concepts from Gadame and Ricoeur (1). All researchers examined handoffs from the perspective of nurses except for two authors (Benham-Hutchins & Effken, 2010; Ragpal, et al., 2008) who traced patient-centered handoffs.

The majority of authors did not list a definition for the handoff event. The UK and Australian authors used the term "handover" while US authors used "handoff." For those defining the term, no consensus among definitions is evident across the 31 studies.

Information Effectiveness and Efficiency

Over 1/3 of the studies (14) addressed information effectiveness and efficiency, i.e., information completeness, accuracy, efficiency (time for handoffs and costs). Authors of descriptive studies found incomplete information in verbal handoffs compared to formal documentation (Sexton, 2004), patients' actual conditions (Richard, 1988), and taped report (O'Connell, 2001). Authors noted information loss at every handoff point in the care continuum for surgical patients (Nagpal et al., 2010) until only 43.9% of essential information reached the inpatient unit. Likewise, Richard in 1988 (Richard, 1988), found incongruence in all 57 handoffs for 584 patients when comparing handoff information to patients' actual conditions.

Structured, consistent formats improved information completeness in seven different formats (Berkenstadt et al., 2008; Fenton, 2006; Nelson & Massey, 2010; Pothier, Monteiro, Mooktiar, & Shaw, 2005; Tucker et al., 2009; Wilson et al., 2007). A change to bedside handoffs improved information completeness in one study (Kassean & Jagoo, 2005); however, bedside handoffs were difficult on palliative care units because of sensitive information (McKenna & Walsh, 1997). Taped handoffs had more information omissions than verbal reports but were more congruent with the patient's actual condition (Richard, 1988). O'Connell and Penney (O'Connell, 2001) concluded that no one type of handoff was most effective because of differences in contexts, patients and nurses.

Pothier and colleagues (Pothier et al., 2005) discovered that nurses in a laboratory experiment had only 31% accuracy on traditional written notes handing off information five times while a combination of verbal report with a typed sheet resulted in minimal decrements. Dowding (2001) found low average information recall rates of 27% and only a 45.2% average accuracy rate during a laboratory study comparing two handoffs with different information structures. However, she also found that information recall and accuracy were improved with consistent formats.

Authors showed that average times and costs for handoffs decreased with a standardized, electronic template (Nelson and Massey, 2010) and methods tailored to each unit (McKenna & Walsh, 1997) except with format called "Essence of Care" (Fenton, 2006).

Handoff Processes and Structures

Authors of nine studies examined the structure and processes of nursing handoffs. The majority outlined the functions of handoffs: transfer of patient information, team building, nursing goals/values, social, educational (Kerr, 2002; Lally, 1999), consensus about next shift care actions and knowledge construction (James, Andershed, Gustavsson, & Ternestedt, 2010), group cohesion (Payne, Hardey, & Coleman, 2000), expectations and cultural aspects (Holland, 1993), emotional support (Hopkinson, 2002) and socialization of new nurses (Ekman & Segesten, 1995). Handoffs are deemed complex (Benham-Hutchins & Effken, 2010; Sherlock, 1995) although the process of handoffs were cryptic, given at high speed and included jargon (Payne et al., 2000; Wolf, 1989).

The remaining studies addressed unique topics. Benham-Hutchins and Effken (2010) examined patient-centered, multi-professional handoffs using network analysis. Networks ranged from 11 to 20, were non-linear, unpredictable, and shaped by providers' information needs. Other authors concluded that replacing face-to-face handoffs with asynchronous electronic records would hinder nursing handoffs (Engesmo & Tjora, 2006). Chaboyer et al. (2010) discovered that patients participated in less than one-half of bedside handoffs and that nurses' printed sheets played a primary role during and after handoffs.

Handoffs as Ritual

Authors of five studies examined handoffs as rituals. The first work was by Wolf (1989) but work has continued as late as 2008 (Evans et al., 2008). Consensus exists across all authors that handoffs are a form of ritual. Rituals have a set of common values and symbolic language ensuring exclusivity. They can alleviate anxiety (Evans et al.), serve valuable psychological and social protective functions (Strange, 1996), and provide a safe forum for nurses (Wolf). Strange concluded that handoffs had important ritualistic functions and should not be dismissed.

Information Content and Tools

Only five studies addressed information content; however, purposes and findings are dissimilar. Hardey, Payne and Coleman (2000) outlined the crucial role that nurses' papers or "scraps" play during and after report for information communication and care delivery. Lamond (2000) examined the information content of handoffs and other sources, concluding that while more information exists in documentation, nurses communicated global judgments only in handoffs. Staggers and Jennings (2009) found four themes during handoffs with facts and professional judgments being only second and third in frequency, handoffs were unstructured, replete with interruptions and high noise levels and nurses did not use available electronic health records. Last, Welch and colleagues (Welsh, Flanagan, & Ebright, 2010) identified barriers and facilitators of written and taped handoffs.

Discussion

The Concept of Handoff

The majority of researchers of acute care handoffs did not specifically define the term used for handoffs and of those who did, no consistent definition is apparent. This finding is congruent with Cohen and Hilligoss (2010). Perhaps nursing authors assume that readers understand the basic notions of handoffs and leave the term

without definition. The missing definition is a lesser concern here than with Cohen and Hilligoss or Patterson (Patterson & Wears, 2010). Definitions are emerging (Cohen & Hilligoss, 2010; Solet, Norvell, Rutan, & Frankel, 2005). A more important issue is that the event could benefit from greater concept clarification, along the line of work that has been completed on handoff functions.

Functions. Authors agree handoffs are complex (Benham-Hutchins & Effken, 2010; Sherlock, 1995; Parker et al., 1992; Strange, 1996). Researchers outlined the various functions of handoffs, concluding that handoffs perform crucial functions for nurses. As was seen, this event performs no small suite of functions extending far beyond information transfer including educational, role socialization, emotional, social and other functions. These aspects of handoffs are now well outlined having been the topic of numerous studies. What is clear is that handoffs, especially face-to-face handoffs, contribute to nursing and should be retained because of these implicit purposes. Even as handoffs become computerized, handoffs should not be eliminated, being instead *supported* and not replaced by technology.

Information. Researchers attended less to the informational aspects of handoffs despite information being its purported cornerstone. Researchers described informational issues with current processes in the degradation of information across handoffs (Nagpal et al., 2010; Pothier et al., 2005) and incongruence between information and patients' conditions (Richard, 1988). Only 5 studies addressed information content for acute care settings.

Solutions to incomplete and inaccurate information are beginning. Researchers in seven studies described earlier found that structured, consistent formats improved information completeness although the formats were all different and, as Lamond noted, typically atheoretical (Lamond, 2000a).

Handoff structures are a current topic of interest. Australian clinicians are conducting a national project to standardize handoffs (McMurray, Chaboyer, Wallis, & Fetherston, 2010). In the U.S. the format S-BAR (Situation, Background, Assessment and Recommendation) is being touted as the structure of choice. However, this structure was developed as a communication method between professions: nurses and physicians; its structure must be highly tailored to fit nursing handoffs. No studies as yet addressed S-BAR efficiency or effectiveness for acute care units. Earlier reviews also indicated that research is absent on its effectiveness (Cohen & Hilligoss, 2010; Riesenberg et al., 2010). More important, Winters and colleagues (2006), stated that national efforts to improve patient safety should be supported by sufficiently strong evidence to warrant such a commitment of resources. This should be the case with S-BAR.

What may be emerging is that ***the*** specific structure may be less important than having **a** structure for handoffs. As Wilson (2007) found, each unit or subgroup should agree on a specific format. This is in contrast to the effort in Australia to adopt a bedside handoff method and standardize content (McMurray et al., 2010). What is likely most important is the consistency and predictability of information transfer. This notion would need to be tested; however, the concept is congruent with findings from work in psychology and human-computer interaction (Nielsen, 1993; Shneiderman, Plaisant, Cohen, & Jacobs, 2010; Zhang, Johnson, Patel, Paige, & Kubose, 2003).

The content of report has been researched since at least 1969 (Clair & Trussell, 1969) but clear guidance on content for acute care is not apparent from available

research; only snippets emerge. Global judgments about patients are communicated in handoffs but not in documentation (Lamond, 2000) and the majority of handoff content in another study was related to communication itself versus content (Staggers & Jennings, 2009). Last, Hardey and colleagues (2000) documented the crucial role of nurses' papers called "scraps."

Handoff methods. No one handoff method emerged as more effective and efficient. A more promising method was a verbal handoff supplemented with a printed form, but this method was tested only in one study. The most salient comment on this topic was from O'Connell and Penny (2001) who concluded that no one type of handoff was more effective because of differences in contexts, patients and nurses.

Handoffs as Rituals. Researchers completed a set of studies about handoffs as a ritual. While it may be tempting to dismiss handoffs as mere antiquated rituals, these authors give insight into their positive roles. Handoffs are a cultural phenomenon with each unit having norms, expectations, and codes of behavior. Handoffs actually play an important role in nursing by serving psychological and social protective functions.

Research and Methodological Issues

The majority of authors completed qualitative studies on acute care units. Although others recommend increased empirical work (Riesenberg et al., 2010), this writer applauds the amount of qualitative work completed to date and encourages researchers to continue use of this method to expand understanding of handoffs as a concept.

The overall quality of the empirical studies to date for acute care units is low. This finding is consistent with another review of studies based only in the U.S. (Riesenberg et al., 2010). Four major issues contributed to this finding in the current review. Most study designs were pre-experimental with the exception of work by Dowding. These designs did not allow for control of potential confounders, potentially limiting the validity of study findings. Second, researchers did not account for potential differences among nurses or characteristics including knowledge, expertise or other attributes that might affect study findings or differences in settings. Researchers used convenience samples. Third, potential confounders were not included in statistical analyses. Last, studies were not generalizable due to contexts and sample sizes.

Studies in this review were cross-sectional in design. No studies were longitudinal in a naturalistic setting.

Unit of analysis issues. All but two studies examined nurses as the unit of analysis for handoffs although this term would not be used by qualitative researchers. Researchers analyzed data from the perspective of the handoff itself, combining data across nurses and units. Two authors traced handoffs from patients' perspective across a hospital stay (Benham-Hutchins & Effken, 2010; Nagpal et al., 2010). Both perspectives are needed; however, researchers will want to carefully consider which or both to use in future research. For instance, researchers (Fenton, 2006; Kassean & Jagoo, 2005) outlined general guidelines on the completeness of handoffs, but these guidelines and analyses are nurse-centered and need to be expanded to patient-centered analyses. These kind of general guidelines do not consider how well the nurses "know" the patient or their expertise.

A critical point, especially for empirical study designs, is made by Karsh and Brown (2010). Researchers need to consider how study variables at different levels of the organization, unit, and provider might affect errors, patient safety (or handoffs). For

these, nested designs are most appropriate. Handoff research to date has not considered the implications of nested designs.

Future Research

Two areas of study are saturated: handoff functions and rituals. Handoff methods have not yielded clear results despite the number of completed projects and studies. Comparative studies are rare except comparing traditional report to any new method. A comparison of newer methods such as bedside handoffs to a combination of written and verbal exchange would be useful, but other areas are of import. A focus on the informational aspects and content of handoffs is greatly needed (Matic et al., 2010). What, beyond handoff types, contribute to information accuracy, completeness and retention? Is any consistent structure a major contributor or are important attributes correlated to nurse characteristics ? Does a more accurate and complete handoff result in better patient outcomes? Are the outcomes related to other factors such as nurses and contexts?

More research is needed on patient-centered handoffs. How can handoffs from the patient's perspective be improved to prevent information degradation across units and settings? Studies correlating handoff omissions and patient care incidences are critical to perform; strategies beyond S-BAR should be tested. Computerized designs are emerging; however, these are also untested as yet.

Improvements are needed on research design for empirical studies, considerations to differences in nurses, contexts and statistical analyses. Pre-post test and post-test only designs are so very weak that future researchers should not consider them. Other designs are available (Shadish et al., 2002) and longitudinal designs could be considered. More sophisticated sampling techniques can be used rather than convenience samples.

The content, context and complexity of handoffs have not been sufficiently considered despite their importance. Unit-specific and cross-unit content needs to be tested. What content is imperative for nurses' decision making, planning for care, detecting critical information? What is the role of context in errors, omissions? How do handoff interruptions impact information completeness and accuracy?

Limitations

This study was limited to publications in English and in peer-reviewed journals. The quality of the research in qualitative studies was not able to be assessed.

Conclusions

This integrative review yielded 31 studies, including 16 qualitative studies. Researchers agreed that handoffs are complex and have useful, important implicit functions. They determined that handoffs are congruent with the definition of a ritual, performing psychological and social protective functions. Over one-third of the studies addressed information effectiveness and efficiencies. No one handoff method emerged as most effective and efficient; however, a combination of verbal and written handoffs shows promise. Methods should be tailored to acute care units' needs. Seven different consistent, structured formats improved information completeness and efficiency. Determining one specific structure may be less important than having a consistent structure within units. Clear guidance on the content for handoffs is not yet available

from research on acute care units. Researchers of empirical studies of handoffs need to use more sophisticated research designs, control for individual and unit differences and improve sampling frames. Greater consideration to the unit of analysis is needed with attention to the patient-centered nature of handoffs. Future research is needed on information content, handoffs across units, and the relationship of information accuracy to patient outcomes.

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State of the Science Paper

RESEARCH METHODS FOR COMPLEXITY: FROM THE TRADITIONAL TO THE UNIQUE

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Complex environments abound in health care. Researchers, Educators and Practitioners deal with complexity on a daily, if not hourly basis. While this paper emphasizes research methods, the concepts are applicable to all roles within nursing and health care.

Researchers who focus on health care systems, including community care, deal directly with complex environments. However, researchers who focus on the individual client, especially with an intervention, will eventually need to examine the environments in which clients exist and in which an intervention is delivered. Once efficacy and effectiveness trials have been conducted, researchers are faced with moving an intervention to dissemination trials as part of Type 2 translation research (Sung et al., 2003; Sussman, Valente, Skara & Pentz, 2006). At this point, they must deal with the context in which the intervention is delivered. I, and a few others, contend that neglect of context is one reason that interventions fail in some trials (Diez-Roux, 1998; Van Orden, Kello & Holden, 2010). Further, I believe that it is context and the relationships that occur within that context that make environments complex.

There are a variety of research methods that deal with the context leading to complexity. Many of them are those we have utilized for years in research and others are new, particularly to health care and nursing. If you do a Google Scholar search for *"research methods in complex environments,"* you will find more than 7000 citations which range from the cellular to the global level! Of necessity, the searcher needs to make some basic decisions on a review strategy. Therefore, this paper will consider some of the more traditional methods that can be adapted or utilized when context is of interest. Following this, several more unique (to healthcare) methods are described. First, however, a more complete discussion of context is presented.

Context

Context has been mentioned in numerous publications with little information on a conceptual definition. Durning, Artino, Pangaro, van der Vleuten and Schuwirth (2010) define the term by indicating it is the same as *complex environments*. Others have stated that context is basically a person's environment and/or their behavior (Weiner, et al., 2010). Those authors studying neighborhood effects discuss both contextual and compositional effects on health. Contextual effects generally relate to the social environment while compositional effects refer to individual social or economic status (Duncan, Jones & Moon, 1998; Pickett & Pearl, 2001). Generally, it is best to just agree that context is made up of the environmental and/or social

influences that affect both populations and the individuals within that population. Thus the contextual variable is usually a macro or group-level measure.

While definitions of context are non-specific, the content of context is even more difficult to identify. I and colleagues recently attempted to create a taxonomy of the contextual elements that would affect an individual's symptom interpretation and the outcome that would result (Meek, Michaels, Verran, Lareau, Rosenfeld & Jones, 2011). We identified two broad categories of context and four subcategories. The first contextual category of External Context refers to the individual's surroundings. Two dimensions of external context were identified.

The first dimension of Provider Context refers to the values, beliefs and normative practice of the health care team providing care to the individual. The second dimension is Public Context which refers to societal attitudes toward health and disease and the accessibility of structures that support health.

The second category, Internal Context, relates to factors internal to the individual. The two subcategories of Internal Context are Individual Characteristics and Individual Cohort Effects. Individual Characteristics fall into the categories of demographic factors (e.g., age, ethnicity gender) and socioeconomic factors (e.g. education, occupation). Individual Cohort Effects refer to the values and beliefs of the cultures or groups to which the individual belongs. This categorization is similar to the consideration of contextual effects (Individual Cohort Effects) and compositional effects (Individual Characteristics) as previously defined. Even though the compositional effects are often not considered context, they are included in our model because they are outside of the focus of the individual's symptom interpretation. This inclusion exemplifies the fluctuating nature of contextual elements and the need to identify context in terms of the specific focus of the problem to be studied.

I do not propose that the four dimensions form a complete picture of context. Nor do they give specific direction on what elements to measure in research. Determining the appropriate operational indicators of context is the responsibility of the scientist. The selection of contextual elements that have the potential of affecting the outcomes of research is rational and scientifically based with an element of magic. Therefore, like nursing itself, context identification is both science and art.

Traditional Research Methods

The research heading of *Methods* includes a variety of aspects from sample to analysis. The methods that I will review for complex environments include data collection procedures, measurement approaches and types of analysis. All types of research methodologies are useful for contextual analysis, but the more typical approach is through quantitative measurement, data collection and measurement.

Quantitative Methods

The basic issue with using quantitative methods when context is included in the research design has to do with the multilevel nature of the study. As previously mentioned, most contextual elements are variables at a macro-level. Generally, this results in a cross-level question (i.e., What is the effect of a macro or group-level variable on an individual's behavior or outcome?); or a multi-level question (i.e., Does the relationship of an individual contextual variable with an outcome hold for the group?). Rousseau (1985) presents a series of meta-theoretical models for cross-level and multi-level research.

Analysis methods. There are a number of methods through Analysis of Variance Models (ANOVA, ANCOVA) and Regression that are applicable to cross-level analysis. The difference between the usual applications of these procedures is the use of *a cross-level operator* that maps the contextual variable on an individual variable. Klein and Kozlowski (2000) provide details of the use of ANOVA, ANCOVA and Regression with the cross-level operator. One technique that is infrequently used in research and that is directly related to examination of context is appropriately labeled *contextual regression.* There are two forms of contextual regression in the literature. Holzemer, Jennings, Chambers and Paul (1989) describe contextual regression as a way to examine the effect of individual variables in relation to group or contextual variables on an outcome. This approach examines for both an individual and a contextual effect to determine which has the greatest impact on the individual outcome. Klein and Kozlowski describe another approach called contextual regression which examines the effect of the same variable at the individual and group level. The use of this technique investigates the contribution of the group mean of a variable (context) after controlling for the effect of the individual score. Thus, the procedure tests the effect of a variable as context beyond its effect as an individual characteristic.

While the analysis methods described above use well-known approaches, with modifications for context, the ideal strategy for analysis is hierarchical linear modeling (HLM). This technique allows the simultaneous testing of the effects of contextual *and* individual variables on individual outcomes. Diez-Roux (2000) provides an excellent review of the use of hierarchical modeling and contrasts it with other analysis approaches.

Measurement Issues. When adding context to a research study there are major issues with measurement. The ideal situation is one in which a global measure exists that will tap a contextual variable for each group. However, global variables seldom exist and group level measures must often be constructed from existing data or from individual measurement of those in the various groups to be studied. Using individual scores to form a group level measure requires both theoretical and mathematical considerations. First, the scientist must consider how the variable exists at the group level and its relationship to the individual level measure. In other words, making a group level variable from individual measures involves more than simply aggregating scores to the mean for the group. Moving individual measurement to a group level variable is called *emergence* (Klein & Kozlowski). Emergence is the theoretical perspective that a phenomenon that originates with individuals has validity as a collective or group phenomenon.

There are basically three models to consider when creating a group level variable from individual data. The composition model (Rousseau; Klein & Kozlowski) is characterized by isomorphism or functional and structural equivalence between levels. In other words the beliefs at the individual level converge in the same belief at the group level. In our research, we have consistently shown that Control Over Practice converges through a composition model. The second model is a partial composition model, where beliefs are still shared but there is a slight difference when the variable converges to the group. For example, staff job satisfaction tends to follow a partial composition model. When measured at the individual level with job satisfaction surveys, the variable can be shown to be a valid measure of individual satisfaction. When the group mean is used as a measure of group level satisfaction, there is not pure isomorphism. At the group level some researchers call the variable morale which is not quite the same as satisfaction, but it has been shown to be an adequate, but partial, measure of the group level variable that relates to job satisfaction at the

individual level. Both the composition and partial composition models map shared group properties from the individual to the group. A third emergence form deals with configural group properties. Configural properties also originate with individuals but they do not represent agreement, but the group pattern of the individual variable. Configural properties emerge at the group level through compilation models. Compilation models have no structural equivalence. Most measures, such as Turnover, Infection or Fall rates emerge as compilation models. Generally, any variable where there is no expectation of similarity or agreement within a group, such as chronological age or years of experience, should converge as a group level compilation model.

Beyond the theoretical considerations, any variable that is measured at the individual level and expected to converge at the group level should be examined for group level reliability and validity (Verran, Gerber & Milton, 1995). Methodologically, you are basically attempting to validate the group-level variable as a composition or partial composition model by showing there is group-level agreement. There are two measures of agreement that should be examined: The Interclass Correlation Coefficient (ICC) and the within-group Interrater Reliability Coefficient ($r_{WG(j)}$). The ICC examines the relationship between variance within a group as opposed to variance across groups. The idea is to have significantly greater variance across groups than within the groups or an ICC of greater or equal to .60 (Klein & Kozlowski). The $r_{WG(j)}$, on the other hand, only looks at agreement within the group (James, Demaree & Wolf, 1984).

The criterion for adequate within group agreement is an $r_{WG(j)}$ greater or equal to .70. It is best to examine both of these agreement measures since there may be adequate within group agreement but inadequate between group agreement resulting in a low ICC but a high $r_{WG(j)}$. When this occurs, there is adequate agreement to aggregate, but the between group similarities may result in a statistically nonsignificant difference among the groups. However, the $r_{WG(j)}$ indicates an adequate composition or partial composition model for the variable in the current sample. Future research would need to assure more diverse groups to further support the emergence model and the impact of the contextual variable on the study outcome.

Qualitative Methods

As indicated earlier, the primary paradigm for contextual research is quantitative. However, there has been recent emphasis on the use of qualitative procedures, particularly in the area of health services research. In an editorial to a special issue of *Health Services Research (HSR),* Shortell (1999) listed three reasons for the increased interest in qualitative methods: 1) the need to understand natural settings; 2) the value of describing context; and, 3) the complexity of making system changes. As Johnson and Barach (2008) have written:

> "Qualitative research methodologies can play an important role in health care design as they can provide contextual data about health care settings—specifically the people, processes, and patterns that make up the daily work of providing health care." (pg.191)

Not only can qualitative research provide primary information on the effect of context on outcomes, but, in the absence of previous work, it may be ideal for the identification of the contextual elements that are of importance to a particular study focus. There has been some major qualitative work applicable to the consideration of complex environments. Several researchers have contributed data which has resulted in the identification of ten characteristics of high performing care delivery systems (Johnson).

All types of qualitative methods are useful in complex environments. Johnson makes a case for the use of comprehensive task analysis as a means to map system elements to their effective functioning. One of the more unique methods for complexity that will be reviewed is *Cognitive Work Analysis* which uses a type of task analysis as one of its five dimensions.

The issue of *HSR* reviews a variety of approaches appropriate to qualitative research in health systems. In one article, Ragin (1999) describes the use of Qualitative Comparative Analysis (QCA). Ragin contends that QCA is an analytical technique that can examine causal complexity by focusing on the pattern of antecedent conditions instead of selecting cases for a similar outcome as is done in case analysis. In other words, when a system outcome results from the combination of antecedents, QCA can clarify the results. This approach appears to have real value for the handling of our complex health care environments from a paradigm different from the usual.

One interesting approach to expert selection was described by Deshpande, Farley & Webster (1993) in their study of Japanese marketing firms. They utilized *quadrad* analysis to investigate the perceptions of matched set of buyer-seller pairs. The researchers indicated that analysis of data from these matched pairs is a better view of organizational buying behavior. To add to the value of the analysis, two dyads were selected from each organization—thus the term *quadrad.* Their study included 50 quadrads. It seems that a similar sampling approach would also add considerably to our view of context in terms of patient-provider opinions or interdisciplinary perspectives.

Mixed Methods

Mixed methods research is now considered by many to be the third research paradigm (Johnson & Onwuegbuzie, 2004). Johnson, Onwuegbuzie and Turner (2007) developed a general definition of mixed methods research by analyzing definitions from a series of experts in the field. Their definition follows:

> Mixed methods research is the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and collaboration (p. 123).

What is clear from this definition is that Mixed Methods involves only the combination of qualitative and quantitative perspectives, while *multiple methods* research includes many quantitative or qualitative approaches within one study. This latter approach has also been termed within method triangulation. (Johnson & Onwuegbuzie). In 2003, Rocco, Bliss, Gallagher and Perez-Prado reported on a review of 16 articles published in the *Information Technology, Learning, and Performance Journal*. Of these only three met the criteria for being mixed methods research. These authors noted that many questions in the field of organizations (complex environments) lend themselves to mixed method approaches. Yet, there is still limited work with true mixed methods studies. Clarke (2009) presents a research agenda for using mixed methods to understand the experience of stroke. She reviewed a series of both quantitative and qualitative studies that would have benefitted by a mixed method rather than singular method approach.

In this discussion of mixed methods, I don't want to ignore the multiple *methods approach.* Along with true mixed methods complex environments often require, in one study, more than one quantitative or qualitative approach. Questions of complexity

usually require more than one approach to data collection and analysis. In our current funded project (Effken, Carley & Verran, 2006), our research team has conducted five sub-studies which include a qualitative approach using Cognitive Work Analysis, a quantitative study of the communication networks of nursing units using a form of social network analysis and a quantitative study using techniques to simulate nursing units in a virtual environment. All of these studies tell us new and different information about how to improve safety for hospitalized patients. I tend to view this work as an approach to multimethod research rather than mixed methods.

Unique Methods

There are any number of methods that are unique or underutilized in health care that help in the investigation of complex environments. Of those 7000 articles mentioned earlier (or at least the ones I reviewed), one theme involved the use of simulations to model complex environments. Another theme from the field of human factors research involved Cognitive Work Analysis that is being used more frequently in health care. Third, communication network analysis is beginning to get greater attention. I've chosen these three broad categories as examples of "cutting edge" methods for complex environments. It is only coincidental that these are the three techniques I just mentioned as part of our current research!

Cognitive Work Analysis

I must admit that when my colleague, Judith Effken, first mentioned the need to do a CWA as part of our National Library of Medicine (NLM) proposal, my immediate thought went to all those time and motion studies that took place in my youth. However, CWA is a different approach entirely. From the field of human factors research, CWA is designed to model complex sociotechnical systems. Initially developed by Rasmussen (1986) to examine nuclear power accidents and further described by Vicente (1999), CWA is not just one procedure, but has five interrelated phases: Work domain analysis (WDA); Control task analysis (ConTA); Strategies analysis; Social organization/Cooperation analysis (SOCA); and, Worker competencies analysis (WCA). WDA is used to describe the domain in which the focal activity takes place without dealing with any particulars of workers, etc. ConTA models one or more recurring tasks by focusing on what needs to be achieved. The third phase, strategies analysis, is used to look in more detail at recurring activities by considering the strategies that may be used to achieve the task. Phase 4, SOCA, models the constraints that govern the tasks and resources as well as how the work group cooperates. In the final phase, WCA, identifies the competencies that workers need for performing required activities. Jenkins, Stanton, Salmon, Walker and Young (2008) noted that the primary focus in the literature is on the first phase of WDA; however, this approach is used to describe only the domain in which the activity takes place independent of goals. Thus, it's use alone does not fully examine the total sociotechnical system. These same authors further describe methods to link the various phases of CWA (Jenkins, Stanton, Walker, Salmon, & Young 2008). Within health care, WDA has primarily been emphasized. The technique has been used to examine the work domain that involves human technology interaction (e.g. Watson and Sanderson, 1998). An interesting use of WDA is found in publications that use the technique to model the work domain in the care of intensive care patients (Hajdukiewicz, Vicente, Doyle, Milgram, Burns, 2001; Miller, 2004). This approach

makes sense when we think of patients as being at the core, not only of the ICU work domain, but of all health care work domains.

In our research, CWA was initiated to examine the work domain of nurse managers, particularly in terms of the information they needed to make decisions about their units. We also were interested in their access to information primarily in terms of patient safety issues. Ten nurse managers as well as nurse and information systems executives were interviewed using structured questions. Interviews were audiotaped and subsequently transcribed. Interview data were analyzed following the techniques of CWA (Jenkins, Stanton, Salmon & Walker, 2009; Vincente, 1999). One of the results of this analysis involved the first three phases of CWA (WDA, ConTA and Strategies analysis) where we examined the actions taken to resolve a patient safety problem. (Effken, Verran, Logue & Hsu, 2010). We found that the primary action of nurse managers was toward remedial education when system changes might be a more appropriate approach. Although not part of this particular aspect of our CWA, we could move further with the project by examining the constraints that managers face when dealing with patient safety issues and continue to an examination of competencies needed to fully deal with the activity.

CWA has been implemented in a number of areas and its use is moving more into health care. Interestingly, except for our own article, I did not find any other published use in nursing research. It seems that with the general expertise in qualitative methods in nursing and our need to examine complex environments in different ways, CWA should become a method with which we are familiar.

Network Analysis

Network analysis is a quantitative and descriptive approach to understanding the complex relationships that occur among individuals. Relationships can be in terms of a characteristic such as friendship ties or qualities of communication. Its major use has been on the communication patterns within groups. A variety of computer programs are available for measuring communication networks and it is the recent existence of these programs that has made this a technique for investigation. Along with summary measures of the network, graphical presentations are possible for the full network and subgroups within the network. Network analysis has been utilized in a number of areas and has started to be of interest in health care. In many studies, the network itself is the focus. However, a unique study by Zohar and Tenne-Gazit (2008) investigated the effect of communication networks and friendship networks as mediators between transformational leadership and the strength of organizational climate. This study emphasized the two network summary indicators of density and centralization.

Within health care, network analysis has been used to study the impact of information technology on transfer handoffs (Benham-Hutchins & Effken, 2010; Benham-Hutchens & Clancy, 2010), communication and information flow in public health departments (Merrill, Caldwell, Rockoff, Gebbie, Carley & Bakken, 2008); and knowledge sharing networks relation to quality reporting (Rangachari, 2008). These examples are only a few among many other topics.

In our current research, (Effken, Verran & Carley) we have used ORA, an organizational network analysis program to examine nursing unit communication networks (NUCN). The initial purpose in this was to build more realistic unit level relational structures for developing virtual units than a traditional hierarchical structure. Our findings about nursing unit communication have been greatly enhanced with the use of this technique. In looking at the stability of communication, we found varying results:

four of our seven units had stable patterns over time, while three did not. Night shift communication was less stable than day shift communication. We also found that summary indicators affected patient outcomes in a differential manner. In other words, it appears that different communication networks result in more positive outcomes depending upon the outcome. To date, there is limited investigation of how communication networks affect patient outcomes and this is a viable area for further study.

One other approach to the study of social relations is the use of the Social Relations Model (SRM) (Cook & Kenny, 2004). The SRM is a mathematical approach for estimating the interaction effects from individuals and dyads. The model was developed initially for the examination of relationships within families. It is not a network analysis technique per se, but a method for developing group level measures while considering variable levels of influence. Shea (2010) extended the use of the SRM to triads (patient, care giver and home health nurse) involved delivering care in a telehealth environment.

Simulations

While searching for unique methods for examining complex environments, I stumbled across an article by Cohen, Greenberg, Hort and Howe from 1989. These authors reported on the development of the Phoenix project which is a "real-time, spatially distributed, multiagent, dynamic, ongoing, unpredictable environment" (pg. 34). Put in other terms, Phoenix is a program that simulates forest fires by deploying simulated bulldozers, crews, airplanes and other objects. The environment simulates fires in Yellowstone park. There is no question that a forest fire in a national park results in complexity and the handling of that event results in a highly complex environment. In healthcare, we have attempted similar complex situations with simulations that are used as teaching aids for handling complex procedures, but the use of total virtual environments is relatively new.

The best known simulated environment is Linden Lab's Second Life. In 2007, Kamel Boulos, Hetherington, & Wheeler reviewed cases in medical and health education that have used Second Life as their platform. Since that time the use of the virtual world has continued to grow with universities purchasing Second Life property for educational purposes. There is limited evidence, however, of the use of simulated environments in research.

In 2001, colleagues and I (Verran, Effken & Lamb) began what may be a lifetime of work, to build virtual nursing units to allow nurse managers to make changes within the virtual unit and analyze the changes' impact on patient outcomes. Our first funded project identified the critical unit indicators that affected both safety and quality outcomes. Further, that project, using the OrgAhead program established 32 virtual units that were essentially identical to their real-world counterparts. We also verified through virtual experiments that we could alter the virtual environment in to improve patient outcomes. (Effken, Brewer, Patil, Lamb, Verran & Carley, 2003; Effken, Brewer, Patil, Lamb, Verran & Carley, 2005). In 2007, we extended this program of research with DyNADs (Effken, Verran & Carley). DyNADs continues to use OrgAhead to create virtual units, but also includes the use of ORA to identify the NUCN to serve as the structure for each virtual unit. With a much smaller sample of patient care units, this current project has reduced the extensive data collection required in order to simplify the creation of the virtual units and assure that they reflect current unit realities. The use of this reduced or streamlined data is currently being tested for validity in relation to the full data previously collected.

My experience with creating simulated environments is that it takes perseverance, a dedicated team of experts from diverse fields, and the creativity to innovate when things just don't go quite the right way. However, the use of simulations in research has tremendous potential. Our work indicates that it is possible to create organizational environments that model the real health care environment with all its nuances, its relationships and its turmoil and, that these virtual environments can be used for research, management and education. Simulations, in all their form, have extensive potential for researching the complexities of our world.

Conclusions

No matter the research methods used, an issue in the study of complex environments is the identification of the appropriate contextual elements that affect outcomes. As mentioned at the start of this paper, such identification involves both science and art.

The theory designed to ground the research is one approach to assuring the inclusion of appropriate context at the appropriate level. A number of middle-range theories have been utilized to support research involving context. There is increasing literature supporting that health care environments are complex adaptive systems (CAS) (e.g., McDaniel, Lanham & Anderson, 2009). It is possible to model context as part of the five characteristics that define a CAS: 1) diverse agents that learn, 2) nonlinear interdependencies, 3) self-organization; 4) emergence and 5) coevolution. And, it is also possible to include context as part of other organizational and change theories.

A second issue involving research theory deals with the level of the theory. In most cases cross-level theories support research involving context. The researcher needs to attend to the level of the elements within the theory and how they are best measured and analyzed.

The best way to include the appropriate context is to depend on previous research. As part of a program of research the effect of contextual elements should always be considered. Excellent field notes from efficacy and effectiveness trials can inform the investigator of pertinent variables that should be included in future research. Mixed methods research can also inform by directly investigating elements that patients, family and providers indicate affect the patient outcome.

Finally, there is no substitution for collegial networking. When we consider collaboration, it can extend from collaboratories to simple affiliation among scientists. In the last decade there has been more attention paid to the creation of larger collaboratory structures. Bos et al. (2007) define a collaboratory as …..an organizational entity that spans distance, supports rich and recurring human interaction oriented to a common research area, and fosters contact between researchers who are both known and unknown to each other, and provides access to data sources, artifacts, and tools required to accomplish research tasks. (p. 656).

Bender (2004) describes the basic rules that should be followed to develop a successful collaboratory and Bos et al. report on the development of a seven category taxonomy of collaboratory types. In a review of the Science of Collaboratories database, which can be found at http://www.scienceofcollaboratories.org, limited health care groups, except for those related to specific diseases, were in evidence. An initial attempt to build a collaboratory dealing with health disparities is reported by Holmes et al. (2008). It seems that a form of collaboratory related to the identification and measurement of contextual elements could also be organized.

Beyond the formal existence of a collaboratory, is the incredible value of

collaboration, either actually or virtually, with colleagues who share the same interests but bring different perspectives to a problem. I've been fortunate to have a career built on collaboration with colleagues. In fact, this paper could not have been written without my colleagues. I need to end this paper with the recognition of the individuals from both Denver and Tucson, organized by Cathy Michaels and Paula Meek, who got me involved in identifying the context involved in symptom self-management; the research team from Carnegie-Melton University headed by Cathleen Carley; and our Arizona research group headed by Judith Effken. In fact what I know about the three unique methods for use in complex environments stems from discussions and work with Dr. Effken. Finally, I need to recognize Dr. Barbara Brewer, with whom I've spent hours attempting to find the ideal way to analyze both current and past data. To all of the members of my personal "collabortory," I extend my thanks.

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Distinguished Research Lectureship Award Paper

THE "SO WHAT" FACTOR IN A TIME OF HEALTHCARE REFORM: CONDUCTING RESEARCH & EBP PROJECTS THAT IMPACT HEALTHCARE QUALITY, COST AND PATIENT OUTCOMES

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The Current State of Healthcare and Health in the United States

> "Our health care system is in critical condition. Each year, fewer Americans can afford it, fewer businesses can provide it, and fewer government programs can promise it for future generations - A cure is needed."
>
> *The Innovator's Prescription: A Disruptive Solution for Healthcare*
> *Clayton M. Christensen*

Estimates are that the cost of healthcare delivery in the United States (U.S.) is 2.3 trillion dollars a year, a tripling of its cost in the past two decades.[1] Poor quality healthcare cost the U.S. approximately 720 billion dollars in 2008. Wasteful healthcare spending costs the healthcare system 1.2 trillion dollars annually. Half of American hospitals are functioning in deficit.[2] Further, approximately 250,000 individuals die every year from medical errors, many of which could have been prevented with evidence-based practices. Without EBP, patients do not receive the highest quality of care, health outcomes are seriously jeopardized, and healthcare costs soar.[3] The U.S. healthcare system could reduce its healthcare spending by 30% if patients receive evidence-based healthcare.[4] Additionally, approximately 3 to 10% of hospital admissions are associated with adverse events; 5 to 15% resulting in permanent disability or death. Fragmentation of care in our healthcare system is another huge problem.[5] It is now not unusual for a typical Medicare patient to see two primary care providers and five specialists working in four medical practices.[6] Our healthcare system cannot sustain these rising healthcare costs, wasteful spending and lack of evidence-based practices without a collapse of the entire system.

The health of the American people also is in critical condition. Behaviors are the number one killer of Americans, due to smoking, overeating, lack of physical activity, non-adherence to medications and suicidal gestures. Overweight and obesity will soon surpass tobacco as the number one cause of preventable death and disease in the United States. With the rapid increase in the prevalence of overweight and obesity, the Centers for Disease Control predict that one out of three Americans will have diabetes by 2050. According to the Medicare Payment Advisory Commission (MedPAC), approximately 75% of the total U.S. healthcare spending was allocated to the treatment of chronic diseases.[5] For Medicare, chronic diseases account for 96% of total spending with approximately one quarter of older Americans having four or more chronic conditions.[7] Successful treatment of chronic diseases prevents morbidity and mortality. However, as an example, less than 22.7% of Americans have been told that they have hypertension and less than half of those diagnosed have actually been

treated to effective levels. Hypertension treatment reduces the risk of death from cardiovascular disease by 25% and stroke by 40%.

Americans also have rapidly climbing rates of mental health disorders. The National Institute of Mental Health reports that 26.2 percent of Americans who are 18 years and older have a diagnosable mental health disorder within a given year, with six percent of these individuals having a serious mental health disorder.[8] One in every 3 to four children experience a mental health disorder. A recent survey of 10,123 adolescents between 13 and 18 in the U.S. found a prevalence rate of 31.9% for anxiety disorders, 19.1% for behavior disorders, 14.3% for mood disorders and 11.4 percent for substance use disorders, with 40% of youth with one disorder also meeting criteria for another disorder.[9] The overall prevalence of disorders with severe impairment and/or distress was 22.2%. Furthermore, evidence is accumulating to support that individuals with chronic diseases and co-morbid mental health disorders have higher rates of complications, outpatient visits and hospitalizations, leading to greater healthcare costs.[10] These morbidities are even higher in minority populations.

Although the United States Preventive Services Task Force (USPSTF) has long published evidence-based prevention recommendations on various health topics that are often viewed as "gold-standard," these evidence-based guidelines and other evidence-based clinical preventive services by primary care providers are underutilized, resulting in wasteful healthcare spending and, more importantly, loss of life years for Americans. Furthermore, limitations in research funding and the supply of high quality studies in primary care settings are a major challenge in the development of additional evidence-based guidelines to enhance best practices for a variety of conditions.

As healthcare costs continue to rise, more wellness programs are being created in corporations and institutions across the country. The California State University system has seen a $100 million dollar increase in healthcare premium costs over the past four years, which is not covered by the state system. According to data gathered from approximately 600 academic institutions by the College and University Professional Association for Human Resources, healthcare costs over the past four years for college employees with families have increased five to 11 percent, which is not sustainable. Institutions will have no choice but to continue to shift the burden of these rising costs to their employees.

The changing nature of morbidities in the U.S. and the current critical condition of our healthcare system is calling for innovative studies and programs of research that will lead to evidence-based screening and successful intervention/treatment strategies as well as new models of transdisciplinary care that enhance patient outcomes and, at the same time, decrease healthcare costs (i.e., high-value healthcare). This is no small feat, but it can be accomplished with a common vision, rigorous research, acceleration of evidence-based practice, and funding directed to high priority areas that will make a difference in the most prevalent conditions negatively impacting Americans and our healthcare system.

The "So What" Factor in Research and Evidence-based Practice

Over the years, I have mentored many new investigators and students through their PhD and DNP programs. Because of the pressures associated with achieving tenure, it is common for tenure track faculty to place emphasis on obtaining national peer-reviewed funding and publishing data-based articles in journals with high impact factors. Although dissemination of our work is critical, research is not completed

until the findings from our studies are translated into clinical care and communities to positively impact outcomes (i.e., the health of the people for whom we care or the quality of healthcare delivery). I have always said that I do not want to get to the end of my research career, having invested 30 years in a program of intervention research with terrific outcomes for children and families, and have no one implementing my evidence-based intervention programs.

From the very beginning of a doctoral program or as we work with nurses and other transdisciplinary colleagues in healthcare systems, we need to start talking with them about the "so what" factor, which is the term I use for conducting research with high impact potential to positively change healthcare systems, reduce costs and improve outcomes for patients and their families. For example, key questions that every professional needs to be reflecting upon as they begin to design a new study or project are:

- "**So what** will be the end outcome of the study or EBP project once it is completed?;
- "**So what** difference will the study or project make in improving healthcare quality, costs and, most importantly, patient outcomes?;
- "Who will care about the study's outcomes (e.g., healthcare providers; healthcare systems)?;
- Once you have the outcomes from the study or project, what are you going to do with them in addition to presenting or publishing the findings?
- If it is an intervention that is being developed or tested, will it be feasible and cost-effective for providers, hospitals or healthcare agencies to adopt and implement it?
- How exactly will you go about getting your research findings translated into clinical practice to improve care and patient outcomes?

We must help our students and colleagues to focus more on the "so what" factor as they begin their programs of research, especially our PhD students who will be experts at generating evidence and our DNP students who will be experts at generating internal evidence and translating external evidence into practice in their own clinical settings.[11] Planting these seeds in individuals as they enter our academic programs and mentoring them to engage in high impact work that makes a difference in outcomes is necessary to make a positive difference in our healthcare systems, our patients and the communities in which we live. Without this approach, we risk continuing to generate a large number of research findings that are disseminated through publications and presentations, but to a large extent do not make it into the real world to positively impact healthcare quality and patient outcomes.

Three criteria for grant reviews at the National Institutes of Health are: (1) overall impact, (2) significance, and (3) innovation, which are all related to the "so what" factor. It is important to understand the differentiation in these criteria as they relate to proposed studies.

Impact is the probability of whether the study will exert a sustained powerful influence on the research field. The topic of significance questions whether the study addresses an important problem or a critical barrier to progress in the field along with the question of "If the aims of the study are achieved, how will scientific knowledge, technical capability and/or clinical practice be advanced?" Questions about innovation include: (1) Does the project employ novel concepts, approaches or methods?; (2) Are the aims original and innovative; and (3) Does the project challenge existing paradigms or develop new methodologies or technologies?

Building an Impactful Program of Research that Makes a Difference: My Program of Research

There are 5 Ps that I consider important when launching a program of research, including:

- Prevalence of the problem and the "So What" Factor,
- Passion, which is critical for engagement and sustainability of the research program,
- Planning, which includes the details necessary for a successful study or project,
- Persistence, which is the key to getting through all of the "character-builders," especially the grant rejections, and
- Patience, a virtue developed through building a program of research that makes a difference in outcomes.

Throughout my career, one of my greatest passions has been improving the health outcomes of highly vulnerable children, adolescents and their families. Specifically, my sustained research trajectory over the past 25 years has focused on the development and testing of theory-based interventions to improve coping/mental health outcomes in hospitalized/critically ill children, premature infants and their parents, and translating those interventions into clinical care to improve healthcare quality and patient outcomes through evidence-based practice (EBP).

My program of research started when I was practicing as a critical care nurse in the pediatric intensive care unit (PICU) at Children's Hospital in Pittsburgh. As I practiced in that PICU, I was amazed that we, as nurses, would spend so much time educating parents of critically ill children about the tubes, lines and monitors attached to their children, but so little time focused on meeting parental needs and reducing their psychological stressors as there was an abundance of literature supporting that parental distress negatively impacts child outcomes.

Over a period of two decades, I conducted a total of six experimental studies, three of which were funded by the NIH/National Institute of Nursing Research (NINR), testing my COPE (Creating Opportunities for Parent Empowerment) program for parents of hospitalized young children, critically ill children and premature babies. The COPE program is a manualized educational-behavioral skills building intervention that can be delivered by nurses or other health professionals at the bedside. It teaches parents about: (1) what to expect in the behaviors, emotional and physical characteristics of their children, and (2) how best to parent their children while hospitalized along with strategies to enhance their children's developmental and psychological outcomes. Skills building activities are incorporated into the program through a parent workbook so that parents can put into practice the content they are learning from the educational CD-ROMs and written information, which are part of the program.

Overall, findings from this series of six intervention studies indicated that parents who received COPE, in comparison to those who received an attention control program, reported: less stress, anxiety, depressive symptoms and post-traumatic stress during and following hospitalization; and provided greater support to their children as well as had more positive parent-child interactions during hospitalization.[12, 13, 14, 15, 16, 17] In addition, children whose parents received COPE had less negative behaviors, up to a year following discharge, and better developmental outcomes, up to 3 years following discharge from the neonatal intensive care unit. Along with studying the effects of COPE on child and parent outcomes, our team studied the process through which COPE worked by empirically identifying parental cognitive beliefs as the key

mediator of the effects of the intervention on parent mental health outcomes and participation in their children's care.[18, 19] Structural equation modeling also supported that parental emotional outcomes mediated the effects of COPE on child outcomes.[20] These findings filled a gap in the science of understanding the processes through which the COPE psychosocial intervention exerted its positive effects.

Although the findings from these studies were important and I received numerous inquiries about the program from across the U.S. and globe from both researchers and clinicians, the programs were not being implemented in hospitals and, as such, families were not benefitting from the COPE programs. The breakthrough for the COPE program's implementation in hospitals throughout the U.S. was not realized until we published the findings from our full-scale clinical trial with 260 premature infants and their parents, which indicated that the preemies of parents who received COPE were discharged by a mean of 4 days sooner than preemies of attention control parents. This earlier discharge rate resulted in a cost saving of nearly $5,000 per COPE infant.[21] Further, COPE preterms less than 32 weeks were discharged an average of 8 days sooner than attention control preterms. As a result, routinely delivering the COPE NICU program to parents of the over 500,000 preterm infants that are born in the U.S. every year could save our healthcare system at least 2 ½ billion dollars every year. The "so what" factor here is that, not only does COPE improve important parent and infant outcomes, but it also shortens length of hospital stay and saves substantial costs for the hospitals who implement it.

Shortly after publishing our cost analysis paper, hospitals began to call us with questions regarding the cost of the COPE program and training needed for implementation in their NICUs. As a result, our team established a business plan along with a corporation, entitled COPE for HOPE, with the mission of promoting the health of children, teens and families through stressful times (see www.copeforhope.com). COPE for HOPE provides the training and COPE program intervention materials to NICU staff in hospitals throughout the country. One hospital in the mid-west, who has implemented the program for nearly a year now, has found an even shorter length of stay for their preterms whose parents received COPE than we found in our full-scale trial. Two insurers also have recently integrated COPE for parents of preterms into their healthcare services, which is a researcher's dream.

The COPE program also has been and/or is being currently adopted for: (a) burned children in the Shriner's Hospital system, (b) children with epilepsy at Boston Children's Hospital, (c) cardiac children at Barnes-Jewish Hospital, (d) cardiac infants at Children's Hospital of Philadelphia, (e) children in rehabilitation at Emory Children's Hospital, and (f) post-partum smoking mothers with fussy infants. In addition, COPE has been translated into Spanish and is being tested with Latina mothers at Dallas Children's Hospital. COPE is also being used in Switzerland, Sweden, Australia, the United Kingdom, China, the Netherlands, Canada, Iran and Israel.

Although the process of adoption has been slow (a 25 year research-practice time gap instead of the 17-year time gap that is often quoted), COPE is now being successfully implemented by NICUs and insurers throughout the country. It is not easy to be patient as the developer of an evidence-based intervention program, however, the diffusion of innovations takes time. Translational research, which is the study of the process through which evidence-based interventions are implemented in real world practice settings along with the best strategies for translating them into clinical practice, is still in its infancy. In order to discover the best strategy for disseminating COPE into NICU settings, we conducted a recent dissemination/ implementation pilot study. In this study, we learned that there were a variety of barriers that prevented

nurses from routinely implementing COPE with parents of preterms, including competing priorities (e.g., the physical care of the infants), short staffing and movement of babies to different pods within the NICU. As a result of these barriers, parents of preterms were not routinely receiving all phases of the COPE program. However, with the introduction of a COPE EBP mentor into the unit, more parents of preterms received the program.[22]

In working with hospitals throughout the country to implement and sustain EBP, we have learned that advanced practice nurses who are skilled in EBP, organizational cultural change, and individual behavior change (i.e., EBP mentors) are critical in strengthening clinicians' beliefs about the value of EBP and increasing their EBP implementation.[23,11, 24] Developing a critical mass of these EBP mentors in hospital/healthcare systems is a key ingredient in our ARCC (Advancing Research & Clinical practice through close Collaboration) EBP Model for implementation and sustainability of EBP.[25,26]

In our current NIH/NINR R01 funded full-scale randomized clinical trial, we are testing the efficacy of the COPE Healthy Lifestyle TEEN (Thinking, Emotions, Exercise and Nutrition) Program on the healthy lifestyle behaviors and the physical health, mental health, and academic outcomes of 800 adolescents in Phoenix, Arizona high schools. Inclusion of academic outcomes, such as grade performance, retention and missed school days is a huge "so what" factor because schools receive funding based on these outcomes. As a result of the pearls that I have learned in my 25 year research career, I am approaching research through a different lens. I now know how critically important the "so what" factor is in designing studies in the context of the current healthcare climate. I also know how valuable it is to consider the "so what" factor at the outset of a new study and to plan strategies that can be used to successfully translate the findings from research into real world practice settings.

I have always believed that my work as a researcher is not complete until the findings from my studies are translated into clinical practice by point of care providers to improve the care and outcomes of children and their families. As there continues to be a large time gap between the translation of most research findings into clinical practice, I also have devoted a large part of my career to shortening this gap through the advancement of EBP. I cannot emphasize enough that there remain huge barriers in clinicians and our healthcare systems to advancing EBP.

A key barrier to routine implementation of EBP outside of healthcare systems is that many faculty continue to teach bachelor's and master's students the rigorous process of how to conduct research instead of how best to use the research that is generated to improve patient care and outcomes. Until that approach to teaching research is reconfigured in educational institutions throughout the country and hospital cultures transform into those that support system-wide implementation of EBP, the Institute of Medicine's 2020 goal of 90 percent of healthcare decisions being evidence-based will probably not be realized.

Future Tactics for Improved Healthcare and Better Patient Outcomes

A collective vision for improved healthcare and better patient outcomes is desperately needed among researchers, clinicians, leaders, educators, healthcare systems and policy makers. That vision needs to focus on outcomes, specifically improving healthcare quality, cost and patient outcomes. However, vision without execution will not become a reality. Therefore, the following strategies are recommended as key to success:

- Conducting studies with impact, which include the measurement of outcomes that tap healthcare quality, costs and patient outcomes (the "so what factors" important to healthcare systems and the health of our nation);
- Conducting comparative-effectiveness trials in order to support the most efficacious interventions to improve health outcomes;
- Preparing the next generation of researchers and doctorally prepared clinicians to address the "so what" factor in their research and evidence-based/quality improvement projects;
- Teaching these key concepts, including cost analysis and strategies that rapidly translate research based findings into clinical practice, in the early phase of educational programs;
- Encouraging PhD students to tackle intervention studies when there is sufficient descriptive research about the problem;
- Growing more positive deviants, who are innovators and not steeped in "this is the way we do it here;"
- Forming transdisciplinary teams to tackle the "so what" factor and speed the translation of evidence-based interventions into clinical practice;
- Establishing public-private partnerships to tackle the most pressing issues in health and healthcare;
- Establishing more University-wide and corporate wellness programs with rigorous outcomes management;
- Accelerating the use of technology in research and evidence-based practice;
- Addressing key gaps in research where evidence is poor or lacking; and
- Building cultures of evidence-based practice within healthcare systems and academic institutions.

Some ripe areas for research in lieu of our current most prevalent health and healthcare problems include: the development and testing of interventions that improve both physical and mental health outcomes; comparative-effectiveness research; the use of technology to improve healthcare quality and safety; interventions to enhance management of chronic illness and the reduction of health disparities, including mental health; and translational research.

Nursing has long suggested solutions for how to improve healthcare and the health of our nation. With the addition of cost analyses and the measurement of key health and healthcare outcomes that the nation and healthcare systems value, our suggestions and research will be more potent to drive needed effective solutions to the nation's most pressing problems.

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The Carol A. Lindeman Award for a New Researcher Paper

TRANSLATION TEAM APPROACH: PSYCHOMETRICS OF A VIETNAMESE PAP TESTING SURVEY

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Purposes/Aims: There are limited existing instruments for use in examining Pap testing health beliefs, cultural barriers to engaging in cervical cancer screening, and view of the quality of care from the health care system and its influence on participation in cervical cancer screening for Vietnamese immigrant women (VIW, non-United States-born [U.S.]. Therefore, the aims of this study were to adapt and develop a culturally sensitive, linguistically appropriate, and meaningful Vietnamese translation of the *Revised Susceptibility, Benefits, and Barriers Scale* (SBBS)[1], *Cultural Barriers to Screening Inventory* (CBSI)[2], *Quality of Care from the Health Care System Scale* (QoC)[3], and *Confidentiality Issues Scale* (CIS) (developed with Community Experts) for VIW using a community based participatory research approach (CBPR). This process also included describing the psychometric properties of these instruments on the VIW who took the questionnaire in Vietnamese. Validity enhancement in cross cultural research is important in the areas of translation of instruments and measurement procedures so as to get at support for construct equivalence of the original and adapted instrument.[4] Therefore, efforts to minimize construct bias are important; and the use of literal translation can lead to construct bias.

Rationale/Conceptual Basis/Background: We know little about VIW's held beliefs about Pap testing. Vietnamese immigrants believed in not looking for problems unless there was a strong reason for it, preferred to not know about something that could not be changed, and perceived cancer as death.[5,6] VIW would only seek a doctor if there was a sign of cervical cancer suggesting having to be symptomatic prior to seeking care.[5] Shyness or embarrassment was identified as a barrier or avoidance in not getting a Pap test.[5,7] These beliefs regarding cancer and Pap testing can contribute to the delay in obtaining cancer screening for early detection of cancer when cure is achievable. Nguyen and colleagues also found that one of the problems Vietnamese immigrants identified regarding communicating with doctors about cancer was having felt that the doctor did not have time to talk.[6] Only 68% of Vietnamese American women (VAW, United States [U.S.]-born and immigrants) reported adherence to cervical cancer screening guidelines (had a Pap test in the past three years)[8], and this is low compared to the national Healthy People 2010 objectives.[9] VAW are diagnosed with higher late stage (regional spread or metastases) of cervical cancer diagnosis compared to non-Hispanic White women (36% vs. 28% respectively) and also to Korean and Japanese subgroups.[10] The Ecological Model of health behavior guided our understanding of intrapersonal influences included Pap testing health beliefs (perceived susceptibility to developing cervical cancer, perceived benefits of Pap testing, perceived common barriers to Pap testing); perceived cultural barriers to Pap testing; confidentiality issues regarding being worried that a doctor or nurse practitioner or Vietnamese interpreter will let others know about obtaining a Pap test; and organizational influences included view of the quality of care from the health care system.[11]

Methods: ***Design:*** A community-based participatory research (CBPR) approach oriented this study to be collaborative and community-based and addressed a local relevance of a public health issue in the Vietnamese immigrant community in the Northwest metropolitan area of the U.S.[12] Use of a CBPR in developing a questionnaire for a Vietnamese community was appropriate for studying a sensitive topic, cervical cancer screening. Instrument development was in five stages. Stage 1 was focused on making initial modifications with the original instruments. Stage 2 was focused on having community members and two PhD prepared Community Experts review the initial modified instruments. Stage 3 was the instrument translation. Stage 4 was the pre-testing of the Vietnamese and English version questionnaires. Stage 5 was focused on describing the reliability and factor structures. **Stage 1: Initial Instrument Modifications.** ***SBBS.*** This study modified Champion's SBBS to measure Pap testing health beliefs in this study.[1] Perceived susceptibility was defined as an individual's beliefs about risk of threat or harm related to developing a disease. Perceived benefits was defined as an individual's belief about positive benefits of a health action. Perceived common barriers was defined as an individual's personal obstacles that prevents a health action. The conceptual term perceived common barriers was used in this study instead of perceived barriers as to differentiate perceived common barriers from perceived cultural barriers. This original SBBS consists of 19 items. Content validity and construct validity has been supported. An exploratory factor analysis determined the 3-factor structure that accounted for 54% of the variance. The Goodness of Fit Index was at .87. The Cronbach's alphas demonstrated high internal consistency reliability for perceived susceptibility, benefits, and barriers (.87, .75, .88 respectively). Items were measured using a 5-point Likert scale ranging from 1 to 5, and higher scores indicated greater perceived susceptibility, benefits, and common barriers. ***CBSI***. The components of perceived cultural barriers that this study examined was defined as an individual's beliefs about utilization of Eastern/Asian medicine for illness, modesty about one's body, crisis orientation regarding efficacy of Pap testing, and lack of family support as obstacles to a preventative health action. This study modified Tang and colleagues' CBSI to measure perceived cultural barriers in obtaining a Pap test.[2] The original CBSI consists of 17 items. An exploratory factor analysis determined a 4-factor structure that accounted for 54% of the variance. The original CBSI also demonstrated moderate internal consistency reliability for utilization of Eastern medicine, modesty, crisis orientation, and lack of family support subscales (Cronbach's alpha = .72, .72, .61, .54, respectively). Items were measured using a 5-point Likert scale and higher scores indicated greater endorsement of the cultural barrier component. The summed scores were reverse coded for crisis orientation and lack of family support to reflect the same interpretability in scores. ***QoC***. This study adapted five items from the Health is Gold Survey and developed a scale with these items (Nguyen et al., 2006) to measure an individual's view of the quality of care from the health care system. The scores were reverse coded. A 5-point Likert scale was used for each item ranging from 1 to 5 and a higher score indicated a greater view of the quality of care from the health care system. **Stage 2: Community Review.** Next community members involved in the research reviewed the initial modified instruments and provided minor suggestions regarding flow and clarity. The investigators worked with two Community Experts (both PhD prepared, one is a medical doctor, anthropologist; other has a background in adult education, community health) and developed the CIS. Confidentiality issues was measured with two items, using a 5-point Likert scale with 1 being strongly disagree to 5 being strongly agree. The responses for the CIS were summed and a higher score indicated greater worry

about confidentiality in obtaining a Pap test. **Stage 3: Instrument Translation.** The modified instruments were translated into Vietnamese using a CBPR approach and the U.S. Census Bureau's team approach.[13] The translation team consisted of four Vietnamese members: an investigator (nurse), a Community Consultant (Vietnamese language teacher, community health education background), a Community Advisor (nurse), and another Community Advisor (public administration background). Figure 1 provides information on the translation process. **Stage 4: Pre-testing.** ***Sample*:** The questionnaire was pre-tested with 10 VIW who resembled the participants in the full study (self-identified as a Vietnamese immigrant woman, between ages 21-99 years, have never been diagnosed with cervical cancer, and are able to read and speak Vietnamese or English) to examine clarity and utility. The Vietnamese version had 7 participants, and the English version had 3 participants. ***Procedures**:* The study protocol was approved by the Internal Review Board of the Oregon Health & Science University (OHSU) and the OHSU Knight Cancer Institute. Community members helped to invite potential participants about an opportunity to participate in this study. The consenting process included the investigator explaining the purpose of the study to each potential participant. The study protocol was determined to be minimal risk. Each participant received a $20 Fred Meyer gift card at the completion of a one-time self administered pen-paper questionnaire and cognitive interview as an appreciation for her time. Consent was provided when the completed questionnaire was returned and having completed a cognitive interview. The questionnaire took an average of 23 minutes to complete (range 13-35 minutes) followed by a cognitive interview of about one hour duration. **Stage 5: Psychometric Testing.** The modified instruments were then examined to see how well items of the instruments held when compared to the original instruments. This was done on the same sample of VIW who participated in the full study. ***Sample and setting**:* VIW (n=201) (same eligibility criteria as for the pre-testing) participated in taking the Vietnamese version self-administered pen-paper questionnaire. VIW were recruited from 12 Asian community organizations in the Northwest metropolitan area of the U.S. A Vietnamese investigator was present at the data collection sites and was available for questions. The consenting process was the same as for the pre-testing (excluding a cognitive interviewing portion), and each participant received a $10 Fred Meyer gift card upon the return of the completed questionnaire. ***Statistical analyses:*** SPSS (version 17.0.2, Chicago, Illinois) and Amos (version 18.0 Chicago, Illinois) software were used for data analysis. Descriptive statistics were used to describe the sample, and a Cronbach's alpha was used to evaluate the internal consistency reliability, an exploratory

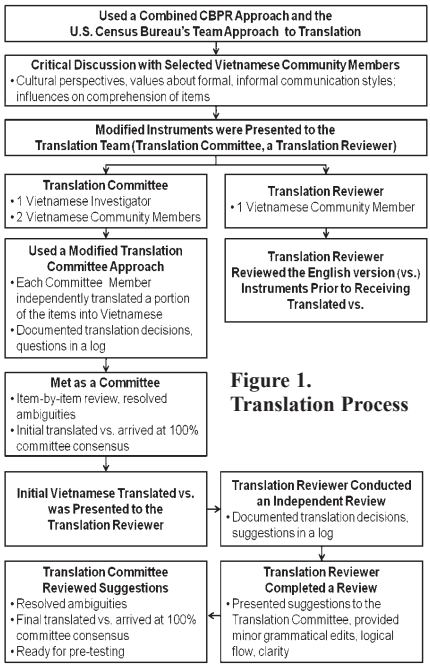

Figure 1. Translation Process

factor analysis was conducted to determine dimensionality only for comparison purposes with the original factor structures. Confirmatory factor analysis was used to evaluate the fit of the 3-factor structure of the modified SBSS and the 4-factor structure of the modified CBSI. An incremental fit index (IFI) < .95 and a root mean square error of approximation (RMSEA) ≤ .06 were used as the cutoff evaluation criteria, with an RMSEA value > 0.10 considered not acceptable.[14,15]

Results: ***Sample characteristics:*** Participants were middle aged with an average age of 50 years and ranged in age from 21-87 years, were an average age of 35 years when immigrated to the U.S. (SD ±15 years), had lived an average of 15 years in the U.S. (SD ± 9 years), and about 40% spoke English poorly or not at all. Approximately 66% of participants were currently married or living with a partner, 39% had less than high school education, and 36% having some college or a graduate degree. ***Reliability:*** The Cronbach's alpha values for the susceptibility, benefits, and common barriers subscales of the modified SBBS were .86, .69, .86 respectively. The modified CBSI subscales, utilization of eastern medicine, modesty, crisis orientation, and lack of family support yielded alphas of .69, .83, .77, and .91 respectively. The CIS had a Cronbach's alpha of .89, and the Cronbach's alpha for the modified QoC was at .57. ***Three-factor structure of the modified SBBS:*** A principal axis factoring extraction method with a varimax rotation was used in which a 3-factor solution was forced for items of the modified SBBS a priori. This allowed for comparison with the original SBBS. The 3-factors together accounted for 44% of the variance. The 3-factor structure of the modified SBSS yielded an IFI at .83 and an RMSEA at .094. The standardized regression weights ranged from .72 to .87 for perceived susceptibility, .07 to .98 for perceived benefits, and .29 to .79 for perceived common barriers. Perceived susceptibility was positively associated with perceived benefits and perceived common barriers, r = .22 and .11 respectively. Perceived benefits was negatively associated with perceived common barriers, r = -.25. ***Four-factor structure of the modified CBSI:*** A principal axis factoring extraction method with an oblimin rotation was used for items of the modified CBSI. This allowed for comparison with the original CBSI. Four factors were extracted and together accounted for 57% of the variance. The 4-factor structure of the modified CBSI yielded an IFI at .88 and an RMSEA at .098. The standardized regression weights ranged from .54 to .80 for utilization of eastern medicine, .49 to .87 for modesty, .28 to .91 for crisis orientation, and .63 to .95 for lack of family support. Utilization of eastern medicine was positively associated to modesty, r = .51, whereas utilization of eastern medicine was negatively associated to lack of family support and crisis orientation, r = -.14 and -.03 respectively. Crisis orientation was positively associated to modesty and lack of family support, r = .19 and .45 respectively. Modesty was negatively associated to lack of family support, r = -.05.

Discussion: The results of the psychometric testing for the four Vietnamese version instruments are promising. Using a combination of CBPR and the U.S. Census Bureau's team approach to translation produced Vietnamese language instruments with moderate to strong subscale internal consistency. Having community members and Community Experts review the questionnaire and pretested with VIW helped make the instruments culturally sensitive and linguistically appropriate. ***Reliability:*** Cronbach's alphas of the perceived susceptibility, benefits, and common barriers subscales of the modified SBBS demonstrated moderate to high internal consistency reliability in the sample of VIW in this study. The results of the perceived susceptibility and common barriers were consistent with the results reported by Champion.[1] The

result of perceived benefits was only slightly lower than that reported by Champion (.69 vs .75). Cronbach's alphas of the modified CBSI subscales, utilization of eastern medicine, modesty, crisis orientation, and lack of family support demonstrated moderate to high internal consistency reliability. The result of utilization of eastern medicine in this study was consistent with the result reported by Tang and colleagues[2]; and the results for the other remaining three subscales were higher than that reported by Tang and colleagues.[2] The CIS demonstrated high internal consistency reliability, and the modified QoC demonstrated moderately low internal consistency reliability. ***Factor structure:*** Although the 3-factor structure of the modified SBSS and the 4-factor structure of the modified CBSI yielded a proportionate improvement in the fit of the respective structure; an examination of the approximate fit yielded a relative lack of fit for both of the structures. A possible explanation regarding the relative lack of fit of the factors within the respective structure may be due to having items that presented with lower standardized regression weights. The standardized regression weights for the items of the perceived susceptibility subscale were all greater than .50. Though some of the items of the perceived benefits and common barriers subscales have standardized regression weights that were less than .50. The following items, "If I get a Pap test and nothing is found, I do not worry as much about cervical cancer", "If I find abnormal cells through a Pap test, my treatment for cervical cancer may not be as bad", and "Having a Pap test will decrease my chances of dying from cervical cancer" do not appear to be related or align with the perceived benefits subscale.[16] Two items of the perceived common barriers subscale, "I don't know how to go about getting a Pap test" and, "I cannot remember to schedule a Pap test" also presented with standardized regression weights less than .50. This may indicate that these items are not related or align with the respective factor. The standardized regression weights for the items of the utilization of eastern medicine and lack of family support medicine subscales were all greater than .50, though the standardized regression weights for two items of the modesty subscale were slightly less than .50. The following items, "I only see a doctor or nurse practitioner when I am having a health problem", and "If I follow a healthy diet and exercise, I probably don't need to use other prevention methods like cancer screening tests" may not be related or align with the modesty subscale.[16] The standardized regression weight of one item, "When I get sick I usually take Western/American medicine", of the crisis orientation subscale was also less than .50. Another possible explanation regarding the relative lack of fit of the factors within the respective structure may be due to negative associations among some of the factors. Even though eight items had regression weights $< .50$, they all had factor loadings $\geq .30$ with four items having a factor loading $> .40$. ***Cross-cultural:*** Earlier versions of the SBBS have been tested with White non-Hispanic, VIW, Korean (native), and Jordan (native) women and have demonstrated to be a moderate to highly reliable instrument that has been used to measure beliefs about breast cancer screening.[17-20] Further testing is needed to examine whether the modified SBBS, modified CBSI, CIS, and modified QoC can be used for other racial-ethnic groups and ethnic subgroups. Further testing is needed to provide additional validity support for these instruments. This study has limitations. The sample consisted of participants who self-selected to be in this study. These participants may have answered the items in a positive manner. Self-report measures can be susceptible to socially desirable bias.[21] The strength of this study was in the community-based oriented design where the investigators were able to gain input from community members and organizational representatives in the design and implementation of the study.

Conclusions/Implications: Using a combination of CBPR and the U.S. Census Bureau's team approach can advance cross cultural measurements nursing science. This study addressed a local relevant public health issue and the importance of working with community members in this study's instrument development process including reviewing and providing suggestion on the modified instruments and being involved in the instrument translation. This resulted in a better understanding of cultural perspectives and values surrounding formal and informal communication styles, and how these would influence VIW's comprehension of the instrument items. Moving towards a novel approach to translation allowed decisions to be made as a team in resolving ambiguities, and provided a way of capturing the team's decisions about what items meant in an explicit manner rather than only happening in a translator's mind like in back-translation. This is an undervalued approach to translation, and using such approaches to help enhance validity can minimize construct bias because efforts are being made to translate in a meaningful way rather than literal translation. Further research is needed to adapt and develop culturally appropriate instruments for measuring external influencing variables to engaging in cervical cancer screening including interpersonal, other organizational, community, and health insurance mandate level influences.

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Abstract of the Western Academy of Nurses Panel

STRENGTHENING NURSING'S CONTRIBUTION TO LEADING CHANGE AND IMPROVING HEALTH: PERSPECTIVES FROM THE CALIFORNIA REGIONAL ACTION COALITION (CA-RAC)

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STRENGTHENING NURSING'S CONTRIBUTION TO LEADING CHANGE AND IMPROVING HEALTH: PERSPECTIVES FROM THE CALIFORNIA REGIONAL ACTION COALITION (CA-RAC)

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This cutting edge panel, organized by fellows of the Western Academy of Nursing, is focused on issue(s) that cross education, research, and practice. As such, this panel will provide an overview of the implementation of the IOM report on the Future of Nursing in California. The California Regional Action Coalition (CA-RAC) is a broad-based coalition of nursing leadership and stakeholders leading prioritization and strategy development for implementation of the eight IOM report recommendations. California is the only western state and one of five selected in the first round by the Robert Wood Johnson Foundation and the AARP Center to Champion Nursing in America to pilot implementation.

Panelists from the CA-RAC Executive and Leadership Committees will provide a description and brief history of the formation of the CA-RAC coalition, leadership structure, and strategies employed in prioritizing issues for immediate action. Strategies will be related to particular political, regulatory, and policy forces in California. Project management, communications strategy and engagement of stakeholders from diverse backgrounds, settings, and perspectives will also be discussed in addition to progress with implementation of two of the IOM recommendations: #2: Expand opportunities for nurses to lead and diffuse collaborative improvement efforts and #8: Build infrastructure for collection and analysis of interprofessional health care workforce data.

A Q&A opportunity will facilitate discussion of educational, research and practice strategies for implementation of the IOM recommendations. Newly accepted western states into Wave II of the *Campaign for Action*'s Regional Action Coalitions (RACs) are encouraged to share during the Q & A.

ASSESSING SLEEP-WAKE PATTERNS ACROSS THE LIFE SPAN

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OVERVIEW: ASSESSING SLEEP-WAKE PATTERNS ACROSS THE LIFE SPAN

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AMPLITUDE-INTEGRATED EEG: A MEASURE OF SLEEP IN PRETERM INFANTS

Shuyuann Wang Foreman, Lauren Thorngate, Karen Thomas

POLYSOMNOGRAPHY AND ACTIGRAPHY CONCORDANCE IN JIA, ASTHMA AND HEALTHY CHILDREN

Teresa M. Ward, Martha J. Lentz, Gail M. Kieckhefer, Carol A. Landis

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SLEEP, RESPIRATORY SYMPTOMS AND LUNG FUNCTION IN CHILDREN WITH ASTHMA

Geunhye Han, Teresa M. Ward, Martha J. Lentz, Gail M. Kieckhefer

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AN EVALUATION OF SENSOR TECHNOLOGY FOR DETERMINATION OF SLEEP AND ACTIVITY

Hilaire J. Thompson, Stephen Thielke, T.F. (Martha) Hsueh, Matthai Phillipose

ASSESSING SLEEP-WAKE PATTERNS ACROSS THE LIFE SPAN

Overview: Assessing Sleep-Wake Patterns across the Life Span

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Background: Sleep is increasingly recognized as critical to health and quality of life across the lifespan for persons with and without chronic health conditions. Approximately 50 to 70 million Americans chronically receive inadequate sleep. While inadequate or disturbed sleep has historically been accepted as an unpleasant but benign or normative condition, current research suggests serious physiologic and behavioral consequences including metabolic and inflammatory disturbances, cardiovascular alterations as well as neurocognitive and emotional-behavioral problems. Researchers from the National Institute of Nursing Research funded Center for Research on the Management of Sleep Disturbances (CRMSD) have come together with a mission to improve health, well being, and quality of life through the enhancement of sleep quality across the lifespan, in part by supporting junior nursing scientists with interrelated programs of research.
Purpose: The purpose of this symposium is to share results from four CRMSD-affiliated research teams who have examined sleep using innovative methods across the age span. Each presentation will provide insights into effective use of the novel methodology along with results from the respective study. The first study presents data using amplitude-integrated EEG (aEEG) to monitor the sleep-wake cycling of stable premature infants in the neonatal intensive care unit. The second study presents results from a comparison of actigraphy and polysomnographic data in young children 9 to 11 years of age and highlights how aspects of two chronic conditions influence estimates of sensitivity and specificity. The third study examines the relations of nighttime sleep parameters with same night asthma symptoms as well as prior and subsequent daytime asthma symptoms in a sample of children 9 to 11 years. The final study evaluates the ability of sensor technology in the home to accurately measure sleep-wake behavior, as compared to wrist-worn actigraphy and sleep-wake diaries, in an elderly population and to quantify daytime activities.
Conclusion: All four studies use emerging technology for the assessment of sleep, technology that can effectively capture patterns of sleep disturbances for particular populations to enhance the ecological validity of results and potential translation to improve nursing practice. All studies move our understanding of the multi-factorial influences on sleep (e.g., environment, age/development, and illness) forward so more effective evidence-based interventions can be designed. Presenting this research in symposium format demonstrates how funding for a research center focused on sleep significantly moves the science forward through shared resources, collegial support and consultation, and shared purpose to promote healthful sleep and reduce the negative consequences of sleep disturbances across the age span.

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ASSESSING SLEEP-WAKE PATTERNS ACROSS THE LIFE SPAN

Amplitude-Integrated EEG: A Measure of Sleep in Preterm Infants

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Purpose: To investigate characteristics of emerging patterns of sleep cycling in medically stable preterm infants using innovative noninvasive brain monitoring in the neonatal intensive care unit (NICU) environment.
Background: Research has suggested the emergence of preterm infant sleep-wake cycling (SWC) from as early as 25-30 weeks gestation. SWC is affected by physiologic stability, neurologic maturation, illness severity, intensive caregiving and treatments, and environmental factors. SWC is inconsistent before term gestation. The absence or delayed emergence of SWC may be predictive of poor short-term outcomes. Amplitude-integrated electroencephalography (aEEG) is a simplified form of EEG that reflects the cerebral background activity. aEEG is designed for continuous or serial brain monitoring at the bedside in the NICU. However, its application for brain monitoring of preterm infants is still limited in the United States despite widespread use in Europe, Australia, and Asia.
Methods: A descriptive design was used. Sixteen medically stable preterm infants at 31 to 36 weeks postmenstrual age and 12 to 43 days of postnatal age were studied in the NICU of a Pacific Northwest hospital. An FDA approved cerebral function monitor (CFM 6000, Natus Medical Incorporated, San Carlos, CA) with hydrogel scalp electrodes was used to record single channel aEEG. Infants were recorded once between caregiving and feedings for approximately 3 hours. Visual pattern recognition was applied to categorize aEEG background and baseline variability (SWC). Categories were defined as *developed*-clear sinusoidal variation between discontinuous and continuous background, *immature*-some cyclic variation of baseline amplitude (>2μV), or *none* (Bowen, Paradisis, & Shah, 2010). Expert external review was used to achieve inter-rater reliability. The longest bout of apparent quiet sleep was approximated for each tracing along with amplitude excursion lower to upper border.
Results: 14 of the 16 recordings with acceptable impedance < 20kohm were analyzed. All EEG traces were scored as developed SWC. Longest quiet sleep measurements were 31.6 minutes mean length (range 18-60 min), 33.5 μV amplitude excursion (range 16-48 μV). All infants tolerated the study procedures without evidence of skin irritation or distress.
Implications: aEEG presents a valuable tool to evaluate the presence and maturation of SWC and optimize the neurodevelopmental outcomes of preterm infants. Continuous aEEG monitoring may provide information on the infant's sleep-wake status for favorable timing of nursing caregiving, medical treatments, and interventions. By identifying sleep-wake states, caregivers can respond more appropriately to infant needs and provide developmentally supportive care at better timing, frequency, and duration. aEEG provides a clinically accessible and noninvasive research method for continuous observation of cerebral background activity in sick infants at the bedside.
Reference: Bowen, J. R., Paradisis, M., & Shah, D. (2010). Decreased aEEG continuity and baseline variability in the first 48 hours of life associated with poor short-term outcome in neonates born before 29 weeks gestation. *Pediatric Research, 67*, 538-544.

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ASSESSING SLEEP-WAKE PATTERNS ACROSS THE LIFE SPAN

Polysomnography and Actigraphy Concordance in JIA, Asthma, and Healthy Children

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Purpose: To evaluate sensitivity, specificity, and accuracy with an epoch-by-epoch comparison between polysomnography (PSG) and actigraphy, and to compare PSG derived sleep parameters to those derived from actigraphy in 9-to-11 year-old children with juvenile idiopathic arthritis (JIA), asthma, and healthy children.
Rationale: Polysomnography is the 'gold standard' and the most accurate method to measure sleep stages and wakefulness in sleep research. Although the most accurate sleep measure, PSG data are usually obtained for 1 or 2 consecutive nights in a laboratory setting and thus, provides only a limited view of sleep, which may not represent a subject's customary sleep at home. In contrast to PSG, actigraphs are relatively unobtrusive, inexpensive and can record subjects' sleep and wake patterns for multiple days and nights in the home environment. Actigraphy has become widely used for estimating sleep-wake patterns in community-based research. Agreement between actigraphy and PSG has been reported in infants and healthy school age children < 9 years old, but to our knowledge studies have not been reported similar comparisons in children with chronic illnesses such as arthritis or asthma or in healthy children 9 to 11 years old. There is a need for further validation studies given known developmental changes in sleep as children mature, the increasing use of actigraphy in community-based clinical studies, concerns about the ability of actigraphy to accurately evaluate sleep quality in school age children, and a lack of reports in the literature comparing actigraphy to PSG in children with chronic illness.
Method: Seventy-one (71) children 9-11 years of age with JIA, asthma, and controls participated in the study. Two consecutive nights of PSG and actigraphy were recorded and sensitivity, specificity, and accuracy evaluated in an epoch-by-epoch comparison of PSG and actigraphy.
Results: For the combined sample, mean sensitivity and accuracy were higher than specificity, but sensitivity was significantly higher for JIA on night 1, while specificity was significantly lower for JIA compared to asthma and controls for both nights at all three activity count thresholds evaluated. Total sleep time (TST), wake after sleep onset (WASO) and sleep efficiency (SE) derived from PSG were not different, but TST and SE were higher and WASO lower in JIA. Based on the Bland-Altman technique, actigraphy was more accurate in estimating TST and WASO at the medium sensitivity threshold.
Implications: Our results highlight the importance of evaluating actigraphy determined sleep parameters at each of the thresholds when using a device and software that enables this level of discrimination since sensitivity, specificity and accuracy may differ with children in various clinical populations. Given the unobtrusiveness and cost-effectiveness of actigraphy in pediatric chronic illness, it is important for clinicians and researchers to understand the differences in scoring algorithms and the strengths and limitations of the various actigraphy devices, as actigraphy may not be as sensitive for certain populations.

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Sleep, Respiratory Symptoms and Lung Function in Children with Asthma

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Purpose/Background: Children with asthma often complain of sleep disturbances. Little is known of daily variability in sleep characteristics and its association with asthma symptom severity and pulmonary function in children. That is, do increased asthma symptoms contribute to poorer sleep or does poorer sleep contribute to increased symptoms? We examined temporal daily relations of sleep, respiratory symptoms, and pulmonary function in 9 to 11-year-old children with and without asthma.

Method: Twenty-eight children with asthma and 27 children without asthma kept daily self-report diaries on sleep quality, respiratory symptoms during the day and night, and peak expiratory flow (PEF) measures for 7 days. The children with asthma had a health care provider diagnosis of asthma. All children were free of recent respiratory infections by self/parental report. The sleep items asked included overall quality of sleep, number of awakenings, and how tired, alert and sleepy the child was upon awakening. The three asthma symptoms included nighttime cough, wheezing and chest tightness. All items were rated on a four point scale except number of waking which asked the child to specify the number of awakenings. The children also wore wrist actigraphs (Actiwatch 64 ™, Mini-Mitter Philips Respironics, Bend, OR) over 6 nights. Actigraphic measures of sleep included time in bed, total sleep duration, wake after sleep onset, and sleep efficiency (time in bed / total sleep).

Results: Children with asthma were more likely to have symptoms during daytime (1.37±1.17 vs. 0.37±0.91, $p<0.05$) and nighttime (0.96±0.84 vs. 0.30±0.99, $p<0.05$) but, the mean values of time in bed (526.86±43.33 vs. 531.00±52.05), total sleep duration (451.09±43.51 vs. 462.31±50.64), wake after sleep onset (75.34±23.47 vs. 68.35±36.66), and sleep efficiency (85.73±4.16 vs. 87.15±4.75) did not significantly differ between groups. Both actigraphy-measured and self-reported sleep measures showed within-child daily variability larger than between-child variability among children with and without asthma (overall intraclass correlation: 18%~43%). Among children with asthma, increases in daytime respiratory symptoms were followed by both greater wake after sleep onset ($\beta=4.85$, $p=0.02$) and lower sleep efficiency the following night ($\beta=-0.74$, $p=0.03$). Increases in nighttime respiratory symptoms were associated with decreases in self-reported sleep quality that night ($\beta=-0.10$, $p=0.05$). In contrast, there was no evidence that poor sleep on one night would be associated with lower pulmonary function and increased respiratory symptoms the following day.

Implications: Daytime and nighttime asthma symptoms appear to be related to different aspects of daily variations in sleep disturbance, suggesting the importance of assessing both the subjective and objective aspects of sleep. Interventions targeting respiratory symptoms during the day and at night may be useful in the treatment of sleep disturbances in children with asthma.

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ASSESSING SLEEP-WAKE PATTERNS ACROSS THE LIFE SPAN

An Evaluation of Sensor Technology for Determination of Sleep and Activity

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Aims: To determine if an existing sensor-based system could be used in elders to: 1) accurately measure sleep-wake compared to wrist-worn actigraphy and sleep and wake diaries and 2) quantify Life-Space.

Rationale/Background: Current sleep and functioning self-report may be unreliable. Research is needed to elucidate associations between sleep disturbance and functioning among elders using objective measures, which can be the basis for targeted interventions to improve health.

Methods: Following informed consent, researchers installed a sensor system in the subject home to compare to standard actigraphy and sleep diary measures. Sensor equipment included both radio frequency identification (RFID) tags and shake sensors that integrated accelerometry. Subjects (N=6) were instructed in all procedures and completed the Life-Space questionnaire at the first visit. Subjects wore the RFID and actigraph bracelets 24hrs/day except during bath/showering and completed daily sleep questionnaires. At the follow-up visit on day 3, a member of the research team returned to remove the RFID system and to ask the subject to provide feedback on the system.

Results: RFID sensors were less robust than traditional accelerometry in identifying sleep and activity level, but were accurate in predicting activity. RFID sensors were successfully able to identify and distinguish various I/ADLs such as hygiene. Increased variability in actual monitoring range to minimum of 20' was found for RFID technology. Shake sensors were non-specific, identifying pet and other activity. RFID data was able to determine out of home activity, correlating to Life-space. Five of six participants did not find the monitoring to be intrusive.

Implications: The sensor system was specific in identifying ADL/IADL activities in this sample of community-dwelling older adults, but was limited in its ability to determine sleep. Revision of existing algorithms is necessary prior to use of this technology in sleep research. Nurse researchers may find RFID technologies to be useful in remote objective assessment of ADL/IADL activities.

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BUILDING COMMUNITY COALITIONS FOR RESEARCH: BARRIERS AND STRATEGIES

Moderator:
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OVERVIEW: BUILDING COMMUNITY COALITIONS FOR RESEARCH: BARRIERS AND STRATEGIES

Elizabeth Reifsnider, Janice D. Crist, Deborah Koniak-Griffin, Leonie Sutherland, Dawn M. Weiler

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LESSONS LEARNED IN A COMMUNITY-BASED RCT

Janice D. Crist

COMMUNITY ORGANIZATIONS AS PARTNERS FOR CBPR: IS THIS TRUE TO THE METHOD?

Leonie Sutherland, Dawn M. Weiler

CREATING OBESITY PREVENTION PROGRAMS THROUGH CBPR

Elizabeth Reifsnider

LIFESTYLE INTERVENTIONS WITH PROMOTORAS TO REDUCE CVD RISK IN OVERWEIGHT LATINAS

Deborah Koniak-Griffin

BUILDING COMMUNITY COALITIONS FOR RESEARCH: BARRIERS AND STRATEGIES

Overview: Building Community Coalitions for Research: Barriers and Strategies

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Purpose: The purpose of this symposium is to describe how to develop and implement community based participatory research (CBPR) projects from inception through completion with community coalitions as the active partners in research. We will describe how to establish community coalitions and build collaborations with the coalitions for research.

Background: CBPR is used for projects/research studies that rely on community participation to carry out the objectives of the research. Its underpinnings involve the philosophy that addressing health disparities requires the involvement/inclusion of the populations and community coalitions that experience the disparity, and that they determine what research is conducted in their community, how it is conducted, analyzed, evaluated, and disseminated.

Description: Content will address strategies for building community coalitions, models for involving community members in research (e.g. promotora models), and issues related to recruitment and retention of hard-to-enroll populations.

Outcomes: Through presentation of three research studies, application of CBPR principles will be illustrated and the impact of societal issues (such as a changing economy) will be examined.

Conclusions: The featured studies focus on obesity prevention interventions, prevention of heart disease, and home care of elders. Through examination of the issues involved with each study, insight will be provided on lessons to be learned from building, sustaining, and collaborating with community coalitions for research with vulnerable populations.

BUILDING COMMUNITY COALITIONS FOR RESEARCH: BARRIERS AND STRATEGIES

Lessons Learned in a Community-Based RCT

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Purpose/Aims: Participation in clinical research by minority group members is essential for eliminating health and healthcare disparities. This exemplar describes challenges, shares theoretically based methods, and gives examples of approaches.
Background: Mexican American elders use home care less than other groups, but have more disabilities at younger ages. The purpose of the study was to test a telenovela intervention designed to increase use of home care services. The setting of the intervention was two local hospitals for this longitudinal randomized two-group design with repeated measures. The power analysis called for 60 dyads (72 to account for attrition). Challenges to recruitment and retention were multiple and inter-woven, including hospital interruptions and short stays of ill, frail elders; locating the family caregiver; and the political climate in the Southwest.
Methods: *Early in the study, we used typical recruitment strategies:* The project director (PD) and PI introduced the study to various hospital staff at the hospitals. The PD went to adult patient units daily and asked unit coordinators for patient information about inclusion criteria (age of 55 years or older) and location of residence (within 50 miles of the university). For qualifying elders, she asked hospital personnel to approach the potential participant to gain permission to talk with him or her about the study (HIPAA requirement). *When we encountered intense recruitment and retention challenges,* we discussed them with members of a community advisory council and modified strategies by: using *personalsimo* (showing human concern/friendliness with all dyads and staff); assigning the GRA to recruit when not providing the intervention; hiring temporary recruiters through "indirect" funds; recruiting regularly Mondays-Thursdays, usually 10AM-noon; using team photographs of team members on all forms; using Spanish or English as preferred by the elder; including visiting family members in the recruitment process; giving the dyad a "timeline" which showed the remaining points of contact at home post-hospitalization and introducing the next team member during transitions from different stages of the study (recruitment, enrollment, consent process, baseline/pre-test, intervention, post-test); providing certificates of appreciation with formal letters, in shiny packets, with a copy to administration, to staff who were helpful; bringing snacks, with promotional material attached, as a thank-you to all adult unit nursing staff meetings; printing "business cards" with study information for nurses, social workers, case managers, students and faculty; and changing two study protocols: we eliminated one sampling inclusion criterion and recruited participants who only had time for one intervention dose before discharge.
Results: Of the minimum 60 dyads, 52 have been recruited. One has dropped out and two died. Participants reported that knowing the study would benefit the community was a stronger incentive than the monetary gift incentive. We spent approximately $3,500 above what was budgeted for recruitment personnel through indirect funds and $500 for additional supplies; e.g., cards, nursing school shirts, and snacks.
Implications: Community partnering, *personalismo,* imagination, consistent branding, and adequate budget are essential to meet recruitment and retention goals for RCTs with vulnerable populations. Multiple barriers should be predicted and addressed early.

Funding: National Institute of Nursing Research (NINR), 1R21NR010901-01A2.

BUILDING COMMUNITY COALITIONS FOR RESEARCH: BARRIERS AND STRATEGIES

Community Organizations as Partners for CBPR: Is This True to the Method?

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Purpose/Aims: To describe the issues that arise when a community organization becomes the partner for Community Based Participatory Research (CBPR).

Background: CBPR is a collaborative approach which brings communities and researchers together to address issues of particular concern to the community. The community is an equal partner and brings knowledge and ways to achieve change to the research process. Community based organizations (CBO) are typically created to address specific issues and may not include members of the community. Thus, the CBO members are not viewed as community representatives. CBPR methodology includes a community advisory board, the key component of community representation. This advisory role becomes blurred as the CBO acts as the bridge between the community and the research team.

Catholic Healthcare Initiatives (CHI) asked the leadership of a local hospital to establish the Latino Health Coalition for the purpose of addressing health related needs of Latinos residing in Canyon County, Idaho. Coalition members represent multiple disciplines and agencies in Canyon County who interact with the Latino population, specifically social workers, clinic physicians, and hospital leadership. Boise State University nursing faculty were invited to join as members. Coalition members have directed their efforts to issues concerning diabetes.

Methods: Although the Latino Health Coalition functioned as the bridge between the community and researchers, by virtue of education and length of time in the U.S., they were not representative of the community. While several efforts were made to include a community member, the lack of representation led to silencing of the community's voice. Strategies to implement the program of research initially were ineffective due to lack of actual community connection.

Results: The closer the team got to the community, the more they realized the extent to which the Coalition membership differed from the target population. Multiple strategies were implemented by the researchers to engage the representative community for true CBPR. Through diligence and consistent presence within the community, success was achieved. Key community members (church secretary, and trusted parishioner) were instrumental in providing access to the larger community membership. Over time, the community actively participated in the research project which resulted in research activities specific to the community's culture and needs; true CBPR. Through this establishment of trust, the researchers became the bridge between the Coalition (community based organization) and the community resulting in the CBO's ability to actively engage with the community and research activities.

Implications: Is partnering with a community based organization true to the CBPR method? Yes and No. Even though the process may take longer, the research team can develop the equal partnership with the target community. It is imperative that the researchers acknowledge differences that exist between the CBO membership and the community itself. Developing and implementing successful strategies are challenging however, the end result of building a relationship with the community for implementing true CBPR can be achieved.

BUILDING COMMUNITY COALITIONS FOR RESEARCH: BARRIERS AND STRATEGIES

Creating Obesity Prevention Programs through CBPR

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Purpose: This paper examines the process through which researchers work with community-based organizations (CBO) to create research programs designed to address obesity through primary or secondary means. Examples of three different projects that developed obesity prevention programs through CBPR will be shared and the results from these collaborations will be used as guidelines for group discussion.

Background: Community-based participatory research (CBPR) is an approach that includes the community (defined as the participants who will be involved in or affected by the proposed research) in the research question to be addressed in the research, the background of the research area, the hypotheses to be tested, the design and implementation of the intervention, data collection, and interpretation and dissemination of the results (evaluation). Obesity is more prevalent in minority communities and interventions for obesity are most effective when delivered at multiple levels, usually those of individual and clinical, family, neighborhood, and broader community. In order for the interventions to be responsive to the family, neighborhood, and community levels, the persons involved in those levels must participate in all stages of research (planning and designing the programs, implementing them, and then evaluation of the outcomes and impacts. CBPR is not a method but rather is an approach to research, and can be used with discovery and theory-testing designs, or with interventions and controlled trials. The community needs to address the level at which they want the research to be conducted.

Methods: The first step to creating the programs was to identify the appropriate partners and community-based organizations. In two instances, the local city/county health department was an initial partner along with two grass-roots community partners. One CBO was well-established in the community and was conducting a secondary obesity prevention program, and one CBO was a nascent organization comprised of individuals who had participated in a faith-based obesity intervention program several years earlier and wanted to organize to continue working together. The third program was comprised of individuals from the community known to the PI who were influential leaders in their respective CBOs and wanted to work with the PI on creating a broad, community-based approach to obesity intervention and prevention. Each program had its own issues as they were working with different partners in different stages of community development.

Results: One research project has been funded, another is being considered for funding, and a third received a good score and is being revised. In each case, the inclusion of the CBOs in the CBPR approach created positive comments from reviewers. The CBPR process has continued through the implementation of the research, with the CBO providing help with subject recruitment, intervention design, and evaluation. The use of CBPR can significantly increase the success of programs that involve communities.

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BUILDING COMMUNITY COALITIONS FOR RESEARCH: BARRIERS AND STRATEGIES

Lifestyle Interventions with Promotoras to Reduce CVD Risk in Overweight Latinas

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Purpose: This paper examines the evolving role of promotoras through presentation of a randomized controlled trial (RCT) designed to evaluate the effects of a healthy lifestyle behavior intervention (LSBI) on decreasing risk for cardiovascular disease (CVD) in overweight Latino women. Separate teams of promotoras served as recruiters, intervenors and data collectors in this longitudinal study.

Background: Latinos, the fastest growing minority population in the U.S., are disproportionately affected by CVD and other chronic illnesses because of several factors, including high rates of obesity, diabetes and lack of preventive health care. Health disparities such as CVD may be combated by involving members of the community in health care delivery and research. Traditionally, *promotores de salud* (community health workers) have helped link health care institutions to at-risk Latinos, serving as "cultural brokers" who provide education and outreach services. This RCT builds upon earlier community-based participatory research (CBPR) conducted by our team that supported the feasibility of applying a promotora model in an intervention to reduce CVD risk among Latinas. The transtheoretical model of behavior change provides a theoretical framework for the RCT.

Methods: Applying CBPR principles, a Community Advisory Board guided the planning and implementation of this RCT. Participants were recruited in 4 cohorts into this study and randomly assigned to a 6-month LSBI *or* to a comparable length control condition (disaster preparedness and home safety). Separate promotoras served as facilitators for both conditions. The LSBI included 8 classes based upon an adapted form of the curriculum *Su Corazón, Su Vida (*Your Heart, Your Life), followed by individual teaching and coaching delivered by telephone and home visits. Participants were evaluated at baseline and post-intervention with physiologic and behavioral measures. The sample included 237 overweight (BMI: Mean=32.7) Latinas, ranging in age from 35-64, who were predominantly poor and had little education.

Results: Comparison of baseline to 6-month findings on the first cohort of women recruited into the study (n=53), show that those in the LSBI lost weight (Mean=2.1 lbs) compared to those in the control group who gained weight (Mean=2.3 lbs). This difference of 4.4 lbs between groups approached significance (F=3.81, p=.058). A similar positive trend was observed for change in waist circumference (F=3.82, p=.058), with a reduction in size (Mean=.54cm) for those receiving the LSBI and an increase (Mean=3.50cm) for control participants. Changes in the LDL levels were clinically but not statistically significant; i.e., a 16.3-point decrease in the LSBI group and a 1.7-point increase in the control group. At baseline, 19% of the LSBI group attained the recommended 10,000 steps per day. The percentage improved to 44% at follow-up.

Implications: Findings across support the integration of the promotora model for promoting healthy lifestyle behaviors among immigrant Latinos. Promotoras are able to recruit hard-to-reach immigrant Latinos into research. Our early findings show that women in the LSBI demonstrated improvements in physiologic measures and physical activity. To ensure program success, researchers working with promotoras need to provide extensive training and supervision and be prepared to address potential challenges (e.g., staff turnover).

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BUILDING THE SCIENCE IN NURSING EDUCATION

Moderator:
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OVERVIEW: BUILDING THE SCIENCE IN NURSING EDUCATION

Barbara St. Pierre Schneider

A THEORETICAL FRAMEWORK FOR BUILDING A SCIENCE IN NURSING EDUCATION

Barbara St. Pierre Schneider

THE MEDICAL EDUCATION RESEARCH STUDY QUALITY INSTRUMENT (MERSQI)

Tish Smyer

AN EXAMINATION OF NURSING EDUCATION RESEARCH LITERATURE

Carolyn B. Yucha

SCHOLARSHIP ASSESSMENT: CITATION RATE, JOURNAL IMPACT FACTOR, & "H-INDEX"

Susan Kowalski

BUILDING THE SCIENCE IN NURSING EDUCATION

Overview: Building the Science in Nursing Education

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Research on nursing education practices and processes has gone in and out of favor over the last 50 years. With the most recent shortage of nursing educators and nurses, research in nursing education has again become more relevant. Yet, there are no models for framing this type of work nor are there any standards for publishing such studies. This symposium will begin with a proposed model for building the science in nursing education. Second, a reliable and valid instrument for evaluating published research on nursing education will be described. Third, an example of a study using this instrument to evaluate literature published in 2006-2007 will be presented. Finally, different methods used to assess the impact of scholarship will be compared and contrasted.

This symposium will be of major interest to those who are engaged or plan to engage in research that focuses on nursing education.

BUILDING THE SCIENCE IN NURSING EDUCATION

A Theoretical Framework for Building a Science in Nursing Education

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Purpose/Aims: From 1976-1997, the number of nursing education research articles has increased from 70 to 1,963 (Stevens & Cassidy, 1999). The rise represents growth and signifies that the development of a science in nursing education is a possibility. However, to accomplish this goal, it is necessary to implement actions that address the multiple factors that are components of building a science. The purpose of this presentation is to describe a theoretical framework for building a science in nursing education.

Description/Definition of Theory/Concept: The concepts and their empirical indicators are (a) cumulative findings: previous publications, (b) cutting-edge approach: innovative or recently developed methods of inquiry, (c) methodological quality: Medical Education Research Scientific Quality Instrument, (d) funding: sources and dollars, (e) scientist: h-index and highest educational degree, (f) impact/relevance: citation counts, and (g) reporting: journal impact factor and reporting guidelines.

Internal Consistency of the Theory/Concept: The proposed theory is internally consistent because many of these concepts are consistent with those presented in articles authored by nurse scientists and leaders. Additionally, these concepts are consistent with recent developments in the (a) assessment of methodological quality and impact or relevance and (b) guidelines for reporting research, and (c) diverse pathways to obtain advanced scientific training.

Logic Linking Theory/Concept to Practice/Research Problem: This proposed seven-concept theoretical framework for building a science in nursing education will guide nurse researchers to develop nursing education studies of high scientific merit and with high impact. Consequently, these studies are likely to lead to the development of scientifically-based learning strategies, which will facilitate the transfer or application of clinical knowledge and skills from the classroom to the clinical setting.

Conclusions, including Utility of Theory/Concept: Multiple factors must be addressed to build a science in nursing education. These factors focus not only on the research, but also on the research's significance, innovation, primary investigator, quality, and dissemination. This focus is complex, rigorous, and demanding; however, a similar theoretical framework has successfully guided nurse scientists to build and sustain a clinical science. Therefore, it is highly possible that this theoretical framework can guide nurse scientists to build and sustain a nursing education science.

Reference:
Stevens, K. A., & Cassidy, V. R. (1999). *Evidence-based teaching: Current research in nursing education*. Boston: Jones and Bartlett Publishers.

BUILDING THE SCIENCE IN NURSING EDUCATION

The Medical Education Research Study Quality Instrument (MERSQI)

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Purposes/Aims: The purpose of this paper is to describe the content, scoring, reliability and validity of Medical Education Research Study Quality Instrument (MERSQI), a tool designed to evaluate the methodological quality of medical education research and discuss its relevance for evaluating nursing education research.
Description/Definition of Theory/Concept: The MERSQI was designed to evaluate the methodological quality of medical education research (Reed, Cook, Beckman, et al., 2007). It includes 10 items, reflecting six domains of study quality: (a) study design, (b) sampling, (c) type of data, (d) validity, (e) data analysis, and (f) outcomes. The maximum domain score is 3, producing a maximum possible MERSQI score of 18 and potential range of 5-18. As designed, it is not limited to intervention studies only, but is appropriate for all quantitative studies. This instrument can be found online at http://www.academicpeds.org/esppeerrev/media/MERSQ%20Instrumentv-scored.pdf.
Internal Consistency of the Theory/Concept: The developers of the MERSQI have validated it against a number of parameters and found that scores were associated with (a) expert quality ratings, (b) three-year citation rate, (c) journal impact factor, (d) number of previous medical education peer-reviewed publications by the first author, (e) amount of study funding, and (f) editorial decisions.
Logic Linking Theory/Concept to Practice/Research Problem: The MERSQI can be tested for its appropriateness for nursing education research by using it to evaluate the methodological quality of a set of nursing education research articles, determining association with citation rate and impact factor, and comparing scores with those reported by Reed and her colleagues (2007).
Conclusions: The MERSQI has been demonstrated to be a reliable and valid instrument for measuring methodological quality in medical education research. However, the methodological quality in nursing education research has not been as rigorously evaluated. Such an evaluation is needed to ensure that we are building a solid evidence base for nursing education.

Reference:

Reed, D. A., Cook, D. A., Beckman, T. J., Levine, R. B., Kern, D. E., & Wright, S. M. (2007). Association between funding and quality of published medical education research. *Journal of the American Medical Association, 298,* 1002-1009.

BUILDING THE SCIENCE IN NURSING EDUCATION

An Examination of Nursing Education Research Literature

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Purposes/Aims: To describe the methodological quality of a series of published articles reporting results of research focused on nursing education.
Rationale/Conceptual Basis/Background: If we are to build a solid evidence base for nursing education, we need to be able to demonstrate the most effective and efficient methods to produce nurses capable of caring for patients in our complex and fragmented health care system. Nursing education research needs to be conducted with methodological rigor to ensure valid and replicable conclusions and to convince funding agencies of their importance.
Methods: The librarian searched the database CINAHL for articles that involved nursing students as subjects and were published between July 2006 and December 2007, using the CINAHL heading "students, nursing," and limiting the results to publication type "research" and "peer-reviewed" journals. Each of the 133 quantitative nursing education research articles published were evaluated using the Medical Education Research Study Quality Instrument (MERSQI) by two faculty reaching consensus on scoring. Data were analyzed using the Statistical Program for the Social Sciences (SPSS version 17.0) software (Chicago, IL).
Results: Of the 133 articles, 43.6% were conducted in North and South America, 24.8% in Europe, 12.8% in Australia/NewZealand, 10.5% in Asia, 7.5% in the Middle East, and 0.8% in Africa; 89.5% studied undergraduate, including diploma, nursing students, 7.5% studied graduate nursing students, and 3% did not identify the level of the students.

The mean MERSQI score for the 133 studies was 9.5 ± 2.1 and the range was 6.0-14.5. The majority of studies were cross-sectional in design or post-test only and involved only one institution. Most studies had high response rates, but involved self-report by participants, rather than objective data. The validity of the instruments used was not generally well-described. Statistical analyses were appropriate and the majority included inferential procedures. Most of the study outcomes were related to student satisfaction and attitude or general facts; very few outcomes were behavioral in nature or related to patient outcomes. Cronbach alpha for the overall MERSQI was .685.
Implications: These MERSQI scores were comparable to those found by Reed and her colleagues (2007) using the medical literature. This suggests that it can be used to evaluate the quality of nursing education research to advance the evidence base of the science of nursing education. The next step will be to compare the MERSQI scores with citation counts, journal impact factors, and first author *h*-index.

Reference:
Reed, D. A., Cook, D. A., Beckman, T. J., Levine, R. B., Kern, D. E., & Wright, S. M. (2007). Association between funding and quality of published medical education research. *Journal of the American Medical Association, 298,* 1002-1009.

Funding: This study was funded by a National League of Nursing Ruth Corcoran Grant for Nursing Education Research.

BUILDING THE SCIENCE IN NURSING EDUCATION

Scholarship Assessment: Citation Rate, Journal Impact Factor, & "H-Index"

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Purpose/Aims: There is a growing interest in the assessment of nursing scholarship and rating of research using such means of citation rate, journal impact factor, and more recently the "h-index." The purpose of this presentation is to describe each of these measures in light of their value for scholarship assessment.

Description/Definition of Theory/Concept: There are three components of the scholarship assessment framework: (a) citation rate, (b) journal impact factor, and (c) the h-index.

Citation rates are found in three commonly used databases. The traditional Web of Science database includes back files to 1900 and includes over 10,000 journals. Scopus indexes 16,500 peer-reviewed journals, and dates from 1996 forward. Google Scholar includes more journals than either Web of Science or Scopus, but its disadvantages include non-scholarly citations, double counting of citations, less frequent updating, and less comprehensive coverage of older publications and citations.

The Journal Impact Factor presents the mean number of citations received in a particular year to articles published in the journal in the preceding two years. A common publication source for yearly Journal Impact Factors (JIF) is the ISI Journal Citation Reports (JCR). The JIF is calculated by dividing the number of citations to articles published in that journal in the previous two years by the number of articles published in these two years. The use of self-citations and the limited two-year citation window within which knowledge is to be disseminated may limitations of the JIF.

Based on the work of Hirsch (2005), the "h-index" is employed as a measure of an author's scientific productivity and scientific impact using a formula which reflects a combination of both quantity (number of papers) and quality (impact, or citations) to these papers. H-Indices can be obtained through the ISI Web of Science, Scopus, or Publish or Perish. A limitation of the use of h-indices are that they are continually being raised and never decline over an author's lifetime, but this analysis give a 'snapshot' of current performance and an indication of scholarly success.

Internal Consistency of the Theory/Concept: The proposed theory is internally consistent because these concepts are connected with scholarship assessment. That is, these concepts can be used to assess the scholarship of publications.

Logic Linking Theory/Concept to Practice/Research Problem: Dissemination of quality nursing education research and publications is essential for improved teaching practice. Citations reflect the sharing of knowledge, usefulness of the publication, and ultimately is an indicator of quality.

Conclusion: The use of citations as found in current databases can be a valuable measurement of publication impact. Understanding the pros and cons of using the journal impact factor and the h-index in evaluating scholarly performance can lead toward improved scholarly works in nursing education.

COMMUNICATION BEHAVIORS OF INTERNATIONAL NURSES AND QUALITY OF CARE

Moderator:
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OVERVIEW: COMMUNICATION BEHAVIORS OF INTERNATIONAL NURSES AND QUALITY OF CARE

Yu Xu

USING IPS TOOL TO ASSESS INTERPERSONAL SKILLS OF INTERNATIONAL NURSES

Jay Shen, Yu Xu, Anne Bolstad, Shelley Staples

INTERNATIONAL NURSES' ACCENT, INTERPERSONAL SKILLS AND PATIENT SATISFACTION

Shelley Staples, Yu Xu, Anne Bolstad, Jay Shen

INTERPERSONAL SKILL ASSESSMENT OF INTERNATIONAL NURSES: TWO CASE STUDIES

Anne Bolstad, Yu Xu, Jay Shen, Shelley Staples

NON-VERBAL COMMUNICATION BEHAVIORS OF INTERNATIONAL NURSES AND PATIENT CARE

Yu Xu, Jay Shen, Anne Bolstad, Shelley Staples

COMMUNICATION BEHAVIORS OF INTERNATIONAL NURSES AND QUALITY OF CARE

Overview: Communication Behaviors of International Nurses and Quality of Care

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Both the number and proportion of internationally educated nurses (IENs) in the U.S. nurse workforce have been increasing steadily over the last decade. In 2008, IENs constituted 5.6% of the 3 million U.S. nurse workforce (Health Resources and Services Administration, 2010). The proportions of IENs in some states are much higher. For instance, IENs make up 29% and 24% of the nurse workforce in California and Florida, respectively (Aiken, 2007). Moreover, a significantly higher proportion of IENs (71.1%) were in direct patient care positions compared to their American counterparts (54.0%) according to the 2004 National Sample Survey of Registered Nurses (Xu, Zaikina-Montgomery, & Shen, 2010). Most IENs in the U.S. are from Asian countries, especially the Philippines, India, Korea, and increasingly, China.

Communication is essential for safe and effective patient care in nursing. Although IENs' communication challenges in the clinical setting are well documented, no research has been conducted to assess their specific communication behaviors and examine their possible effects on patient care. Research is needed if interventions to facilitate the successful transition, adaptation, and integration of IENs and improve patient care are to be developed.

This symposium intends to address some of these issues. The first paper reports findings from a baseline study on the interpersonal skills of IENs. The second paper explores the relationships among accent, interpersonal skills, and patient satisfaction. Using a case study method, the third paper illustrates both exemplary and less ideal communication behaviors through two contrasting cases. The fourth and final paper reports research findings from a study on non-verbal communication behaviors of IENs. Implications for practice, education, research, and policy are elaborated when appropriate in each paper. We hope that this symposium will contribute to the knowledge base and improve our understanding of the communication behaviors of IENs. Based on the findings, targeted interventions can be developed to improve quality of care.

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Aiken, H. L. (2007). U.S. nurse labor market dynamics are key to global nurse insufficiency. Health Services Research, 42(3), 1299-1320.

Health Resources and Services Administration. (2010, March). The Registered Nurse Population: Initial Findings from the 2008 National Sample Survey of Registered Nurses. Retrieved March 30, 2010, from http://bhpr.hrsa.gov/healthworkforce/rnsurvey/initialfindings2008.pdf

Xu, Y., Zaikina-Montgomery, H., & Shen, J. J. (2010). Characteristics of internationally educated nurses in the United States: An update from 2004 National Sample Survey of Registered Nurses. Nursing Economics, 28(1), 19-25, 43.

COMMUNICATION BEHAVIORS OF INTERNATIONAL NURSES AND QUALITY OF CARE

Using IPS Tool to Assess Interpersonal Skills of International Nurses

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Purpose: To assess interpersonal skills of internationally educated nurses (IENs) in two hospitals when they interacted with standardized patients.
Background: Due to language barriers and cultural differences, IENs face challenges in healthcare delivery, particularly in situations where they have face-to-face interactions with patients.
Methods: This was a baseline assessment study. Participants included 52 international nurses from two community hospitals in the same hospital system in a Southwestern region metropolitan area. A tool for assessing the interpersonal skills (IPS) of physicians, developed by the Educational Commission for Foreign Medical Graduates, was adapted and modified for this study. Standardized patients were used to create patient-nurse encounters that were video-taped. Seventeen elements in four domains (i.e. Domain 1 - Skills in Interviewing and Collecting Information, Domain 2 - Skills in Counseling and Delivering Information, Domain 3 - Rapport, and Domain 4 - Personal Manner) in the revised IPS instrument were measured by a 4-point Likert scale with 4 indicating the best performance. The IENs were scored for the 17 elements by the research team who watched the videos. The average composite score and the composite score as a percentage of the perfect score were compared across the four domains. Also the scores of all 17 individual elements were examined.
Results: In 10 out of the 17 elements, the IENs received average scores below 3: 2.10 for "counseling" and 2.44 for "closure" in Domain 2, 2.06 for "small talk" in Domain 3, and 2.21 for "physical exam" in Domain 4. The top three scores were "clarity of questions" and "avoidance of using jargon" in Domain 1 and "language" in Domain 2 (3.87, 3.74, and 3.74, respectively). Moreover, the average composite score of Domain 1 was 3.54 out of 4, which was significantly higher than the average scores of Domains 2-4 (2.76, 2.81, and 2.71, respectively) ($p < 0.01$). The composite score as a percentage of the perfect score for Domain 1 was 88.4%, which was significantly higher than those for Domains 2-4 (69.1%, 70.2%, and 67.8%, respectively) ($p < 0.01$).
Implications: The interpersonal skills of IENs in domains such as Counseling and Delivering Information, Rapport, and Personal Manner need further improvement. Well designed intervention programs may facilitate the improvement, especially in the areas of small talk, counseling, closure, and physical exam.

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COMMUNICATION BEHAVIORS OF INTERNATIONAL NURSES AND QUALITY OF CARE

International Nurses' Accent, Interpersonal Skills and Patient Satisfaction

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Purpose: To test the relationships among accents of international nurses, their interpersonal skills in a clinical setting, and the overall satisfaction of standardized patients (SPs) interacting with the nurses.
Background: Accent has been perceived as a significant barrier to international nurses' successful communication with patients. While accent is one of the most immediately identifiable cultural markers of international nurses, it is unclear to what degree accented speech is related to interpersonal skills and patient satisfaction.
Methods: Participants included 49 international nurses from two community hospitals in the same hospital system in a Southwestern metropolitan area. Each nurse's accent was assessed using the Compton Phonological Assessment of Foreign Accent (CPAFA). Each nurse also interacted with a SP, who was asked to indicate an overall satisfaction rating of 1 to 5. Finally, the nurse-SP interactions were assessed based on the Interpersonal Skills (IPS) Assessment, a tool used to assess international medical graduates and modified for the current study. The IPS measures interpersonal skills (levels 1 to 4) in 1) Skills in Interviewing and Collecting Information; 2) Skills in Counseling and Delivering Information; 3) Rapport; and 4) Personal Manner. Correlations were computed between the overall scores on each of the three assessments, as well as between percentages of possible points on each assessment.
Results: No significant correlation was found between the total number of errors made on the CPAFA and the total score on the IPS Assessment ($r = -.037$, $p = 0.798$). In addition, no significant correlation was found between the total number of errors on the CPAFA and the SP's overall satisfaction score ($r = .081$, $p = 0.589$). Additional correlations computed using the percentage of possible points for each assessment also failed to reach significant levels. There was, however, a significant correlation between the SP's overall satisfaction score and the IPS ratings ($r = .482$, $p < 0.001$).
Implications: As expected, the IPS and SP satisfaction score seem to be measuring similar constructs. Interestingly, it seems that other factors besides accent are impacting international nurses' interpersonal skills and standardized patients' satisfaction. Given the small sample size, these results cannot be generalized to a larger population of international nurses. However, they do suggest that future research should investigate additional linguistic, non-verbal, and sociocultural factors that affect international nurses' interpersonal skills and patient satisfaction.

Funding: This study is supported by a grant from the National Council of State Boards of Nursing (Grant # P18002-1, Yu Xu, Principal Investigator).

COMMUNICATION BEHAVIORS OF INTERNATIONAL NURSES AND QUALITY OF CARE

Interpersonal Skill Assessment of International Nurses: Two Case Studies

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Purpose: To provide two case studies that demonstrate better and less well executed communication skills observed in a socio-cultural communication competency study of internationally educated nurses (IENs) who interacted with standardized patients (SPs).

Background: A high proportion of IENs are in direct patient care. Language barriers and cultural differences are identified as major challenges to both the smooth transition of newly arrived IENs into practice in the U.S. healthcare environment and to some experienced IENs in clinical practice. Communication behaviors and skills have direct implications quality of care.

Methods: Communication behaviors of 52 international nurses were assessed using a modified form of the Interpersonal Skills of Physicians on 17 elements representing four domains: Skills in interviewing and collecting information; Skills in counseling and delivering information; Rapport; and Personal manner. Two cases with high and low assessment scores were selected for contrast to demonstrate effective, less effective, or ineffective communication behaviors. Additionally, qualitative evaluations by the SPs were used to validate and augment the quantitative findings.

Results: The sharpest contrasts between the exemplary case (IEN #1) and the less than ideal case (IEN #2) demonstrated that IEN #2 was much less effective in providing counseling, showing empathy and support, and drawing closure of the encounter. In addition, IEN #2's communication was less effective because of a too great physical distance from patient and lack of responding to cues. Consequently, IEN #2 failed to "connect" with the patient to a considerable extent. Evaluation by the SP further validated these empirical findings.

Discussion: Communication behaviors and skills have implications for quality of care. Interventions should be developed to address the communication "gap" of some IENs to improve patient satisfaction with their healthcare experiences.

Funding: This study is supported by a grant from the National Council of State Boards of Nursing (Grant # P18002-1, Yu Xu, Principal Investigator).

COMMUNICATION BEHAVIORS OF INTERNATIONAL NURSES AND QUALITY OF CARE

Non-Verbal Communication Behaviors of International Nurses and Patient Care

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Purpose: To evaluate non-verbal communication behaviors of internationally educated nurses (IENs) interacting with standardized patients (SPs) in a controlled clinical setting. Background: Because of language barriers and cultural differences, IENs face communication challenges in healthcare delivery, particularly in face-to-fact interactions with patients. Yet it is unknown how and to what extent non-verbal behaviors affect patient care because of absence of research in the existing nursing literature.
Methods: This was a baseline assessment study. Participants included 52 IENs from two community hospitals in the same hospital system in a Southwestern metropolitan area. Twelve elements in four non-verbal communication domains (i.e. Domain 1 – Facial Expression and Eye Behaviors, Domain 2 – Bodily Communication, Domain 3 - Space, and Domain 4 – Therapeutic Touch) were measured by a 4-point Likert scale with 4 indicating the best performance. The IENs were rated for the 12 elements by the research team after watching videos of SP-IEN interactions. The average composite score and the composite score as a percentage of the perfect score were compared across the four domains. Also, all 12 individual elements were examined. Finally, the overall communication performance was examined in four areas: genuineness, spontaneity, appropriateness, and effectiveness.
Results: The IENs received average scores under 2 in four out of the 12 elements, all in Domain 2. They were "hug" (1.06), "lower body position to patient's level" (1.08), "lean forward" (1.19), and "shake hands" (1.65). The top three scores were for "no distractive movement," "eye contact," and "smile" (3.88, 3.83, and 3.69, respectively). Moreover, the average composite score of Domain 1 was 3.76 out of 4, which was significantly higher than that for Domains 2 and 4 (2.32 and 1.71, respectively) ($p < 0.01$) yet comparable with that for Domain 3 (3.49, $p = 0.05$). The composite score as a percentage of the perfect score for Domain 1 was 94.0%, which was significantly higher than those for Domains 2 and 4 (57.9% and 42.8%, respectively) ($p < 0.01$) but comparable with that for Domain 3 (87.0%, $p = 0.05$). Finally, the average score for spontaneity was 2.64, which was significantly lower than the scores for genuineness (3.29), appropriateness (3.27), and effectiveness (3.04). This was likely due, at least partially, to IENs' awareness of being tested.
Implications: The IENs' non-verbal behaviors in areas such as "hug", "lower body position to patient's level", "lean forward", "shake hands" and "therapeutic touch" have room for improvement. Targeted interventions focusing on norms and expectations of non-verbal behaviors in the U.S. healthcare setting are called for in order to improve quality of care.

Funding: This study is supported by a grant from the National Council of State Boards of Nursing (Grant # P18002-1, Yu Xu, Principal Investigator).

COMPLEX ENVIRONMENTS NEED COMPLEX METHODS

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OVERVIEW: COMPLEX ENVIRONMENTS NEED COMPLEX METHODS

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TRANSLATING DATA FROM COMPLEX ACTUAL ENVIRONMENTS TO COMPLEX VIRTUAL ENVIRONMENTS

Barbara B. Brewer, Joyce A. Verran

VALIDATION OF DATA STREAMLINING WITH COMPUTATIONAL MODELING

Joyce A. Verran, Barbara B. Brewer

EXPLORING COMMUNICATION NETWORKS DURING SHIFT HANDOFFS WITH ORA

Sheila M. Gephart, Judith A. Effken

EXPLORING GROUPS WITH ORA

Judith A. Effken, Kathleen M. Carley

COMPLEX ENVIRONMENTS NEED COMPLEX METHODS

Overview: Complex Environments Need Complex Methods

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Purposes/Aims: In this symposium we report the results of four studies that elucidate the complex methods we have found essential to examine the relationship of the complex environments that define acute care nursing units to patient safety outcomes.
Rationale/Conceptual Basis/Background: The conceptual model guiding our research is the Systems Research Organizing Model, which suggests that context (i.e., organizational characteristics), client (patient characteristics) and nursing unit characteristics interact to affect patient safety outcomes. These relationships are anything but simple; and we have found that understanding them requires new, complex methods and tools. Our ultimate goal is to make these tools available to managers on their desktops as DyNADS (dynamic network analysis decision support). However, if DyNADS is to be practical for nurse managers to use, we must radically simplify the data collection and data translation processes we have used in previous studies. Here we report the results of developing two new simplifying processes. We also report the results of two new studies using ORA, one of the components of DyNADS, to examine first the association of communication patterns during change-of-shift handoffs with patient falls, and second we describe what can be learned from a small group analysis of nursing communication patterns.
Methods: In this symposium, we describe the use of two different complex dynamic analysis tools through four separate studies. For some time we have used OrgAhead, a computational modeling tool to examine the impact of organizational and unit level factors on patient safety outcomes. To use OrgAhead, we needed to develop a new procedure for translating data collected in complex actual environments to the formats needed by the algorithms used in a complex virtual environment. That procedure will be described. Further, because the amount of data required for the analysis was very large, we derived and tested a streamlined set of data elements to alleviate future staff response fatigue. In the study reported here, we compare the results of computational modeling in OrgAhead with both the original and the streamlined data. We are also using ORA, a dynamic network analysis tool, to examine how different communication patterns affect patient safety outcomes. In this symposium, we will first describe our use of ORA to describe the relationship of specific communication patterns during change of shift handoffs with safety outcomes and then describe the identification of subgroups and patterns within a communication network on a nursing unit. All studies were done in a sample of 7 medical surgical units in 3 Arizona hospitals.
Results: The DyNADS components, ORA and OrgAhead, were challenging to master initially and required new procedures for data collection and input, but ultimately are extremely powerful tools to study complex environments.
Implications: Nursing units are examples of complex environments that simply cannot be studied adequately with traditional methods. However, complex methods using tools such as those we describe in this symposium, can allow researchers to deal effectively with the complexity.

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COMPLEX ENVIRONMENTS NEED COMPLEX METHODS

Translating Data from Complex Actual Environments to Complex Virtual Environments

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Purposes/Aims: OrgAhead is a computerized modeling software program used to simulate effects of nursing unit characteristics on patient safety and quality outcomes. The purpose of this presentation is to present the method used to create metrics for variables to be used in OrgAhead algorithms.

In order for variables to be used in OrgAhead, data must be transformed into proper OrgAhead parameters used in its algorithms. OrgAhead algorithms use values that are defined in relation to a specific sample, prohibiting generalizability for future samples. Thus, we created a method that is a more general, standardized format.

Rationale/Conceptual Basis/Background: Before data can be entered into OrgAhead they must meet OrgAhead scaling requirements. In our previous research, rescaling (relative ordering of sample units) was done using a larger sample. For this study, and for future use of the DyNADS application, we needed to develop a method that was independent of any given sample so that it did not scale units in relation to each other.

Methods: Data used in OrgAhead came from multiple sources, staff, managers, and administrative data from the information systems. All 24 variables were converted to proportions of either the total possible value or a realistic maximum value where that was not possible. Ultimately we wanted to end up with a scale of 0-100%. Two variables, RN Workload and Total Patient Turnover, did not have upper limits on the possible value. These variables were converted by dividing by another variable that was logically related to it.

Results: All variables were translated into a format that met OrgAhead algorithm requirements. Some variables, such as staff with Baccalaureate degree or higher and percentage of registered nurse (RN) staff who had 30 or more hours of continuing education units, were already expressed as proportions so did not require further translation. Others, such as hours of RN and unlicensed staff orientation, were expressed as a proportion of 1040 hours (6 months for a full time equivalent) resulting in acceptable variability across units (41.5 to 76.2%, RN orientation; 7.7 to 23.1% unlicensed orientation). RN Workload and Total Patient Turnover, the two variables where we chose realistic upper limits, also resulted in acceptable variability (8.5 to 14 patient days per RN full time equivalent as a percent of discharges and 39.8 to 51.6 admissions, discharges, transfers in and transfers out as a proportion of the number of staffed beds on a unit).

Implications: Data required to model complex environments using a computational modeling program may require rescaling in a way that is independent of any given sample. The method used in this study may be useful to other researchers who must translate their data into more generalizable formats.

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COMPLEX ENVIRONMENTS NEED COMPLEX METHODS

Validation of Data Streamlining with Computational Modeling

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Purpose: An aim of DyNADS was to streamline data to be collected from staff. This presentation describes how we validated the data obtained from the streamlining procedure by comparing the computational modeling results with the full and streamlined dataset.

Background: When data are being collected from all staff and a large response rate is needed. Reducing the burden on respondents is a necessity. Because of the unit of analysis (patient care unit) and the small sample size in our study, a new, unique procedure was developed utilizing nonparametric correlations. The procedure involved five steps: Step 1: Total scale correlations and discrimination with outcome variables; Step 2: Individual item correlations and discrimination with outcome variables reflective of the total scale; Step 3: Reduced scale correlation with other workgroup variables reflective of the original scale; Step 4: Reliability and validity assessment of reduced scales; and Step 5: Regression of reduced items with outcomes.

Methods: Data were collected from 292 nursing staff and 416 patients on 11 nursing units from three hospitals, all of which had Magnet certification. Of the 11 units, seven achieved an adequate response rate to be included in further research. The streamlining procedure outlined above reduced the total number of staff survey items from 158 to 74. The development of algorithms and metrics for the OrgAhead computational modeling program further reduced the amount of needed data by another 42 items. For the OrgAhead program, staff responded to 68 scale items for the full dataset and to 32 items for the reduced dataset. Data from Information Systems about unit patient populations and nurse managers regarding staffing were also input into OrgAhead. No reductions were made in these items. The validation procedure was performed at two levels. First, the ordering of virtual units was compared with actual unit ordering for Patient Safety and Quality Outcomes. Second, experiments were run on two units with the full data set. These experiments were repeated for the reduced data and compared to the initial results. To validate the streamlined data, the results needed to fall within the 95% confidence interval for the full data set or within 2 points of the experimental results.

Results: The Spearman Correlation for the virtual units with actual units was .47 for safety outcomes and .67 for Quality Outcomes. Because of the small sample and limited unit variability, these correlations were deemed adequate to support the similarity of virtual and actual units. Correlations with streamlined data met the criteria to support validation of the streamlining procedure. Experiments with data required several steps and, although some results differed, the final comparison for each unit was within the preset criterion.

Implications: This study showed that, for unit level comparisons, reducing the data with a detailed procedure results in similar findings when compared with the full set of scale data. Similar work can be done to reduce subject burden when a large amount of information needs to be collected to measure complex environments.

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COMPLEX ENVIRONMENTS NEED COMPLEX METHODS

Exploring Communication Networks during Shift Handoffs with ORA

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Purpose: The purpose of this study was to explore network communication characteristics of the shift handoff that are related to patient safety and quality outcomes using dynamic network analysis. The study is an extension of some of the work we reported last year on developing a decision support tool for nurse managers.
Background: In 2006, the Joint Commission made standardizing handoff communication a national priority. Up to two-thirds of sentinel events are related to communication breakdowns, such as those that can occur during a handoff. Using Social Network Analysis (SNA), people have studied communication networks—but generally for small groups. We have been using ORA, a Dynamic Network Analysis software application, to visualize nursing unit communication networks and explore how frequency of communication relates to patient outcomes. Benham-Hutchins used *ORA to explore the interdisciplinary handoffs between the Emergency Department and medical/surgical units. Here, we report the results of a study on how the communication network that emerges during shift handoffs relates to patient quality and safety outcomes.
Methods: Secondary analysis of data collected for the original study was carried out. Nurses, unit clerks and patient care technicians were surveyed on 7 nursing units in 3 acute care hospitals in Arizona. An Organizational Network Analysis Survey was used in which staff were asked how frequently they Got Information, Gave Information, Discussed patient care with and Interacted with other staff members. Patients' satisfaction was measured using a Well-Cared-For survey and their ability to perform self care and manage symptoms were measured using separate scales modified for this study. Safety outcomes measured included falls and Adverse Drug Events (ADEs). We used the network analysis program, ORA, to explore a handoff communication network from days to nights for each unit (on one day). The network was created by merging the data about frequency of communication from (a) dayshift staff who *gave* information to the night staff and (b) nightshift staff who *got* information from the day staff. After visualizing the resulting networks, 15 *ORA network metrics were correlated with falls, ADEs, and patient satisfaction outcomes using rank order (Spearman) correlations.
Results: High performing units differed by specific patient outcome. More highly connected staff members were associated with fewer falls. More clustering of small groups, triads (groups of three) and cliques were related to fewer ADEs. Units with denser networks, faster information diffusion, and more links among individuals were positively associated with patients having greater capacity to deal with their symptoms. Self-care improvement during hospitalization was positively related to hierarchy but negatively to information diffusion and more staff connected to highly connected staff.
Implications: The outcomes we studied are qualitatively different. Communication network patterns that improve one outcome may not necessarily improve another. Nurse managers will need complex, adaptive decision making tools that are individually tailored to specific outcomes to improve their units' performance.

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COMPLEX ENVIRONMENTS NEED COMPLEX METHODS

Exploring Groups with ORA

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Purposes/Aims: In this study, we used ORA, a dynamic network analysis tool to compare network metrics and visualizations for two nursing units, one with a high fall rate and one with a low fall rate in an attempt to identify differences in communication patterns. This analysis extends our previous work by examining subgroups.
Rationale/Conceptual Basis/Background: The conceptual model guiding our research is the Systems Research Organizing Model, as described in the Symposium Overview. A number of studies have demonstrated the importance of nursing communication, but most of those studies have been limited to dyads or small groups. ORA makes it possible to study much larger networks. Our earlier studies using ORA identified specific nursing unit communication patterns that were associated with different types of patient outcomes (falls, ADEs, symptom management, self care, and patient satisfaction). In this study, we explored the relationship between communication networks, subgroups, key performers, staff knowledge, and patient falls.
Methods: For this secondary analysis, we used data collected by staff survey on two medical surgical units in two Arizona hospitals. The survey asked staff how frequently they communicated with others on their shift using a response scale from 1-4 (rarely to constantly). Demographic data about education and experience on the unit and in the hospital were collected. Both day and night shifts were studied. A 100% response rate was obtained for both units for those staff working on the days of data collection. Patient fall rates per 1000 patient days were obtained from the hospital's quality improvement data. For this study we examined data only from the units with the highest and lowest fall rates. ORA was used to analyze the data, calculate network metrics that could be associated with fall rates, and visualize the networks for units and for subgroups within the units.
Results: The unit with the higher fall rate was associated with greater network density, faster information diffusion, and less hierarchical (top-down) communication. In addition, staff on that unit also had lower knowledge scores on the day shift. Further, staff found to be "in the know" or "gatekeepers" were more likely to have lower knowledge scores and also more likely to be PCTs than was true on the unit with the low fall rate, suggesting that the informal leaders had less experience and education on the high falls unit.
Implications: This study further clarifies the influence of nursing communication networks on patient outcomes. Further, the study demonstrates how ORA, a complex network analysis tool, can be used effectively to study the relationship between multiple nursing unit factors and patient outcomes. With ORA, we were able to study the relationship among staff knowledge (education + experience), communication patterns (overall and subgroup), individual key performers, and one patient outcome—fall rate. Without this complex methodology, such a complex analysis would be difficult, if not impossible.

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CONFRONTING ETHICAL ISSUES THROUGHOUT THE RESEARCH PROCESS

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OVERVIEW: CONFRONTING ETHICAL ISSUES THROUGHOUT THE RESEARCH PROCESS

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RECONCILING THE "PUSH FROM FUNDING" WITH "PULL FROM COMMUNITY": ETHICAL ISSUES IN CBPR

Samira S. Jones, Dian L. Baker

ADDRESSING ETHICAL ISSUES DURING DATA COLLECTION IN LONG-TERM CARE COMMUNITIES

Tara Sharpp, Heather M. Young

HEALTH SERVICES RESEARCH: DISSEMINATION AND PROTECTION OF HUMAN SUBJECTS

Elena O. Siegel, Sarah E. Shannon, Heather M. Young, Pamela H. Mitchell

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ETHICAL CHALLENGES IN IMPLEMENTING RESEARCH INTO BUSINESS PRACTICE

Debra Bakerjian

CONFRONTING ETHICAL ISSUES THROUGHOUT THE RESEARCH PROCESS

Overview: Confronting Ethical Issues Throughout the Research Process

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The goal of research is generalizable knowledge that contributes to the health and welfare of society. Achievement of this goal creates numerous ethical dilemmas stemming from conflicts between society, researchers, and human participants. Growing ethical concerns in clinical research have paralleled the huge growth of research studies in the United States. Nurse scientists conduct basic, clinical, and systems research using a variety of methods. This symposium will describe how nurse researchers confront ethical issues throughout the research process. This symposium will address four ethical issues including, gaining access in diverse communities, data collection, dissemination of findings, and translating research in the business of healthcare.

The overview will describe how nurse scientists are uniquely positioned to contribute to the development of ethical guidelines and protection of human subjects through their expertise in clinical science, education, and health policy. The first paper addresses the ethical challenges of conducting Community Based Participatory Research (CBPR) in diverse populations, including gaining access and informed consent. This concept analysis paper describes how researchers who undertake CBPR must balance the unique ethical challenge of aligning the wishes of the community with the demands of the funding and regulatory agencies. The second paper describes the ethical issues encountered during data collection in a sample of vulnerable adults. The ethnographic study was conducted in a long-term care community for older adults with dementia. Ethical concerns included balancing the role of the objective researcher with the compassionate nurse when observing unsafe practices or questionable care. The third paper, also a research paper, explains the ethical issues confronted during the conduct of health services research with a small sample of participating sites. The discussion will focus on protection of human subjects and dissemination of findings, including reports to study sites and publication in a peer-reviewed journal. Finally, the fourth paper highlights the ethical challenges faced in translating research into practice in this era of diminishing resources, pay for performance, high cost technical procedures, and an aging and diverse population. This final paper describes how healthcare professionals must weigh issues of access, quality, and cost along with risk and benefit as research findings get integrated into the business of healthcare.

At the conclusion of the presentations, a nurse ethicist will serve as a discussant for a question and answer period in which the audience can dialogue with the presenters about ethical issues arising across the continuum of the research process This will provide an excellent forum for confronting ethical concerns that are not adequately addressed in the literature or in practice.

CONFRONTING ETHICAL ISSUES THROUGHOUT THE RESEARCH PROCESS

Reconciling the "Push from Funding" with "Pull from Community": Ethical Issues in CBPR

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Purposes/Aims: The purpose of this presentation is to describe the unique ethical complexities associated with community based participatory research.
Description: Community based participatory research (CBPR) has demonstrated effectiveness in reducing health inequities and providing mechanisms for translational research. By definition, community based participatory researchers are outsiders. This outside position creates complexities unique to CBPR. The challenges of CBPR include formation of a truly community driven agenda. The *pull* from the community may conflict with the *push* (i.e., rules and regulations) from grant funders and human subject review committees.
Approach: This presentation is a review of CBPR ethical issues with a specific focus on internal review board processes with examples from the presenters' experiences with CBPR and use of community advisory boards (CABs). Specifically, this presentation describes a faith-based community advisory committee that facilitated the successful implementation of a targeted nutrition and health education intervention for African-American women.
Research Problem Link: Demonstrating the effective use of CABs and clear, open dialog regarding potential ethical conflicts are useful mechanisms to create ethically-based partnerships. Principles of ethical research outlined by Emanuel, along with ecology principles summarized by James G. Kelly, are used to frame this discussion.
Conclusions and Implications: Multiple studies have verified CBPR's impact in reducing health inequities. CBPR conducted *with rather than in* the community has potential to develop local capacity and empowerment. However, ethical challenges including power distribution, insider-outsider tensions, cultural humility, and research dissemination strategies can affect this partnership. The examples presented outline effective approaches to consent and the IRB process that utilize the principles of CBPR which can be an effective leverage for sustainable community relationship building.

CONFRONTING ETHICAL ISSUES THROUGHOUT THE RESEARCH PROCESS

Addressing Ethical Issues during Data Collection in Long-Term Care Communities

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Purpose: The purpose of this paper is to describe how ethical issues were addressed during data collection of an ethnographic study that examined the care delivered to vulnerable adults.This paper is part of a symposium that addresses the role of nurse researchers confronting ethical issues throughout the research process and in a variety of settings.

Rationale: Assisted living communities (ALCs) are the fastest growing form of housing for older adults with dementia in the United States. Recent studies have shown that residents in ALCs have multiple cognitive, functional, and health-care needs. However, nurses or licensed health care professionals are not required to be employed in ALCs in California. This study examined how care was provided to residents with dementia in an ALC.

Methods: An ethnographic study was conducted in an ALC that specializes in dementia care. Participant observation and interviews were conducted with employees and family members over six months. The data were transcribed and analyzed for themes regarding how caregivers in ALCs deliver care. All study procedures were approved by the Institutional Review Board prior to data collection.

Results: Our results showed numerous problems in the delivery of health care, including the lack of standard precautions, how residents were monitored for changes in their conditions, and how medications were administered. During interviews, participants described several situations that demonstrated a disregard for resident safety or described unethical behavior. However, the researchers did not observe any instances of abuse or neglect. The researchers did observe employee practices that demonstrated disrespect for the residents, such as using demeaning language or not providing privacy.

Implications: This study highlights dilemmas that researchers face when conducting studies on quality of care. While the researcher is expected to maintain the objective role of observing and collecting data while not disturbing or influencing the setting, data collected may trigger mandatory reporting or intervention on behalf of vulnerable participants. The researcher role is particularly challenging when the nurse researcher observes care that is contradictory to the best interest of the patient. During this ethnographic study, the researchers took several actions to address the issues identified, including conferring with the IRB board, providing education to the staff after data collection, and providing feedback to the administration (while protecting participant confidentiality). By recognizing the ethical issues that often accompany quality research, nurse researchers can play the important role of advocating for improved care, both in their research setting and by publishing findings to broad audiences.

Funding: This study was funded by the John A. Hartford Foundation.

CONFRONTING ETHICAL ISSUES THROUGHOUT THE RESEARCH PROCESS

Health Services Research: Dissemination and Protection of Human Subjects

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Purpose: The purpose of this study was to describe and explore organizational factors that support nurses' supervision of nursing assistants from the perspectives of nursing home management, staff nurses, and nursing assistants. The presentation will highlight the challenges confronted and the strategies applied to protect human subjects in the reports of study findings back to the study sites and in a manuscript submitted for peer-reviewed publication.

Rationale/Conceptual Basis/Background: Nursing assistants provide the majority of direct personal care to nursing home residents (i.e., feeding and grooming), within a context of activities delegated by the licensed nurse. The nurse's supervision of delegated activities is challenged by heavy workloads and high job turnover. The overall aims of this study were to identify the organization-level infrastructure, systems, and processes that support nurses' enactment of the supervisory role.

Methods: An ethnographic approach was used to collect data from three nursing homes purposively selected for their organizational differences. The goal was to capture a broad range of work environments in which nurses enact their supervisory role, including: size, profit status, chain affiliation, composition of the organizational chart, care model, and nurse-nursing assistant job designs. Data collection included: 170 hours of observation; in-depth interviews with nurses, nursing assistants, and management (n=31); and review of job descriptions, policies, procedures, and performance evaluation materials. Qualitative analyses included micro-coding, constant comparative analysis, and content analysis.

Results: The resources, expectations, and systems available for development and support of the nurse's supervisory role varied considerably across the three nursing homes. Given the small sample of participants from each site and the relatively few participants in each employment category (i.e., management, registered nurse, licensed practical nurse), the sites and employees that participated in this qualitative study were at risk of identification, depending on the approach used to report the study findings.

Implications: Despite requests for greater detail regarding study sites, rich description of study sites and linkages of findings to site and/or participant characteristics were avoided to minimize the potential for recognition of (1) sites or participants by co-participants or other employees and (2) by readers familiar with the nursing homes in the study region.

Funding: Funding for this project was provided by the John A. Hartford Foundation Building Academic Nursing Capacity Scholarship Program and the deTornyay Center for Healthy Aging Doctoral Scholarship Program and Hester McLaws Scholarship Fund, University of Washington.

CONFRONTING ETHICAL ISSUES THROUGHOUT THE RESEARCH PROCESS

Ethical Challenges in Implementing Research into Business Practice

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Purpose: The purpose of this presentation is to describe the ethical tensions that arise when healthcare professionals attempt to integrate healthcare research findings into day-to-day healthcare business practices.
Rationale/Background: Ethics is defined as a set of moral principles, a theory or system of moral values, or a guiding philosophy. Business ethics takes ethical concepts and theories and applies them to specific business operations: how people and institutions should behave in the world of commerce. Clinicians are encouraged to review research and transform those findings into clinical practice. However, healthcare professionals often face ethical challenges when implementing healthcare recommendations derived from research that must be transformed into daily practice. Clinicians, administrators, and owners must consider the financial and operational challenges they face daily, even as they strive to use research findings to improve practice.
Description: This presentation is a review of ethical issues that have been identified when attempting to implement research findings into business practices with examples from the presenter's research as well as from the literature. Common ethical constructs include utilization and distribution of resources and cost of implementation.
Outcomes: Multiple studies in both healthcare business and practice reveal that ethical principles such as beneficence, least harm, autonomy, social justice, values clarification, utilitarianism, conflicts of interest, and ethical realism are not followed in effecting translation into practice. Specifically, variations in payers (insurance companies) influences implementation of the evidence, findings may benefit a select few, allocation of resources may be based on the corporate mission and environment rather than the evidence, the competition between organizations challenges clinicians to allocate scarce resources to provide evidenced-based care, conflicts of interesting arising from owner practitioners are barriers to successful translation of research to practice.
Conclusions/Implications: A better understanding of these potential conflicts and strategies for resolving ethical dilemmas will help both researchers and clinicians in better integrating evidence-based care. Knowledge of ethical challenges, research findings, and anticipating problems with translation will give clinicians/administrators the tools they need to provide optimal care.

CREATIVE PEDAGOGY LINKS EDUCATION AND COMMUNITIES

Moderator:
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OVERVIEW: CREATIVE PEDAGOGY LINKS EDUCATION AND COMMUNITIES

Suzanne K. Sikma

AN ACADEMIC-COMMUNITY PARTNERSHIP TO PROMOTE LACTATION SUPPORT IN THE WORKPLACE

Elizabeth Madison, Sharon Ivey, Melissa Adair, Amanda Goodwin, Christina Armstrong, Stephanie Brown, Elizabeth Allen

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EFFECTIVENESS OF SELF-DIRECTED INSTRUCTIONAL STRATEGY IN NURSING EDUCATION

Mabel Ezeonwu

USE OF COMMUNITY PARTNERS FOR PROFESSIONAL DEVELOPMENT IN HYBRID EDUCATION

Jamie Shirley

STRENGTHENING NURSING EXPERTISE IN EDUCATIONAL TECHNOLOGY

Jerelyn Resnick

CREATIVE PEDAGOGY LINKS EDUCATION AND COMMUNITIES

Overview: Creative Pedagogy Links Education and Communities

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This symposium consists of four papers reflecting projects that used creative pedagogy to link faculty/students from one nursing program with related communities. Commitments from the campus mission undergirding these projects included: 1) serving both college-age and established adult students, as well as the community at large, by providing access to a premier institution of higher education; 2) providing quality curricula by making use of the best of educational technology in support of teaching and learning; 3) promoting a strong public service commitment; and 4) building an inclusive and supportive community of learning. Our campus houses two nursing programs: the RNB program offered at the campus and at two distance sites, and a Master of Nursing program. In addition, nursing program faculty may collaborate in programs offered through University of Washington Professional & Continuing Education.

The first two papers in this symposium describe projects using Community-Based Learning (CBL) approaches. CBL is a form of instruction where students develop professional competencies in a community setting focusing on population groups and also individuals and their everyday problems (Wojtczak, 2002). Both projects were completed as part of the RN to BSN Partnerships in Community Health course. The first paper describes an academic and community partnership in which BSN students at one of our distance sites collaborated with a public health department on a project to promote lactation support in their county of residence. The second symposium paper describes and presents the outcomes of a two-year project utilizing an independent learning activity (ILE) as a teaching-learning strategy that promotes active engagement with providers and consumers of health services and awareness of the political climate of health care in the community.

The final two papers in this symposium describe projects utilizing hybrid/blended learning. Hybrid or blended learning integrates face-to-face and online learning in one course in order to optimize student engagement (Garrison & Vaughan, 2008). The third paper reflects the work of a faculty member in using community partners to optimize a professional development certificate program for professional guardians delivered in a hybrid format. The fourth paper describes best practices used in a hybrid graduate nursing course on technology-enhanced pedagogy. This course brought together current and future nurse educators from practice and academic communities to enhance expertise in technology-assisted nursing education.

References:

Garrison, D.R. & Vaughan, N.D. (2008). *Blended Learning in Higher Education: Framework, Priciples and Guidelines*. San Francisco, CA.: Jossey-Bass.

Wojtczak, A.. (2002). *Glossary of Medical Education Terms.* http://www.iime.org/glossary.htm, December, 2000, Revised February 2002.

CREATIVE PEDAGOGY LINKS EDUCATION AND COMMUNITIES

An Academic-Community Partnership to Promote Lactation Support in the Workplace

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Background: In 2010, the HRSA Maternal and Child Health Bureau launched a pilot project in Washington State, "The Business Case for Breastfeeding (BCBF)," aimed at educating employers about how to develop lactation programs to support breastfeeding women returning to work. BCBF offered free trainings to community MCH providers, who would then approach community business leaders. Due to recent budget challenges, however, many providers who attended the training have been unable to devote their time to this project. Nursing students, already well versed in presentation skills, were able to help by partnering with the public health department to implement the project.
Purpose: The purpose of the project was to help MCH providers promote lactation support programs in the workplace. This health promotion project fit with the community health nursing course objectives and provided an opportunity for students to make a significant contribution in the community where they live and work.
Participants: Participants included five students in a community health nursing course and one public health nurse. The students were all experienced RNs living and working in the target community, having returned to school to complete a BSN.
Methods: Students collaborated with their MCH nurse colleague in the Public Health Department to learn how they could participate in furthering the BCBF agenda. The plan they developed included meeting with representatives of local businesses to educate them about promoting lactation support programs with the aim of convincing them that promoting such programs saves money by lowering health care costs, reducing lost work days and decreasing employee turnover. Students used BCBF materials, power point slides, and their own research on current data re: breastfeeding rates in the county to create a presentation for the human resources (HR) department at a regional hospital.
Results: Hospital HR personnel attended and were surprised to learn how much they did not know about promoting lactation support in their workplace. In a hospital with a birth center that promoted breastfeeding, it was assumed that employees would also benefit from expert knowledge. However, it was discovered that there was much still to do, and although patients were given adequate support, employees sometimes lacked what they needed to continue breastfeeding after returning to work.
Implications: Students' contributions proved to be very useful in this public health project. Students' community connections, skills in creating and presenting information using up-to-date technology, time and energies all helped create an effective result. A major contribution to success was having access to high quality materials, and to a professional nurse in public health who knew how to direct and focus student efforts. This project promoted contact between the hospital and the public health department, creating a chance for continued dialogue. Further, participating in this project increased the confidence of the public health nurse to be able to carry forward the BCBF agenda, and reminded us all about the efficiency and efficacy of collaboration.

Materials for this project supported by Contract #HHSH240200735008C between DHHS, HRSA, MCH Bureau, and HCD International, Inc.

Effectiveness of Self-Directed Instructional Strategy in Nursing Education

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Purpose: The purpose of this paper is to describe the effectiveness of an independent learning experience (ILE) as a teaching-learning strategy embedded in a community health nursing course in an RN~BSN program.
Background: Nursing education strives to support student learning by creating knowledge from education-based activities. ILE, an out-of-class activity, provides students with opportunities to self-direct their learning and understand the diversity of health needs, barriers to health services, and roles of public health professionals in our global community. The common model of traditional pedagogy that delivers streams of information from lectures fails to challenge non-traditional RN~BSN students, the majority of whom have several years of nursing practice and leadership experiences in various acute and sub-acute settings. A learner-centered strategy that shifts the responsibility for learning toward the students provides them with autonomy in the final quarters of their program to engage in self-directed learning activities in the community – an innovative way of fostering higher levels of learning and practice independence, and opportunities to apply their nursing knowledge in different community contexts. The ILE challenges students to critically analyze the environment of health care services delivery. Active engagement with providers and consumers of health care services and general awareness of the political climate of health care in the community is not only critical to students' learning but also exposes them to volunteer and possible employment opportunities in community/public health nursing.
Approach: The evaluation of the ILE outcomes over two years included data from five quarters. The methods used were review and content analysis of students' comments and documentation of their activities in: 1) Reflective summaries; 2) ILE report papers; 3) General classroom sharing of ILE and 4) End of quarter course evaluations.
Outcomes: Students demonstrated roles characterized by accountability, critical thinking, self-directed learning, effective communication skills, leadership, and partnership building in the community – a very important objective of the course. Students also specifically described:

1. Strong interests in community/public health nursing as a result of the ILE;
2. Increased confidence and skills in working in multi-cultural environments;
3. Increased awareness and appreciation of the health needs of diverse populations; and
4. Increased knowledge of professional nursing roles in community health nursing.

Conclusion: This teaching-learning activity encompasses initiative and independence. It motivates students to be proactive, and to become more engaged in their learning. ILE has the potential to transform nursing pedagogy to attain better teaching and learning outcomes. As the RN~BSN programs across the country continue to expand and attract older practicing, and often established nurse professionals, efforts should be directed toward building participatory and hands-on activities (that appeal to adult learners) into the larger nursing curriculum.

CREATIVE PEDAGOGY LINKS EDUCATION AND COMMUNITIES

Use of Community Partners for Professional Development in Hybrid Education

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Purposes: Professional education is in the forefront of adopting hybrid learning pedagogies. One of the challenges of implementing this structure is the reduction of opportunities to influence the development of professional character and identity. This presentation reports on the use of community partners to foster professional development in a curriculum for professional guardians and draws parallels to nursing education.
Background: Hybrid education is receiving increased attention due to its potential to reach geographically diverse audiences and to engage students with disparate learning styles. Most of the relevant literature has detailed innovative technological strategies for online pedagogy. By contrast, comparatively little has been written about the live, in-person elements of the courses. Fundamental to the success of blended education is the creation of a community of inquiry – a group of scholars focused on a common educational goal. The goals of professional education include not only knowledge attainment, but also development of professional identity. It is during the in-person portions of the course that much of the subtle work of professional development can occur, including the inculcation of professional norms of behavior, collegiality, and values. Additionally, students initiate and foster relationships, both with their student colleagues and their instructors, which sustain them during the more isolated online portions of the course.
Description: In order to improve the preparation of professional guardians in Washington, the state licensing board asked the professional education unit of the university to develop a robust certificate program. To promote availability across the entire state, a hybrid model was selected. It is currently a 100-hour program offered over six months, with a 60/40 ratio of online to in-person time.

In the initial iterations of the course, the in-person time was scheduled with traditional didactic presentations. As the course has evolved, we have systematically decreased the time spent on lectures and increased the amount of facilitated small group discussions, panel presentations, and interactive learning exercises. Critical to this shift has been the integration of practicing professional guardians as instructors and facilitators. As relatively novice educators, the presenters have required careful selection, preparation, and coaching to understand their dual responsibilities for knowledge dissemination and professional identity development.
Outcomes: These shifts in pedagogical approach have lead to increased cohesion among the students as reflected in their increased participation in both required and optional asynchronous online discussions. Additionally, anecdotal reports reflect collaboration among students after completion of the program that was not evident in the earlier cohorts. Since professions by definition depend on self-regulation and mutually established norms, this enhanced collaboration and cooperation is fundamental to establishing and maintaining professional identity. The community partners serve to model this behavior through their participation in the educational process.
Implications: Nursing education similarly pursues the dual goals of knowledge dissemination and professional development. The thoughtful and strategic use of community partners during the face-to-face portion of hybrid courses strengthens the development of professional identity through more engaged learning and greater group cohesion.

CREATIVE PEDAGOGY LINKS EDUCATION AND COMMUNITIES

Strengthening Nursing Expertise in Educational Technology

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Background: This paper describes best practices utilized in a hybrid graduate course on technology-enhanced pedagogy. The course helps fill the educational technology gap experienced by nurses in all community settings, due not only to the increasingly technology-filled environments in which they work, but also to the challenges of working with students and staff with widely varying degrees of comfort with educational technologies.
Purpose: The intent of the course was three-fold: to provide opportunities for master's prepared nurses, whether digital natives or digital immigrants, to experience learning in a primarily online environment; to support their ability to use educational technologies to transform how they teach, learn and educate in a variety of community settings; and to embed their own learning and their approach to teaching and educating in Bloom's Cognitive Taxonomy and the Digital Bloom's Taxonomy. It was also intended to help nurses approach their teaching, learning and evaluation activities from a theory-based foundation rather than from a primary focus on content to be mastered.
Approach: The course was structured to provide scaffolding for the evolving student competence and confidence. Early assignments, readings and postings emphasized lower-order cognitive and technology skills. The familiar cognitive skills of remembering, understanding and applying were critical to the students' ability and willingness in the early weeks to begin working their way up the digital Bloom's taxonomy, with its focus on technology skills. Coursework in the later weeks engaged students in thoughtfully building upon and incorporating their early work and skills into more sophisticated work as they analyzed, evaluated and created tools, products and modules they could implement with their learners in their community work settings.
Outcomes: Outcomes of the course included creations such as a podcast to help family members feel more comfortable about admitting their elderly family member to a care center; a blog where pre-licensure students journaled about the clinical day with more depth and reflection than they had previously done in face-to-face post-conference; and a wiki structured to support collaboration between patients, providers and others interested in bariatrics. Additional outcomes included greater confidence in using technologies, increased clarity about the role Bloom's taxonomy brings to teaching and learning, and a desire to help colleagues make the same transitions. To support the continuance of this focus on technologies, our nursing faculty are developing more hybrid and online offerings.
Implications: Implications for nursing education include evaluating whether or how the needs of digital natives and immigrants differ and how best to support divergent needs, assuring that the course scaffolding is more visible to students, and exploring strategies for integrating skills from this elective course into other coursework. Implications for cross-institutional community connections with nursing education through these modalities include the potential for greater sensitivity to the needs of community partners, joint research projects and heightened technology expectations from RNB and MN students who come to us from our community partners.

DECISION-MAKING AMONG VULNERABLE WOMEN: TRANSITIONS TO IMPROVE SELF-CARE

Moderator:
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OVERVIEW: DECISION-MAKING AMONG VULNERABLE WOMEN: TRANSITIONS TO IMPROVE SELF-CARE

Margaret Susan Stemmler

DECISION-MAKING DETERMINANTS AMONG VULNERABLE WOMEN: A REVIEW OF ADAY'S FRAMEWORK

Benissa E. Salem

SYMBOLIC INTERACTION: AN INTERPRETIVE FRAMEWORK FOR QUALITATIVE STUDIES

Teodocia M. Hayes-Bautista

TO GET THE SHOT OR NOT: HPV VACCINES AND AMERICAN INDIAN FEMALE STUDENT DECISION-MAKING

Felicia Schanche Hodge

SHE DECIDES: CONDOM-USE, SEX PARTNER DECISION-MAKING AND AFRICAN AMERICAN WOMEN

Ann K. Anaebere

METHAMPHETAMINE-USING WOMEN: THE ROLE OF DECISION-MAKING IN EARLY PREGNANCY

Margaret Susan Stemmler

DECISION-MAKING AMONG VULNERABLE WOMEN: TRANSITIONS TO IMPROVE SELF-CARE

Overview: Decision-Making among Vulnerable Women: Transitions to Improve Self-Care

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Purpose: A synthesis of the concept vulnerability and the framework of symbolic interactionism (SI) in Grounded Theory (GT) set the foundation to highlight decision-making challenges for improving self-care, as experienced by three vulnerable populations: African American (AA) women who are at the highest risk for HIV infection; college-age American Indian (AI) women risking cervical cancer, and methamphetamine (MA)-using women with unintended pregnancies.
Rationale: Traditionally, quantitative research informs the health and social sciences of women's probable health status and health-seeking behaviors. Unfortunately, population-based information is not valid for AA and AI women who are systematically marginalized by ethnicity and culture. It also has no value for MA-using women whose clandestine lifestyle separates them from the mainstream. However, awareness of vulnerability enhances the appreciation of risk predictors in the targeted populations. AA women aged 18-39 have the highest rates for acquiring HIV/AIDS through heterosexual transmission. Understanding their partner selection and condom use are critical links to improving self-prevention measures for HIV infection. AI women have high rates of sexually transmitted infection but rarely receive the HPV vaccine. Understanding issues that affect their decisions regarding vaccination can improve HPV vaccination rates, ultimately reducing cervical cancer in the group. Lastly, inhibition and unprotected sexual encounters increase the risk for unintended pregnancy among MA-using women. Analyzing their experiences associated with pregnancy recognition and their decisions to maintain a pregnancy can support entry into prenatal care and better pregnancy outcomes.
Methods: To provide insight into decision-making processes, qualitative research design is best suited for exploring from social interactions. GT offers the appropriate qualitative methodology for the three research studies. SI provides an interpretive framework for analyzing and creating meaning from the verbal narratives provided by participants. The study about AI college women used GT to identify themes elicited from focus groups conducted in three university settings. Constructivist Grounded Theory supports the data interpretation for the studies about the AA women and MA-using women in which audio-taped, semi-structured interviews were conducted in home and community agencies with AA participants, and public-funded drug treatment sites provided the settings for interviewing MA-using pregnant volunteers.
Results: Vulnerable populations have heightened health risks. SI supports interpretation within the context of the targeted women's narratives about life experiences. For AA women, environment and social networks affect partner selection and condom use. AI women reveal how issues of culture, knowledge, and risk perception influence self-care. Lastly, MA-using women struggle toward motherhood exposing concerns of coping, responsibility and emotional support.
Implications: Understanding decision-making processes of the targeted vulnerable populations informs health providers and the social sciences of about opportunities for developing appropriate education, interventions, and participation of the targeted groups.

Funding: The National Institutes of Health/National Institute of Nursing Research, T32 NR007077 for Vulnerable Populations-Health Disparities.

DECISION-MAKING AMONG VULNERABLE WOMEN: TRANSITIONS TO IMPROVE SELF-CARE

Decision Making Determinants among Vulnerable Women: A Review of Aday's Framework

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Purpose: To present vulnerability[1] as a concept influencing decision-making in three diverse populations: (1) African American (AA) women at increased risk for HIV/AIDS, (2) American Indian (AI) college-age women at risk for cervical cancer, and (3) methamphetamine (MA)-using women with unplanned pregnancies.
Concept: The word vulnerable is derived from the Latin verb, *vulnerare,* which means to wound, injure or act to diminish power and authority. Individuals and communities are often described as vulnerable are susceptible to health disparities, which are inequities in quality of care based on age, race, ethnicity, socioeconomic status, access to care and resources which lead to premature morbidity and mortality. While all human beings can be considered vulnerable at some point in life, racial and ethnic minorities evidence health inequities associated with preventable conditions at unprecedented rates due to the unequal distribution of resources, often rooted in social, structural and political power differentials.
Concept Analysis Approach: Aday devised a theoretical framework which characterizes a convergence of interrelated concepts, i.e. resource availability, relative risk and health status that predict health outcomes in vulnerable populations. Specifically, resource availability directly influences social status, social capital and human capital. Social status is associated with age, sex, race, and the status individuals hold in societies, while social capital identifies social networks that provide supportive services; and societal investment through schools, jobs, income and housing. These predictors affect relative risk, referring to the susceptibility to harm and neglect that can result in poor physical, psychological and community health. Recognizing the conceptual basis of vulnerability aids in understanding the decision making processes that are present among AI, AA, and MA-using women as they strive to attain better health status.
Link to Theory and Practice: Vulnerable populations in the aforementioned populations are at heightened risk for health disparities and poorer health outcomes, namely premature morbidity and mortality associated with HIV/AIDS, cervical cancer and unplanned pregnancies. The marriage between theory and practice arms healthcare providers with culturally sensitive translational interventions and purposefully informs, educates and encourages healthy behaviors and lifestyles among vulnerable women.
Conclusion: Understanding decision making patterns among AI, AA, and MA-using women is an urgent social and public health issue. Aday's framework for studying vulnerable populations is an effective tool identifying predictors of risk. Among AA women, individual resources and health needs affect sex partner decision-making and condom use.

Similarly, among MA women, social status and social capital affect pregnancy recognition and health-care seeking. Likewise, among AI women, human capital, which is influenced by education, needs to be developed and targeted in order to encourage HPV vaccination.

Funding: NIH/NINR T32 NR007077.

DECISION-MAKING AMONG VULNERABLE WOMEN: TRANSITIONS TO IMPROVE SELF-CARE

Symbolic Interaction: An Interpretive Framework for Qualitative Studies

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Purpose: This paper presents symbolic interaction (SI) as the interpretive framework for grounded theory methodology that is used to analyze the qualitative data presented in the following papers: 1) *To Get the Shot or Not: HPV Vaccines and American Indian Female College Student Decision-making,* 2) *The Exploring Condom-use and Sex Partner Selection Decision-making Among Urban African American Women and,* 3) *Methamphetamine-using Women: The Role of Decision-making in Early Pregnancy.*
Symbolic Interaction - A Communicative Process: Blumer argued that behavior is never simply an automatic reflex but instead is "the essential process through which all human action including thinking is created, maintained, and changed." This notion is key to understanding the interpretive framework of SI. Moreover, SI is a communicative process made up of two basic components: "indication" and "interpretation." SI is possible because an individual has the capacity to envision oneself as the object of one's own acts. Mead claimed that this communicative process actually creates meaning--- meaning that can only be found within action or social interaction. In this perspective, meaning is not randomly located somewhere in the psyche, and it is not inherent in an object as if it were just waiting to be observed. Mead holds that the SI schema is mapped as "stimulus - meaning – response".
Approach: Researchers using an SI framework analyze verbal gestures as emergent processes that occur within the self, as well as in interaction with others, leading to the construction of meaning. In ***Constructivist Grounded Theory***, as outlined by Charmaz, meaning-making is a phenomenon that can be found embedded in the narratives of people engaged in living their lives. The action of meaning-making is not inherent to a person, but is created through acts of construction within a participant's lived reality.
Link to Nursing Research: Therefore the goal of a researcher is to analyze narratives and study the meanings that people construct and how they were created while engaged in the process of living life or as in the focus of these studies, make decisions regarding self-care. The vulnerable women in these studies do not make self-care decisions simply because of their income, education or ethnicity. They create meaningful action from the context of their lived reality that may at times put them at risk for health outcomes that are less than optimal. The nurse researchers in this symposium entered the subjects' reality and explored Mead's "stimulus-meaning-response" related to the decision-making for areas including: partner selection, condom use, HPV vaccination, recognition of pregnancy and health-seeking during pregnancy.
Conclusions: The discussion will illuminate the influence of symbolic interaction in social interactions as the three groups of women identified and selected the stimuli to which they responded by creating meaningful lines of action, constantly creating individual and unique lived realities.

Funding: The National Institutes of Health/National Institute of Nursing Research T32 NR007077, for Vulnerable Populations-Health Disparities funds this presentation.

DECISION-MAKING AMONG VULNERABLE WOMEN: TRANSITIONS TO IMPROVE SELF-CARE

To Get the Shot or Not: HPV Vaccines and American Indian Female Student Decision-Making

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Purpose: This paper identifies human papillomavirus (HPV) vaccine decision-making among American Indian female college students.
Background: The Human papillomavirus is reported to be the most common sexually transmitted infection (STI) in the United States. Research estimates that 50% of all sexually active people will acquire genital HPV sometime in their lives. It is well documented that HPV causes cervical cancer and genital warts. Vaccines have been developed that initially targeted females and/or youth between the ages of 12-26 who are not yet sexually active. Many American Indians do not fully participate in the HPV vaccination program, even though they are at high risk for HPV and cervical cancer. There are few targeted efforts to vaccinate and to educate American Indians, thus HPV prevention opportunities are missed.
Methods: Eight focus groups were held with American Indian college students attending the following four Southwest universities: University of California at Berkeley, University of California at Los Angeles, University of Arizona and Arizona State University. These sessions were coordinated in 2009 at Student Unions or American Indian Studies Programs by two trained American Indian graduate students using questions and prompts guided by the literature. Measures included HPV vaccine and virus knowledge, perceived risk, barriers and behaviors. Participants included 57 American Indians, 23 males and 34 females, ages 19-26. Sessions were audio recorded and transcribed verbatim. Transcriptions of all female participants were identified and analyzed independently by three project researchers. Identified common themes were coded and formed into categories following Grounded Theory analytical procedures. Relationships between HPV vaccine decision-making categories were analyzed.
Findings: Six themes were identified explaining HPV vaccine decision-making by college females: knowledge, access, fear, culture, history, and risk perception.
Implications: Understanding the HPV decision-making behaviors of American Indian females will help to improve HPV vaccinations among this group. Recommendations for culturally sensitive educational programs designed to improve vaccination rates are provided.

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DECISION-MAKING AMONG VULNERABLE WOMEN: TRANSITIONS TO IMPROVE SELF-CARE

She Decides: Condom-Use, Sex Partner Decision-Making and African American Women

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Purpose: This purpose of this presentation will be to clarify and enhance the understanding of condom-use and sex partner selection decision-making among urban African American Women (AAW).

Background: AAW account for 66% percent of identified AIDS cases among women in the United States and heterosexual transmission continues to remain the leading cause of HIV acquisition among members of this population. Furthermore, the increase in the rate of Acquired Immunodeficiency Syndrome (AIDS)/Human Immunodeficiency Virus (HIV) cases among African American women (AAW) is most concentrated among women who are between the ages of 18-39 years. As it relates to HIV prevention and African American women, much of the research literature has primarily focused on identifying causes of high-risk sexual behaviors (i.e., poor gender power equity, poverty and lack of social support). However, for many individuals sexual behaviors, whether high-risk or HIV-protective, are often not static behaviors. Behaviors among sexually active individuals have been shown to vary between episodes of high-risk and HIV-protective sexual behaviors. Most specifically, women have continually been shown to alternate between monogamous (exclusive) and non-monogamous (casual) sexual relationships as well as, condom use and non-condom use behaviors. Examining factors that influence AAW decision-making patterns about condom-use and sex partner selection will be key in encouraging HIV prevention efforts among AAW.

Methods: A qualitative study design utilizing a grounded theory approach was used to explore themes, perspectives and contexts related to condom-use and sex partner selection among urban African American women who were between the ages of 18-30. Women who were interviewed resided in urban areas of Los Angeles County. Semi-structured interviews were used for data collection, which offered respondents the freedom and ability to provide information and insights in their own words with as much detail, illustration and explanations as desired.

Findings: Factors impacting condom-use and sex partner decision making have been shown to be connected to a number of environmental, social, individual and other contextual items such as relationship type, social network type, partner and peer influence, self efficacy and health knowledge.

Implications: Exploring the decision-making patterns of urban African American women related to condom-use behavior and sex partner selection will likely offer nurses a clear framework by which to cultivate interventions that are culturally- and developmentally-appropriate and that seek to enhance sexually-safe behaviors among urban African American women. Finally, the information received through this study will be an integral part of deciphering what intervention programs are most beneficial to this population.

DECISION-MAKING AMONG VULNERABLE WOMEN: TRANSITIONS TO IMPROVE SELF-CARE

Methamphetamine-Using Women: The Role of Decision-Making in Early Pregnancy

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Purpose: To explore and propose phenomenon influencing the recognition of pregnancy by women who were methamphetamine (MA) users during an index pregnancy, focusing on their decision-making processes and commitment to maintain the pregnancy.
Background: The transition to motherhood is described as one of life's most stressful and unsettling changes in women's lives. Recognition of pregnancy and circumstances that surround conception contribute to how women make decisions about maintaining a pregnancy. Research about MA-using women reveals life difficulties including childhood family disruption, parents who use substances, history of sexual or physical abuse, and psychological comorbidities. As MA use escalates, it changes self-perceptions and cements a clandestine drug-seeking lifestyle. Isolation from society's mainstream, frequent encounters with police, and recurring incarceration typify the women's experiences. MA use often begins as early as age 15, beginning the childbearing years. Regular MA use is associated with impulsivity and sexual inhibition. Many MA-using women report multiple intimate partners and risky sexual encounters. Unintended pregnancy threatens the women's familiar drug-using lifestyle and social stigma negatively affects health-seeking because they fear disclosure of illegal drug-use and loss of child custody. Thus, pregnancy associated with MA use provokes public health concerns regarding delayed onset of prenatal services and poor outcomes from in utero exposure of the fetus.
Methods: Qualitative inquiry utilizing Constructivist Grounded Theory engaged 12 women who were pregnant or new mothers within 6 months of delivery. All participants met criteria for drug-dependence as determined by the DSM-IV Short Form, and they claimed MA was their primary drug of choice. Recruited from publicly funded drug treatment facilities in Southern California, the participants were 18 years of age or older, English speaking, and of varied race and ethnicity. Under the protection of a Certificate of Confidentiality, a maximum of two semi-structured interviews were conducted with each woman. Simultaneous data collection and analysis documented the women's personal experiences of drug-using lifestyles, recognition of pregnancy, relationships, support systems, and health-seeking behaviors during pregnancy.
Findings: Experiences of pregnancy recognition and stories of day-to-day life throughout the index pregnancy provided compelling data detailing the women's struggles toward motherhood. Coping, taking responsibility, and acceptance of assistance or emotional support are central themes in their recognition of the pregnancy and taking-care behaviors to prepare for motherhood.
Implications: The personal experiences of women who have used MA during pregnancy add to the understandings of a vulnerable population that risks health disparities, especially surrounding reproductive needs and adherence to prenatal care. This qualitative research informs nursing, health providers, and the social sciences about opportunities for improving health services to MA-using women through improved timing for interventions, preventive strategies to restore personal confidence, and improving access to contraceptives, preconceptual preparation, self-care, and entry and adherence to prenatal care services.

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DOES NURSE STAFFING MATTER? FINDINGS FROM A NATIONAL OUTCOMES DATABASE STUDY

Moderator:
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OVERVIEW: DOES NURSE STAFFING MATTER? FINDINGS FROM A NATIONAL OUTCOMES DATABASE STUDY

Lori A. Loan, Mary McCarthy, Patricia A. Patrician, Andres Azuero, Mona Bingham

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DO NURSING OUTCOMES DATABASES PRODUCE VALID & RELIABLE DATA?

Mary McCarthy, Lori A. Loan, Patricia A. Patrician

IS NURSE STAFFING ASSOCIATED WITH ADVERSE EVENTS?

Patricia A. Patrician, Mary McCarthy, Lori A. Loan

ARE NURSING OUTCOME DATABASES SENSITIVE TO OUTCOME CHANGES OVER TIME?

Lori A. Loan, Patricia A. Patrician, Mary McCarthy

DOES NURSE STAFFING CONTRIBUTE TO JOB SATISFACTION IN NURSING PERSONNEL?

Mona Bingham, Lori A. Loan, Mary McCarthy, Patricia A. Patrician, Andres Azuero

DOES NURSE STAFFING MATTER? FINDINGS FROM A NATIONAL OUTCOMES DATABASE STUDY

Overview: Does Nurse Staffing Matter? Findings from a National Outcomes Database Study

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Introduction: Whether they work in civilian or military hospitals, nurse executives face similar staffing constraints and patient safety dilemmas. The need for decision support tools upon which to base nurse staffing recommendations is a constant concern. Without standardized nurse staffing and nurse-sensitive outcome reporting mechanisms, it is nearly impossible to compare staffing adequacy and outcomes across units inside a hospital or facilities within a health care system.

Since its inception in 2001 as the first national nursing database project to support the collection of American Nurse's Association's Nursing Quality Indicators at the shift-level, the Military Nursing Outcomes Database (MilNOD) has used state of the science analytical methods in order to study how daily nurse staffing decisions and nurse driven processes of care impact patient and nurse outcomes. Although the National Database for Nursing Quality Indicators and the Collaborative Alliance for Nursing Outcomes methods and results have been extensively reported elsewhere (Aydin et al., 2004; Aydin et al., 2008; Bolton et al., 2007; Donaldson et al., 2005; Dunton, 2008; Gallagher & Rowell, 2003), the MilNOD findings from shift-level analyses are now being disseminated. Four years of longitudinal research in military hospitals has resulted in a data set of over 115,000 shifts from 57 medical, surgical, step-down and critical care units. Findings from this work may guide others who ponder daily nurse staffing decisions.

Aims: This symposium examines the quality of nursing outcomes data collected at the shift level in order to confirm one aim of MilNOD - to create a valid and reliable nursing outcomes database. The second aim was to provide patient safety data as a basis for comparison among hospitals. Therefore, we will describe the MilNOD's efficacy as a monitoring strategy that is sensitive to changes in patient outcomes over time. Analysis supporting two additional aims of the MilNOD will also be presented including an examination of the associations between staffing and patient outcomes, and an analysis describing the association between nurse staffing and job satisfaction among nursing personnel.

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DOES NURSE STAFFING MATTER? FINDINGS FROM A NATIONAL OUTCOMES DATABASE STUDY

Do Nursing Outcomes Databases Produce Valid & Reliable Data?

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Purpose: The purpose of this analysis was to describe the strategies employed to ensure reliability and validity of Military Nursing Outcomes Database (MilNOD) data.
Background: There is little evidence in the literature to support the validity and reliability of indicators collected for national nursing databases. One of the original aims of the MilNOD project was to ensure reliability and validity of its indicator data. Without addressing data quality, there would be no basis for comparisons among military hospitals. Indicators selected and definitions used were chosen for their concurrence with indicators in other national databases, such as the Collaborative Alliance for Nursing Outcomes, in order to ensure valid comparisons with private sector hospitals.
Methods: Each of thirteen participating sites collected data for nursing sensitive structural indicators and patient/nursing outcome indicators, as well as explanatory variables and contextual features. Indicator data came from a variety of primary and secondary sources, accessed and recorded by a trained research assistant (RA) at each site. The RA selected the most accurate source of data and used this consistently; no hospital administrative databases were utilized for data extraction. A rater-to-standard design was developed to train site RAs about medication errors, falls, restraints, and pressure ulcer staging classification. An RA Orientation Packet, 30 day run-in periods for each site, frequent team teleconferences and site visits, and ongoing data quality assessments were strategies used to optimize data integrity.
Results: Percent agreement between direct observation and staffing hours ranged from 86% to 97% and was similar for worksheet staffing records and database entries. Admission, discharge, and transfer data reached 97% agreement, and shift census consistently reached 98% agreement when comparing assignment worksheets to database entries. Medication error classification ranged from 92-100% for all participating units, and falls classification was generally at 100% agreement across all sites. Interrater reliability assessments for restraint classification held steady at 100% and pressure ulcer staging classification never fell below 91% at any site.
Implications: The MilNOD collated useful, valid, and reliable data that supported appraisal of staffing effectiveness and nursing's contribution to patient safety. A shift-level database can be labor intensive and dismissed by managers and nurse executives unless the nursing sensitive outcome indicators are viewed as useful, timely, and relevant, as well as reliable and valid.

Funding: TriService Nursing Research Program (Grants N02-P06 and N03-P07).

DOES NURSE STAFFING MATTER? FINDINGS FROM A NATIONAL OUTCOMES DATABASE STUDY

Is Nurse Staffing Associated with Adverse Events?

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Purpose/Aim: The Military Nursing Outcomes Database (MilNOD) was created in response to the national mandate to examine nurse staffing effectiveness and to inform decisions regarding safe levels of nurse staffing in military hospitals. One of the study's aims was to examine the relationship of nurse staffing to patient and nurse outcomes.
Rationale/Conceptual Basis: Contrary to popular studies at the time which relied on annually collated existing administrative data for both staffing and patient outcomes, the MilNOD used prospective, shift-based data. A descriptive, observational design was employed. Donabedian's conceptual framework guided variable selection and analysis.
Methods: A convenience sample of 57 acute adult inpatient care units from 13 United States Army, Navy and Air Force large and small hospitals participated in the MilNOD. Data for several American Nurses Association's nursing sensitive quality indicators were collected including nurse staffing numbers and mix, patient days, patient falls, medication administration errors, and nurse needlestick injuries. Acceptable levels of data validity and reliability were maintained. Bayesian hierarchical logistic regression was used for the analysis.
Results: The analysis included 115,062 shifts. The overall adverse event rate was 2.47%. An increased proportion of RNs was significantly associated with fewer falls in medical-surgical (MS), OR 1.21, 95% CI [1.00, 1.21], and critical care (CC) units, OR 1.20, 95% CI [1.07, 1.39]. Fewer falls were associated with a higher percentage of Department of Defense (DoD) civilian nurses: MS, OR 1.48, 95% CI [1.20, 1.81]; Step-down (SD), OR 1.33, 95% CI [1.11, 1.51]; and CC units, OR 1.36, 95% CI [1.00, 1.73]. An increased percentage of RNs was significantly associated with fewer medication administration errors in MS and CC units (OR and 95% CI 1.13[1.04, 1.23] and 1.17 [1.06, 1.35], respectively). A higher proportion of DoD civilian nurses was associated with fewer medication administration errors: MS, OR 1.21, 95% CI [1.00, 1.21]; SD, OR 1.22, 95% CI [1.05, 1.44]; CC, OR 1.20, 95% CI [1.07, 1.39]. Needlesticks were significantly associated with shifts that had lower RN skill mix: MS, OR 1.32, 95% CI [1.14, 1.54]; SD, OR 1.38, 95% CI [1.18, 1.60]; CC, OR 1.35, 95% CI [1.18, 1.57], and a lower percentage of DoD civilian staff on MS, OR 1.54, 95% CI [1.00, 2.12], and SD units, OR 1.22, 95% CI [1.05, 1.44].
Implications: The level of detail in MilNOD data collection methods elucidated relationships that have not been shown to exist in annualized administrative data. This model for collecting and disseminating reliable, valid and usable inpatient data across hospitals is an effective patient safety monitoring strategy.

Funding: TriService Nursing Research Program Grants N02-P06 and N03-P07).

DOES NURSE STAFFING MATTER? FINDINGS FROM A NATIONAL OUTCOMES DATABASE STUDY

Are Nursing Outcome Databases Sensitive to Outcome Changes Over Time?

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Purpose: This analysis used data from the Military Nursing Outcomes Database (MilNOD) to describe the efficacy of the MilNOD as a viable patient safety monitoring strategy. The research question was—Were nursing contributions and patient outcomes sufficiently monitored over time to produce measureable changes in participating nursing care units?
Rationale/Conceptual Basis: Healthcare organizations are increasingly accountable for the quality of care they provide. Never before has this focus on data to document healthcare quality been so critical. The imperative to measure nursing's impact on quality has been hampered by the use of a wide variety of internal monitoring systems that often have not been proven to be sensitive or effective. Testing nursing quality monitoring systems is an important issue for nursing and hospital executives. The MilNOD project was the most comprehensive shift-level effort of its kind in the United States. It was guided by Donabedian's (1966) triad of structure, process, and outcome.
Methods: This particular analysis used retrospective longitudinal patient outcome data collected between October 2004 and December 2006 from 47 of the study's 57 acute adult inpatient units representing 13 Army, Navy and Air Force hospitals. Patient falls and medication administration errors were extracted from hospital occurrence reports by trained research assistants (inter-rater reliability [IRR] >92%). Mean outcome rates were obtained by averaging all unit shift-level outcome rates for each quarter. Pressure ulcer prevalence was collected by a team of on-site experts at least annually (IRR >91%). Repeated measure analysis of variance (RM-ANOVA) was used to evaluate changes in outcomes over time.
Results: Participating unit average fall rates decreased significantly from baseline to the 10th quarter of data collection ($F=2.05$, $df=9$, $p = 0.028$). On average, unit fall rates decreased 69%. The average medication administration error rates significantly decreased from baseline to the 10th quarter of data collection ($F=2.17$, $df=9$, $p = 0.019$) which represents a 55% decrease in this error rate. The nurse medication administration error with harm rates also significantly decreased over the ten quarters ($F=2.42$, $df=9$, $p = 0.009$), representing a 70% rate reduction. Hospital Acquired Pressure Ulcer (HAPU) prevalence decreased significantly from baseline to the 4th prevalence survey ($F=3.02$, $df=3$, $p = 0.036$). On average, participating units decreased their HAPU prevalence by 62%.
Implications: Participating nursing care units realized significant improvements in key patient outcome variables over time. Several MilNOD interventions may have contributed to these improvements—participants received quarterly reports allowing performance comparisons against other military and civilian hospitals; following study enrollment implementation of evidence-based falls and pressure ulcer risk assessments were required; and MilNOD experts facilitated best practice sharing across hospitals and assisted sites in evaluating evidence-based improvements. We conclude that the MilNOD did meet the needs for a monitoring system that is sensitive to changes in outcomes over time.

Funding: TriService Nursing Research Program (Grants N02-P06 and N03-P07).

DOES NURSE STAFFING MATTER? FINDINGS FROM A NATIONAL OUTCOMES DATABASE STUDY

Does Nurse Staffing Contribute to Job Satisfaction in Nursing Personnel?

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Purpose: This analysis used data from the Military Nursing Outcomes Database studies to determine whether nurse staffing is associated with job satisfaction of nursing personnel working in military facilities.
Rationale/Conceptual Basis: Although there is ample anecdotal evidence that low staffing levels results in job dissatisfaction among nurses, there is little empirical evidence that supports this relationship. Job satisfaction is critical to retaining a qualified workforce and is associated with positive patient outcomes. Donabedian's conceptual framework guided variable selection and analysis.
Methods: Participants in this analysis included 1,438 nurses from 57 acute adult inpatient units from 13 U.S. Army, Navy and Air Force hospitals. As part of a four year staffing and outcomes study, nursing personnel were surveyed annually on job satisfaction. Staffing data were collected each shift over a four year period. Job satisfaction was evaluated using a single-item measure. In a previous study scores for this single-item overall job satisfaction measure were highly correlated ($r = 0.79$, $p < 0.01$) with global satisfaction scores from the McCloskey-Mueller Nursing Job Satisfaction Survey (Loan, Jennings, DePaul, Brosch & Hildreth, 2003) demonstrating parallel-test reliability.
Results: Generalized linear mixed model analyses revealed that, controlling for patient turnover, nurse staffing did not predict job satisfaction. However, the odds of job satisfaction were significantly higher for RNs than non-RNs (OR 1.46, p = .04) and the odds of job satisfaction among military personnel were significantly lower than that for civilians (OR 0.66, p = .01).
Implications: These findings are contrary to the expectation that staffing affects job satisfaction. Perhaps other factors, such as practice environments, moderate the effects of staffing on job satisfaction.

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EXAMINING SHORT- AND LONG-TERM EFFECTS OF CREATING OPPORTUNITIES FOR PARENT EMPOWERMENT (COPE) INTERVENTION FOR FATHERS OF PRETERM INFANTS

Moderator:
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OVERVIEW: EXAMINING SHORT- AND LONG-TERM EFFECTS OF CREATING OPPORTUNITIES FOR PARENT EMPOWERMENT (COPE) INTERVENTION FOR FATHERS OF PRETERM INFANTS

Bernadette Mazurek Melnyk, Krista Oswalt, Darya McClain

EXPLANATORY EFFECTS OF THE COPE PROGRAM IN THE NICU ON PATERNAL ANXIETY AND DEPRESSION

Bernadette Mazurek Melnyk

IDENTIFYING MEDIATORS OF THE EFFECTS OF THE COPE PROGRAM ON MARITAL CONFLICT

Darya McClain, Krista Oswalt, Bernadette Mazurek Melnyk

MEDIATING FUNCTIONS OF PATERNAL BELIEFS ON CHILD VULNERABILITY

Krista Oswalt, Bernadette Mazurek Melnyk, Darya McClain

EXAMINING SHORT- AND LONG-TERM EFFECTS OF CREATING OPPORTUNITIES FOR PARENT EMPOWERMENT (COPE) INTERVENTION FOR FATHERS OF PRETERM INFANTS

Overview: Examining Short-and Long-Term Effects of Creating Opportunities for Parent Empowerment (COPE) Intervention for Fathers of Preterm Infants

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Despite a 3 percent decline from 2007 in the preterm birth rate (Martin, Osterman & Sutton, 2010), more than 520,000 babies (12.3%) still were born too soon in the United States in 2008 (Hamilton, Martin & Ventura, 2010). This is well above the National Healthy People 2010 preterm birth goal to lower the rate to 7.6 percent of all live births (Centers for Disease Control and Prevention & Health Resources and Services Administration, 2001). Preterm birth results in a multitude of negative adverse outcomes for children, including extended stays in the neonatal intensive care unit (NICU), developmental delays, physical and mental health/behavioral problems, increased medical utilization, and poor academic performance (Forcada-Guex, Pierrehumbert, Borghini, Moessinger & Muller-Nix, 2006; Melnyk, Feinstein, Alpert-Gillis, Fairbanks, Crean, et al., 2006). Additionally, parents of preterms experience a high incidence of poor mental health (e.g., anxiety, depression) along with overprotective parenting and marital conflict, which negatively impact their children (Forcada-Guex et al., 2006; Miles, Holditch-Davis, Schwartz, 2007; Holditch-Davis, Bartlett, Blickman & Miles, 2003). Therefore, the purpose of this symposium is to present the findings from three studies that were conducted on data from a large randomized controlled trial with 260 premature infants and their parents that tested the efficacy of the COPE (Creating Opportunities for Parent Empowerment) educational-behavioral intervention program on short- and long-term parent and child outcomes. This study is innovative because of inclusion of fathers in the educational-behavioral intervention. The unique contribution of this work will add to the science by demonstrating the long-term effectiveness of this type of intervention on father mental health, marital relationships, and child health and well being.

The first paper in this symposium will present a theoretical model examining the processes through which an educational-behavioral intervention program (COPE) delivered in the NICU influences fathers' anxiety and depression when premature infants reach 12 months corrected age. The second paper will examine the direct and indirect effects of the COPE program on marital conflict resolution at 24 months corrected age. In the third paper, mediators of the effects of the COPE program on paternal perception of the child's vulnerability at 36 months corrected age will be discussed. This body of evidence supports the need to provide the COPE program in the NICU to fathers of premature infants to avoid long-term negative father and child outcomes. Implications for both clinical practice and future research will be discussed.

EXAMINING SHORT- AND LONG-TERM EFFECTS OF CREATING OPPORTUNITIES FOR PARENT EMPOWERMENT (COPE) INTERVENTION FOR FATHERS OF PRETERM INFANTS

Explanatory Effects of the COPE Program in the NICU on Paternal Anxiety and Depression

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Background: The neonatal intensive care unit (NICU) a stressful environment for both the infants and their parents. Parents of preterm infants frequently experience emotional distress during their infants' hospitalization, along with high levels of depressive and anxiety symptoms that often last well into their children's pre-school and school-age years (Johnson, Ring, Anderson, & Marlow, 2005; Melnyk et al., 2006; Pinelli, 2000; Teti, Hess, & O'Connell, 2005). The Creating Opportunities for Parent Empowerment (COPE) Program is one intervention aimed at ameliorating present and future outcomes for infants and their parents facing a stay in the NICU. Beyond recognizing that an intervention is beneficial to premature infants and their parents, understanding the processes through which interventions work for fathers of premature infants is necessary for the advancement of science and the translation of efficacious interventions into clinical practice settings.
Aim: To test a theoretical model examining the processes through which an educational-behavioral intervention program (Creating Opportunities for Parent Empowerment [COPE]) delivered in the neonatal intensive care unit (NICU) influences fathers' anxiety and depression when premature infants reach 12 months corrected age.
Methods: A secondary analysis was conducted using data from a randomized controlled trial with 142 fathers of low-birth-weight preterm infants who were assigned randomly to COPE or attention control conditions. Measures included fathers' stress in the NICU, fathers' anxiety and depression, and fathers' beliefs about their infants and their role.
Results: The structural equation modeling approach to path analysis with observed variables was used to test the hypothesized model (Schumacker & Lomax, 1996). Results indicated that the COPE intervention had a significant indirect effect on fathers' anxiety at 12 months, through fathers' beliefs and anxiety in the NICU. Compared to fathers in the control group, fathers in the COPE intervention were more confident about their role as a father and more knowledgeable about their infants' appearance, which led to less paternal anxiety in the NICU, which then led to less paternal anxiety at 12 months. The results also suggested that there were significant direct effects of fathers' trait anxiety on fathers' depression and anxiety at 12 months. There were also significant indirect effects of fathers' trait anxiety on fathers' depression and anxiety at 12 months, through fathers' stress, depression, and anxiety in the NICU.
Conclusion: Findings indicate that implementation of COPE lessens paternal anxiety by enhancing knowledge and beliefs about how to best parent a preterm infant, which could improve long-term outcomes for both preterm infants and their fathers. Due to the high incidence of negative parental mental health symptoms associated with a NICU stay and the increased risk of developmental delays related to prematurity, wide-spread utilization of this educational-behavioral intervention is recommended.

EXAMINING SHORT- AND LONG-TERM EFFECTS OF CREATING OPPORTUNITIES FOR PARENT EMPOWERMENT (COPE) INTERVENTION FOR FATHERS OF PRETERM INFANTS

Identifying Mediators of the Effects of the COPE Program on Marital Conflict

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Background: The neonatal intensive care unit (NICU) is a stressful environment for parents. Increased parental anxiety in the NICU has been significantly associated with increased marital conflict for parents of very low birth weight infants (Zelkowitz, Bardin, & Papageorgiou, 2007). A strong body of evidence suggests that marital conflict has a long-term, negative impact on child adjustment, externalizing and internalizing problems, and emotional security (Cummings & Davies, 2004; Davies, Cummings & Winter, 2004). Previous research with parents of premature infants indicated that the quality of the marital relationship during infancy predicted child behavior problems at 7 years of age (Benzies, Harrison, & Magill-Evans, 2004). The Creating Opportunities for Parent Empowerment (COPE) Program is an educational-behavioral intervention that aimed to facilitate parental understanding and beliefs about parenting a premature infant to promote positive outcomes for infants and parents, including reducing marital conflict. The present study investigated the effects of the COPE program on marital conflict for fathers of premature infants by identifying potential mediators of program effects.
Aim: The goal of the current study was to examine whether fathers' beliefs about parenting a premature infant and anxiety in the NICU mediated the effects of the COPE program on marital conflict resolution at 24 months corrected age.
Methods: The current study is a secondary data analysis based on data from a larger study of the effects of the COPE Program on parents and their premature infants. Fathers (n=142) and their low-birth-weight premature infants, hospitalized in two NICUs, were randomized to COPE or control conditions. Measures included were the Parental Beliefs Scale: NICU (Melnyk, 1997), the State Anxiety Inventory (Spielberger, 1977), and the Conflicts and Problem-Solving Scales (Kerig, 1996).
Results: Path analysis results indicated that the longitudinal effect of the COPE program on fathers' reports of marital conflict was significantly mediated by fathers' beliefs about parenting a premature infant and state anxiety in the NICU. Compared to fathers in the control group, fathers in the COPE program were more confident about their role as a father and more knowledgeable about their infants' appearance, which led to less anxiety in the NICU, which then led to less marital conflict at 24 months.
Conclusion: Findings indicate that providing an educational-behavioral intervention aimed at facilitating understanding and beliefs about parenting a premature infant helps to reduce anxiety and marital conflict in fathers of premature infants. Given that marital conflict has a detrimental impact on child functioning during infancy, childhood, and adolescence, the effects of the COPE program to reduce marital conflict may have long-term effects on child development.

EXAMINING SHORT- AND LONG-TERM EFFECTS OF CREATING OPPORTUNITIES FOR PARENT EMPOWERMENT (COPE) INTERVENTION FOR FATHERS OF PRETERM INFANTS

Mediating Functions of Paternal Beliefs on Child Vulnerability

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Background: Parental assessments and beliefs regarding infant vulnerability are linked to parent stress and often persist well beyond discharge from the neonatal intensive care unit (NICU) (Erdeve, Arsan, Canpolat, Ertem, Karagol, Atasay, et al., 2009; Holditch-Davis et al., 2003; Teti & O'Connell, 2005). The tendency for some parents of premature infants to be overprotective, over indulgent, and anxious is believed to contribute to increased occurrence of developmental and behavioral problems among premature infants who are already at risk for delays due to their prematurity (Forcada-Guex et al., 2006; Holditch-Davis et al., 2003). The Creating Opportunities for Parent Empowerment (COPE) Program was designed benefit premature infants and their parents during their stay in the NICU and long-term by providing an educational-behavioral intervention that aimed to facilitate understanding and beliefs about parenting a premature infant. Understanding the processes through which interventions work for fathers of premature infants is necessary for the advancement of science and the translation of efficacious interventions into clinical practice settings.
Aim: The purpose of this study was to determine whether the effect of the COPE program on father's perceptions of child vulnerability at 36 months corrected age was mediated by parental beliefs about parenting a premature infant.
Methods: Fathers (n=142) and their low-birth-weight premature infants, hospitalized in two NICUs, were randomized to COPE or control conditions. These participants were drawn from a larger study of the effects of the COPE Program on parents and their premature infants. Measures included fathers' beliefs about their infants and their role, and father's perception of child vulnerability.
Results: Path analysis results indicated that the longitudinal effect of the COPE program on father's perceptions of child vulnerability at 36 months was significantly mediated by fathers' beliefs about their infants and their role. Thus, compared to fathers in the control group, father's of preterm infants who participated in the COPE intervention were more confident about their role as a father and more knowledgeable about their infants' appearance, which led to less perceived infant vulnerability at 36 months.
Conclusion: Developmental and behavioral problems associated with prematurity may be exacerbated by overprotective and excessively permissive parenting styles. Results of this study provide support for offering fathers with an educational-behavioral intervention focused on enhancing parents understanding of preterm infant behavior/appearance and confidence in their ability to parent these infants in order to facilitate positive outcomes in preterm infants and their fathers.

FAMILY PRESENCE: A MULTI-INSTITUTIONAL PRACTICE AND EDUCATION COLLABORATION

Moderator:
Cynthia F. Corbett, PhD, RN
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OVERVIEW: FAMILY PRESENCE PROJECTS UNIFYING PRACTICE AND EDUCATION

Cynthia F. Corbett

AN EVIDENCE-BASED PROJECT: FACILITATING FAMILY PRESENCE DURING RESUSCITATION

Michael W. Day, Cynthia F. Corbett

PHILOSOPHICAL EXAMINATION OF THE RESUSCITATION SCENE IN MODERN HEALTH CARE SYSTEMS

Shigeko (Seiko) Izumi, Erla Champ-Gibson, Roxanne Vandermause

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CURRICULAR INNOVATIONS FOR TEACHING FACILITATED FAMILY PRESENCE TO STUDENTS AND CLINICIANS

Deborah J. Bennett, Erla Champ-Gibson, Cynthia F. Corbett, Kevin Stevens

FAMILY PRESENCE: A MULTI-INSTITUTIONAL PRACTICE AND EDUCATION COLLABORATION

Overview: Family Presence Projects Unifying Practice and Education

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Facilitated family presence during resuscitation can be defined as *having an identified health team member available to support the family witnessing resuscitation in a location that allows family visual or physical contact with the patient*. Despite positions statements from many professional organizations supporting the practice of family presence, many healthcare organizations do not have policies about family presence. In addition, research indicates that many healthcare professionals have reservations about family presence during resuscitation. A summary of the family presence research will be presented during the symposium overview. Following the overview, a philosophical and ethical perspective of the customary procedures involving family at the resuscitation scene will be presented. Next an exemplar of an evidence-based practice project involving one hospital's experience developing and implementing a family presence policy will be presented. The third presentation will describe a multi-institutional collaborative project to develop a tool kit featuring simulation videos that have unrestricted online access and can be used to provide education about family presence to both health professions students and healthcare providers. The online tool kit will be demonstrated as part of this presentation. Finally, the symposium panelists will describe future research projects which will contribute to the science of further unifying family presence practice, education, and research.

FAMILY PRESENCE: A MULTI-INSTITUTIONAL PRACTICE AND EDUCATION COLLABORATION

An Evidence-Based Project: Facilitating Family Presence during Resuscitation

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Purpose: To establish an evidence-based hospital-wide policy addressing family presence during resuscitation.

Background/Rationale: A trauma patient's husband was admitted to the trauma resuscitation bay to be with his wife while she underwent cardiopulmonary resuscitation (CPR), as a result of a motor vehicle crash. The attending trauma surgeon was upset that the patient's husband had been allowed to observe the resuscitation. The need for a hospital-wide policy addressing family resuscitation was identified and the trauma coordinator and surgeon agreed to evaluate the nursing and medical literature for relevant research. During the initial literature review process, the trauma coordinator described the problem to the hospital's chief medical officer who sanctioned the formation of a committee to address the need for a hospital-wide policy.

Approach/Process: A committee was established that included nurse managers from the intensive care unit (ICU), the cardiac ICU, and the pediatric ICU, the hospital's ethicist, the emergency department medical director, the director of chaplaincy services and the trauma coordinator. A notebook of the relevant research was prepared for each member of the committee to review. The committee then discussed the research and determined that a survey of hospital staff was warranted to determine their level of knowledge and comfort regarding family presence during resuscitation. The survey was modeled after several that had been published in nursing literature. All medical, nursing and ancillary staff that were likely to participate in a resuscitation were invited to complete the survey. Results (N=363) mirrored those of other published surveys of hospital staff. For example, 59% of the respondents indicated that they would experience greater stress and anxiety if family members were present during CPR, and 67% indicated that witnessing CPR would cause significant emotional trauma to the family member. Concurrent with the survey process, the committee reviewed research and other literature on family presence, including polices from other institutions and position statements from several medical and nursing specialty organizations.

Outcomes Achieved: A policy was developed that allows family presence during resuscitation throughout the hospital. Exceptions to this policy include family members who are out of control emotionally or under the influence of alcohol or drugs. In addition, the policy clearly outlines who is responsible for caring for family members during the resuscitation. The policy was implemented hospital-wide. The survey results informed the topics for staff education which included using a video presentation of three simulation scenarios that depict family presence during resuscitation. Information about the evidence supporting family presence during resuscitation was also provided during staff education about the new policy.

Conclusions and Implications: This project exemplifies how a critical clinical incident provided the impetus for a positive practice change for an entire hospital. Facilitated family presence during CPR aligns with the values of patient centered care. However, more research is needed to discover ways to improve staff comfort with family presence and to discover the impact and meaning being present during CPR has on families and patient survivors. Specific plans to follow-up on our project include re-surveying staff after the policy has been in place for 6 months to determine whether staff knowledge, attitudes or perceptions have changed and partnering with a university to conduct a qualitative study of the experience of family members who have witnessed CPR.

FAMILY PRESENCE: A MULTI-INSTITUTIONAL PRACTICE AND EDUCATION COLLABORATION

Philosophical Examination of the Resuscitation Scene in Modern Health Care Systems

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Purpose: The purpose of this presentation is to examine the underlying ethical values that construct the customary scene of cardiopulmonary resuscitation (CPR) in modern health care. Doing so will set the backdrop for discussions about family presence during resuscitation.

Description of Values and Culture: Health care providers are trained primarily to save the lives of patients. Unless there is a specific order for do not resuscitate, the ethical principle of beneficence means saving lives because death is viewed as worst outcome.

From the deontological perspective, health care providers are compelled to do everything for the outcome of saving lives. Therefore, when a patient has a cardiac arrest, a code team will arrive. Equipment and medications will be brought in to set up a theater to save the patient's life. The CPR scene is arranged to maximize the efforts of the resuscitation team: the resuscitation team surrounds the patient, the necessary CPR equipment is in close proximity for easy access by the team, and everything and everyone else (including patient's family) that is non-essential are removed. Because families (and likely patients) expect healthcare providers to use the advanced technological equipment and medications to do everything to save their loved one's life, they generally acquiesce to the healthcare team and step aside, which is usually outside of the patient's room.

There is a strong belief by many in the US and other developed countries that health care technology is so advanced that death may be considered optional. Given the low success rate of CPR and even lower rate of full recovery, saving a life with a good outcome is actually a fairly rare event. However, misunderstandings about the limitations of technological advances may create unreasonable family expectations and/or defensive or protective behaviors by healthcare providers about their practice. The perception among health care providers, that if families witness CPR they may be more likely to sue if their family member dies, is a manifestation of a protective behavior and adds to the belief that the right thing to do is to remove family members from the scene of CPR.

The ethical principle of beneficence provides another reason for removing family members from the CPR site. CPR is a violent procedure, and seeing such a violent procedure performed on their loved one could be traumatic. Thus, family members are often removed from the CPR site by healthcare providers with a good intention of protecting them from the harm.

In summary, a combination of ethical reasoning and culture in the society has led to the customary US practice of removing family members from the scene of CPR.

Discussions: Providing patient and family-centered care is one of the focal points in healthcare today. The customary practice of removing family members from the scene of CPR requires examination from a patient and family-centered care approach. Doing so may illuminate alternative philosophical and cultural perspectives about the role of family members during CPR and the need for further research to inform education and practice.

FAMILY PRESENCE: A MULTI-INSTITUTIONAL PRACTICE AND EDUCATION COLLABORATION

Curricular Innovations for Teaching Facilitated Family Presence to Students and Clinicians

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Purposes/Aims: To develop videos and an instructional tool kit about family presence during resuscitation utilizing simulation and standardized patients.
Rationale/Background: A review of literature shows that family presence is a controversial topic for healthcare providers and educators. Support for family presence during resuscitation is not universal and the attitudes and values of healthcare professionals are common obstacles for family presence. The project collaborators hypothesized that a simulated family presence tool kit that included educational videos, discussion questions, and evidence-based references and resources could be used to assist health professional students and healthcare providers increase their knowledge about family presence, examine their values, and evaluate whether family presence during resuscitation may be consistent with patient and family-centered care.
Approach and Process: The availability of grant funding to promote inter-professional and workforce development facilitated coalescence of health professionals from Providence Sacred Heart Medical Center (PSHMC), Washington State University (WSU) College of Nursing, and the Master of Anesthesia Education Program at Gonzaga University to develop a unique tool kit for education about family presence during resuscitation. WSU nursing faculty, PhD students, and media specialists, PSHMC certified nurse specialists, and faculty from Gonzaga University's Nurse Anesthetist Program all collaborated to write the scripts for three scenarios related to family presence during resuscitation. A postpartum scenario, a pediatric scenario, and a trauma scenario were developed, volunteer actors were recruited, and the simulation scenarios were recorded at PSHMC. Videos were then produced and edited.
Outcomes Achieved/Documented: Family presence simulation videos and an accompanying tool kit are now available online for easy access and use by healthcare educators and providers (scenario example: http://vimeo.com/14864545). Each video is less than 5 minutes and includes questions for discussion. In addition, instructor/facilitator resources that reference and summarize the current evidence based literature are available online. The online availability of the tool kit offers opportunities for both synchronized education for groups of students or health professionals and independent asynchronized learning.
Conclusions and Implications: The literature on family presence during resuscitation consistently recommends that more education for healthcare professionals is needed. This multi-institutional collaborative project developed a unique tool kit that uses simulation videos and standardized patients as a method of providing awareness and education to healthcare students and providers about family presence during resuscitation. Future research will be done using the videos in baccalaureate nursing programs to evaluate students' perceptions and attitudes toward family presence before and after viewing the videos and participating in a facilitated discussion using the resources in the tool kit.

Funding: Supported by HRSA #12H-2483-0287: Nursing Workforce Capacity in the Inland Northwest: Strategic Actions and Partnerships.

HEALTH STATUS OF AFRICAN REFUGEES

Moderator:
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Boise, ID

OVERVIEW: ASSESSING THE HEALTH STATUS OF AFRICAN REFUGEES

Pamela J. Springer, Mikal Black, Patricia Lazare, Abigail Gerding, Terri Soelberg, Michal Temkin Martinez, Sean Wasden

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TRAINING UNCERTIFIED INTERPRETERS FOR RESEARCH

Terri Soelberg, Michal Temkin Martínez, Pamela J. Springer, Mikal Black, Abigail Gerding, Patricia Lazare

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UTILIZING A HEALTH FAIR SETTING FOR SURVEYING AFRICAN REFUGEES

Mikal Black, Pamela J. Springer, Terri Soelberg, Abigail Gerding, Michal Temkin Martínez, Patricia Lazare

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HEALTH STATUS OF AFRICAN REFUGEES - ANALYSIS

Patricia Lazare, Sean Wasden, Pamela J. Springer, Mikal Black, Abigail Gerding, Terri Soelberg, Michal Temkin Martinez

HEALTH STATUS OF AFRICAN REFUGEES

Overview: Assessing the Health Status of African Refugees

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Most African refugees who are relocated to the United States have spent years in refugee camps. These refugees face cultural and linguistic barriers as they transition into the American health care system. Little is known about the health status of these refugees after they settle in the U.S. A cultural and community assessment completed in 2009 by this research team indicated the refugees understand little about their health or health care and their health care providers have limited understanding of effective treatment interventions. Gaps exist between health provider knowledge and the health status of the African refugees.

The purpose of this symposium is to discuss the methods and findings of a research project documenting the perceived health status of African refugees and comparing it with their medical records. In collaboration with refugee community leaders, researchers and students used community based participatory principles to identify culturally appropriate venues for data collection. Presenters will discuss the use of community based participatory research to develop and implement health fairs for data collection, the training of interpreters and development of recordings to ensure informed consent and accurate interpretation of research questions, and the results related to the health status of the African refugee community and comparison with medical records.

Papers will be discussed in relation to their implications for nursing science, practice, and future research focused on the African refugee population.

HEALTH STATUS OF AFRICAN REFUGEES

Training Uncertified Interpreters for Research

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Purpose: This paper describes the process of training uncertified, community-selected interpreters for a nursing research study in order to ensure the validity and reliability of participant responses across speakers of five different African languages.
Background: African refugees are a vulnerable population facing many linguistic and cultural barriers when accessing medical care. One of the five African languages noted in this community has no written form. Moreover, many of the refugees are not literate in their native tongue or in English despite intensive English language training since their resettlement in the U.S.
Approach: The research team used a community based participatory research (CBPR) approach to engage three African refugee associations in Boise, ID. The African communities then selected trusted, multilingual community members to serve as interpreters for the research project. These interpreters were asked to attend 3-4 workshop sessions, where they learned about the research process and the sensitive nature of medical confidentiality. Additionally, these workshops served as a forum for arriving at a consensus among the interpreters as to the exact terminology to be used for the research questions during data collection. Particular care was taken to discuss medical terms because many of the languages did not have equivalent words and the researchers wanted to ensure interpreters could accurately convey the concepts.
Outcomes: Discussion occurred within and across language groups until agreement was reached on how to translate questions so that participants from each language group would provide valid responses. Consent forms and demographic and research questions were then recorded to ensure that all participants were presented with an accurate oral translation, regardless of language or availability of a workshop-trained interpreter.
Conclusions: Due to the lack of formal interpreter training programs for some of the African languages in U.S. refugee communities, it is necessary to hold special training workshops for interpreters. Community feedback indicated that the consenting process was viewed to be formal, lengthy, cumbersome, and distracting to participants. Future research studies may benefit from working with Institutional Review Boards to develop streamlined 'colloquial' consent forms when working with this population. Insistence on an equitable division of labor within each community can present process and timeline challenges for research studies.

Funding: Boise State University College of Health Sciences OEF Developmental Research Grant.

HEALTH STATUS OF AFRICAN REFUGEES

Utilizing a Health Fair Setting for Surveying African Refugees

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Enrolling participants and collecting data has particular considerations and challenges when engaging in research with vulnerable populations like the African refugee community in the Idaho Treasure Valley. This paper discusses use of health fairs as a method of data collection while utilizing a community-based participatory research philosophy.

Nurse researchers from Boise State University engaged a community advisory board (CAB), including leaders from three African refugee communities, to gain input for areas of need and concern related to collecting health data from this vulnerable population. Multiple meetings were held with the CAB to discuss cultural and logistical matters pertinent to the research project. As a result, this team of community leaders and researchers planned a series of health fairs as the setting in which to connect with a broad base of African refugees and to conduct research related to their health. The health fairs then became a platform for the researchers to enroll participants and collect data while providing health information and incentive for attendance.

By engaging the community members and being open to cultural needs, a venue for researchers was found that not only aided in the collection of vital data that will be used to inform development of interventions aimed to improve the health of African refugees, but valuable health information was disseminated in culturally congruent modalities that gave the refugees immediate and useful health information. Implications of the use of health fairs in nursing practice and research with a vulnerable population, such as refugees, involve consideration of many issues including input from the community, the use of diverse languages, privacy and confidentiality, appropriate locations, building and equipment needs, scheduling, budget, appropriate health information topics, inclusion of healthcare community partnerships, and student involvement.

Having the health fairs in the communities where the participants live, engaging interpreters and leaders from their own communities, and providing valuable health information enhanced participation in this project by the refugees in a manner which was responsive to their cultural norms and addressed barriers, including transportation and language.

Funding: Boise State University College of Health Sciences OEF Developmental Research Grant.

HEALTH STATUS OF AFRICAN REFUGEES

Health Status of African Refugees – Analysis

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African refugees resettling in the U.S. continue to face numerous challenges, one of which is navigating the complex U.S. health care system. Many African refugees are non-literate, often because their native language lacks a written form, and few speak English. Cultural and linguistic barriers have been identified as significant impediments to refugees causing health disparities. Little is known about the health status of African refugees once they are settled in the U.S. Refugees drop off of state Medicaid rolls 6-12 months after resettlement, and many have no insurance.

This research project sought to document the perceived health status of African refugees in a resettlement city and to compare refugees' self-reported health status with their medical records. A total of 259 refugees (112 adults, 147 children) were enrolled in the study. Participants were asked about their health status using selected NHANES questions. Medical records were then reviewed to determine how the African refugees' perceived health status compared with provider records.

Data was analyzed for all adults, all children, and for Somali Bantu. McNemar tests revealed a significant difference ($p < .05$) between the childrens' perceptions and what was documented in their medical records in 2 areas and significant differences between the adults' perceptions and what was documented in their medical records in 4 areas. Of particular concern was differences between self report and medical record in relation to high cholesterol and high blood pressure. Moreover, only 2 percent of respondents knew their height and weight. The Somali Bantu did not show more differences than English speaking refugees.

This is a vulnerable population whose members are at great risk for errors in health care. These findings point to a need for nursing interventions to foster understanding.

IMPROVING THE HEALTH OF PERSONS WITH DISABILITIES THROUGH RESEARCH AND PRACTICE

Moderator:
Lauren Clark, RN, PhD
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OVERVIEW: IMPROVING THE HEALTH OF PERSONS WITH DISABILITIES THROUGH RESEARCH AND PRACTICE

Lauren Clark

EFFICACY OF A HEALTH PROMOTION TRAIN-THE-TRAINER PROGRAM: RESEARCH TO PRACTICE

Beth Marks

EFFECTING HEALTHY LIFESTYLE CHANGE IN YOUNG ADULTS WITH INTELLECTUAL DISABILITIES

Marjorie A. Pett, Lauren Clark, Beth Cardell, Alison Eldredge, Susan Reese, Jennifer Jewitt, Beth Hiatt

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AN EXPLORATION OF BODY IMAGE AMONG PERSONS WITH INTELLECTUAL DISABILITIES

Robert Bucciere, Justine J. Reel, Sonya SooHoo

THE REALITIES OF COLLECTING RESEARCH DATA FROM PEOPLE WITH INTELLECTUAL DISABILITIES

Lauren Clark, Beth Cardell, Marjorie A. Pett, Alison Eldredge, Erin Rothwell, Cathy Chambless, Jeff Burley

IMPROVING THE HEALTH OF PERSONS WITH DISABILITIES THROUGH RESEARCH AND PRACTICE

Overview: Improving the Health of Persons with Disabilities through Research and Practice

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Purpose: This symposium provides a multi-disciplinary view of contemporary research and best practices to achieve the health goals of people with disabilities.
Background: People with disabilities experience health disparities in several areas, a topic *Healthy People 2010* addresses directly. Rather than assuming that people with disabilities are unable to achieve health and wellness, national goals seek to promote the health of people with disabilities by recognizing environmental barriers to health, addressing lack of access to resources, minimizing provider mis-information and bias, and drawing attention to the need for improvement in areas of known disparity. Foremost among the health disparity concerns listed in *Healthy People* is the reduction of overweight/obesity, followed by increased physical activity, and reduced stress for people with disabilities. Ethical, measurement, and accessibility considerations have led to a *de facto* exclusion of people with disabilities from research protocols, to the detriment of research generalizability.
Approach: The complementary array of papers included in the symposium begin by introducing a theory-guided, evidence-based health promotion curriculum for people with intellectual and developmental disabilities (I/DD). The first two papers report on different research approaches using this health promotion curriculum. The effectiveness of a curriculum-based, train-the-trainer model to achieve health outcomes for adults with I/DD in community settings is addressed first. The next paper examines a community-based intervention modeled on the same curriculum to identify research protocol feasibility and determine health outcomes for people with I/DD exposed to the intervention. The papers that anchor the conclusion of the symposium address health measurement and body image assessment for people with I/DD, both topics applicable in research and clinical practice. A best-practices paper examines measurement issues, proposing strategies gleaned from recent research for more inclusive, valid, and reliable research with persons who have disabilities. The symposium concludes by examining the embodied experience of stigma and body image for people with I/DD who are often overweight or have eating disorders. Eliciting the lived experiences of health behavior change, health and risk perceptions, and healthy lifestyle preferences of people with I/DD is on the forefront of contemporary disability and health research. The symposium papers challenge assumptions that people with disabilities lack the insight and capacity to coherently reconstruct and articulate their lived experiences, offering instead examples of how researchers can include people with I/DD as participants in health research and behavior change programs.
Conclusions: The symposium, taken as a whole, explores processes, recommendations, resources, and research-based outcomes designed to assess and improve the health of people with disabilities. Clinicians and researchers alike debate the nature of disability as a concept and an individual variable, and wonder at the most effective ways to assist people of all abilities to meet their health goals. The papers in this symposium begin to address those questions from a multi-disciplinary perspective.

IMPROVING THE HEALTH OF PERSONS WITH DISABILITIES THROUGH RESEARCH AND PRACTICE

Efficacy of a Health Promotion Train-the-Trainer Program: Research to Practice

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Purpose: To describe the effectiveness of a Train-the-Trainer intervention for implementing a community-based physical activity and nutrition health promotion program to improve health and well-being of adults with intellectual and developmental disabilities (I/DD) and build capacity within community-based organizations. The evidence-based health promotion curriculum that formed the basis for this intervention was *Health Matters: Exercise and Nutrition Health Education Curriculum for Adults with Developmental Disabilities* (Marks, Heller, and Sisirak, 2006).
Background: Health promotion program staff in community settings often lack general knowledge about disability and how to work with individuals with intellectual disabilities on health goals (Rimmer et al., 2004, 2005). While data support the benefits of physical activity and nutrition programs for adults with I/DD in laboratory/University-based settings, little research is available on ways to enhance health status, increase physical activity, and improve food choices in settings in which people work and live.
Methods: Fifty-eight staff in community-based organizations (CBOs) were given 8 hours of training to start and implement a 12-week physical activity and health education program personalized to the needs of their clients with I/DD. Participants with I/DD, including 67 adults with ages 30 years and older were randomized into an intervention (n = 32) or control group (n = 35). The intervention group participated in a 12-week, 3 days per week, exercise and health education program. Assessments were conducted immediately before and after the program for control and intervention groups.
Results: Compared to the control group, those in the intervention group showed significant changes in psychosocial health status, increased self-efficacy, increased social / environmental support for exercise and eating fruits and vegetables, and exercise adherence. The intervention group also demonstrated greater flexibility, improved aerobic capacity and lower body muscle strength, improved blood cholesterol levels, and lowered glucose levels. Although not significant, intervention group participants had less barriers to exercise and greater exercise outcome expectations following the 12-week program.
Implications: Results suggest the efficacy of a train-the-trainer program for a staff-led health promotion program in CBOs aimed at teaching and supporting adults with I/DD to be more physically active and improve their physical and psychosocial health status. Nurses can have a leadership role in supporting staff in CBOs to implement health promotion programs for people with I/DD in community settings; and nurses can provide health education to both staff and people with I/DD.

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IMPROVING THE HEALTH OF PERSONS WITH DISABILITIES THROUGH RESEARCH AND PRACTICE

Effecting Healthy Lifestyle Change in Young Adults with Intellectual Disabilities

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Purpose: To implement and evaluate the feasibility and effectiveness of a community-based exercise and healthy lifestyles intervention for overweight young adults (ages 18-35) with intellectual disabilities (ID) who were living at home with their parents. Pre-intervention (T1) and post-intervention (T2) changes are reported for anthropometric and fitness measures for participants randomly assigned to either the 'Yes We Can!' healthy lifestyles intervention (n=12) or wait-list control group (n=11).

Background: Like all adults, young adults with intellectual disabilities (ID) have gained weight at unprecedented rates. The prevalence of obesity in this group is nearly double that of their age-matched peers without disabilities. As a result, they experience more weight-related medical problems. Despite sustained national interest in fitness and weight reduction programs for the general population, there is a paucity of such programs for persons with disabilities, Research is needed to translate and introduce existing evidence-based healthy lifestyle interventions into local community programs for the overweight disabled population that can be locally adapted, adopted and sustained.

Methods: 23 overweight young adults (13 females, 10 males) with ID (M_{age}: 24.6; M_{BMI}= 27.8) participated in this community-based study. The 12-week intervention utilized a theory-based curriculum designed for persons with disabilities. It consisted of 24 twice-weekly 1-1/2 hour sessions held at a community recreation center. Curriculum content included strategies for physical activity and nutrition improvement (45 minutes) as well as a 45 minute cardiovascular and strengthening program. T1 and T2 measures included nutrition/self awareness questionnaires, blood samples, anthropometric and fitness measures. All participants received a 1-year recreation center pass.

Results: There were no statistically significant differences between the intervention and control groups on all measures at T1. At T2, compared to the control group (WLC), the intervention (I) group had greater weight loss (I: 6.0 lbs, range=1.0-17.8; WLC: 1.6 lbs, range =-8.0 to 9.8, p=.03), decreased BMI (I: -1.1,range=-3.0 to -0.2);WLC: 0.3, range=-1.9 to +1.4, p=.04), reduced systolic and diastolic blood pressure (I: systolic=-23.6, diastolic= -6.4; WLC:systolic =+1.9,diastolic=-1.6, p=.001, p=.05), and improved scores on the Tinetti Balance test (p= .03). No differences were found between the 2 groups on blood draw assessments, or additional anthropometric and fitness measures.

Implications: The 'Yes We Can!' program effected short-term reductions for persons with ID in weight, blood pressure and balance; long-term maintenance is being evaluated. Given measurement challenges with this population, we are examining the reasons for lack of change in the other fitness measures.

Funding: The University of Utah Seed Grant Program.

IMPROVING THE HEALTH OF PERSONS WITH DISABILITIES THROUGH RESEARCH AND PRACTICE

An Exploration of Body Image among Persons with Intellectual Disabilities

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Purpose: The purpose of this exploratory study was to examine body image concerns for adults with intellectual disabilities (ID). According to stigma theory (Goffman, 1963), individuals with disabilities possess "discrediting attributes" that prevent them from meeting culturally constructed appearance norms and therefore, may face decreased self worth and body image (Taub, Fanflik & McLorg, 2003). Some estimates place the prevalence of eating disorders in this population at 20%. Measuring body image concerns of persons with ID has traditionally been challenging (Reel & Bucciere, 2010) and people with intellectual disabilities are usually excluded from most scientific studies involving disabilities (Hassouneh-Phillips & McNeff, 2005). Therefore, we piloted a body image scale to determine feasibility and better understand body image among persons with ID.
Methods: Adults with ID (*N*=103) including 49 females (48%) and 54 males (52%) voluntarily participated. Participants ranged in age from 18 to 61 (*M*=33.34; SD=11.19). Researchers measured height using a stadiometer and weight using a calibrated scale in order to calculate Body Mass Index (BMI). Participants completed the Figure Ratings Scale (Stunkard, Sorenson, & Schulsinger, 1983) verbally with a trained researcher. Thereafter, each participant was interviewed using semi-structured open-ended questions about body image. A sample interview question was "If you had a magic wand, what is something you would want to change about yourself?" Descriptive and correlation statistics were calculated using PASW/SPSS, and qualitative interview items were transcribed from audiorecordings and analyzed for themes.
Results: All participants (100%) completed the questionnaire and interview verbally. Participants were measured with an average BMI of 30.41(SD=8.59). Preliminary results revealed that most participants (77%) reported a desire to change their current figure and of those 48% wanted to be thinner. Although some participants reported being satisfied with their current shape, many individuals revealed strong negative dissatisfaction with their weight, shape and body parts. Qualitative analysis identified several overall themes including a preference for a thinner ideal (for females) and more muscular physique (for males). For example, one participant responded, "I would change my body frame from an 8 to a 3. I'm too fat, too ugly, not pretty. I'm not cute." Interestingly, physical disabilities when present were not discussed within the context of body image dissatisfaction. However, stigma theory's assertion that individuals with disabilities are not considered to have body image/appearance concerns was upheld in this exploratory investigation. Furthermore, several myths (e.g., persons with disabilities do not care about appearance or wear make-up) were dispelled by the interview findings.
Conclusions: Usability of the FRS and semi-structured interview in a population of adults with intellectual disabilities was demonstrated for research purposes. Further research is needed to understand the sources of body image distress, relationship of body image to motivation to engage in healthy lifestyle behavior change, and clinical interventions to address body image and associated disturbances in self-esteem, self-worth, and eating behaviors. To link this research to clinical practice, additional research is needed to assess the fit of body image assessment tools in clinical settings.

IMPROVING THE HEALTH OF PERSONS WITH DISABILITIES THROUGH RESEARCH AND PRACTICE

The Realities of Collecting Research Data from People with Intellectual Disabilities

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Purpose: We describe best practices in the collection of valid, reliable, ethical, timely data from research participants with intellectual disabilities (ID). These best practices were identified by researchers administering a healthy lifestyle intervention study and measuring participant outcomes. We report on improvements for eligibility screening/consenting participants and recommendations for measuring physiologic, paper-pencil survey, and physical performance variables. **Background:** Researchers are discouraged from including people with ID in research because of ethical and access challenges and measurement difficulties. Assessing knowledge, attitudes, and practices is a challenge for researchers working with persons with ID, yet critical to determining intervention effectiveness. Biophysical variables, too, pose measurement challenges for any group with morphologic difference. Eliminating disparities for people with ID will require advances in health measurement strategies. **Approach and Methods:** This intervention study recruited young adults (n=31) with intellectual disabilities from community settings. Study measures employed pre- and post-intervention included questionnaires, anthropometrics, fitness measures, and a finger-stick blood sample analyzed for a variety of biochemical parameters. **Outcomes Achieved:** Screening and consenting participants prior to study enrollment required clarification of guardianship status, operationalization of definitions of eligibility criteria such as "disability" and "living at home", and verification of young adults' comprehension of study requirements. Participant burden was compounded by a complex and unstructured data collection day including 29 measures and 8 room transitions. An emerging best practice was a set schedule for each participant to decrease confusion, as well as a predictable and consistent staffing pattern for each station. Paper format questionnaires for low-literacy populations were converted to online format and administered in advance at home or on-site in a computer room with researcher assistance. Added flexibility may have improved retention, completeness, and accuracy. Reliability of physiologic measures was improved through retention of a multidisciplinary research team with expertise in each area of measurement. **Conclusions:** Ethical considerations accompany the process of research consent and self-determined participation. Including people with ID in research activities remains challenging for both researchers and participants. Eliminating health disparities for this population requires identifying ways to increase research participation and simultaneously improve the research process.

Funding: The University of Utah Research Foundation Seed Grant.

MODELING OLDER WOMEN'S HEALTH USING THE WOMEN'S HEALTH INITIATIVE DATABASE

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OVERVIEW: MODELING OLDER WOMEN'S HEALTH USING THE WOMEN'S HEALTH INITIATIVE DATABASE

Barbara B. Cochrane, Nancy Fugate Woods, Margaret W. Baker, Oleg Zaslavsky

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TOWARD A POSITIVE AGING PHENOTYPE FOR OLDER WOMEN: CONCEPTS AND INDICATORS

Nancy Fugate Woods, Barbara B. Cochrane, Andrea Z. LaCroix

DEVELOPING A CONCEPTUAL FRAMEWORK OF FRAILTY AND ABUSE IN OLDER WOMEN

Margaret W. Baker, Andrea Z. LaCroix, Barbara B. Cochrane, Nancy Fugate Woods

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TRAJECTORIES OF CHANGE IN FRAILTY RESEARCH: METHODOLOGICAL PERSPECTIVES

Oleg Zaslavsky, Barbara B. Cochrane, Nancy Fugate Woods, Andrea Z. LaCroix

MODELING OLDER WOMEN'S HEALTH USING THE WOMEN'S HEALTH INITIATIVE DATABASE

Overview: Modeling Older Women's Health Using the Women's Health Initiative Database

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Purpose/Aims: The purpose of this symposium is to describe various models of women's health that have been developed as frameworks for secondary analysis within the Women's Health Initiative (WHI) dataset. Specific aims of this overview and symposium are to: (1) discuss efficiencies and exigencies (opportunities and challenges) inherent in carrying out secondary analyses of large datasets (2) describe the process and structure of data collected in the WHI relevant to these considerations, and (3) summarize lessons learned in research endeavors to model older women's health using the WHI dataset.
Rationale: Demographic trends indicate a rapidly growing number of older adults in the United States with increasingly complex health care needs. Over two-thirds of the population 85 years and older are women, therefore research on older women's health is a high priority. At a time of economic austerity and progressively more competitive research funding, scientists are looking for alternatives to primary studies to advance research on women's health.
Methods: Methodological and research literature focused on secondary analysis was reviewed to determine considerations for carrying out secondary analyses of large datasets. WHI protocols, data dictionaries, and publications were examined in light of these derived efficiencies and exigencies, and relevant guidelines for researchers were identified.
Results: Secondary analyses of data represent important alternative approaches to primary research on older women's health. The WHI, now with over 15 years of biopsychosocial data and biospecimens collected from 161,808 community-dwelling women ages 50 to 79 at baseline, represents a national resource for researchers to study older women's health. Secondary analysis of the WHI data includes the following efficiencies—an already-accrued sample of participants, large sample sizes for testing hypotheses of interest and enhancing generalizability of findings, a comprehensive dataset of variables measured over time, and data that are already cleaned and well-defined structurally. However, there are certain exigencies to secondary analysis that must be considered, including a complex data structure with certain variables collected only in subsamples of participants at selected time points, limited detail on some concepts of interest, and the need to appropriately negotiate study approval and access policies in order to obtain data for analysis. These considerations and more are reviewed in relation to the three papers on models developed to use in WHI analyses.
Implications: The WHI dataset represents an important scientific resource for studies on older women's health. Researchers seeking to conduct analyses with these data should consult study documentation and investigators to ensure that their scientific needs and timelines will be met.

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MODELING OLDER WOMEN'S HEALTH USING THE WOMEN'S HEALTH INITIATIVE DATABASE

Toward a Positive Aging Phenotype for Older Women: Concepts and Indicators

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Purpose/Aims: The purpose of this paper is to review efforts to identify a positive aging phenotype for older women based on observations from the Women's Health Initiative Study. Specific aims include: (1) describe multiple indicators of a phenotype of positive aging in participants aged 65 years and older at baseline and over follow-up occasions; (2) identify hypothesized dimensions of positive aging and their relationships to one another as a basis for developing a summary measure; and (3) describe indicators for health outcomes of a multidimensional phenotype of positive aging including years of healthy living (follow-up), years of independent living (without residing in assisted living setting and/or nursing home admission), and hospitalizations.
Rationale: Successful aging has emerged as a topic of interest in the milieu of global aging. At the same time, the growing population of Baby Boomers reaching traditional retirement ages expresses increasing interest in aging well and remaining healthy. The development of phenotypes for positive aging will enable investigators to pursue studies of factors informing avenues to promote healthy aging and its outcomes.
Methods: Based on a comprehensive review of the research literature on positive aging phenotypes, we have identified several dimensions of positive aging, including: perceived good health, positive quality of life, capacity for autonomous living including ability to perform functions essential in daily living, and the capacity for social engagement which requires cognitive function and emotional well-being. An extensive review of the WHI protocols, codebooks, publications, and investigators was conducted to identify available indicators and to determine the numbers of participants providing data about these indicators.
Results: The WHI database includes multiple indicators of positive aging that are being integrated into a positive aging phenotype that is being used in further analyses. Self-rated health, capacity for self-care, physical functioning, functional capacity, emotional well-being, cognitive function, social functioning and social integration are some of the indicators that have been identified. Indicators of the various dimensions of positive aging, including physical and socioemotional health are available over time in women 65 years of age and older from the time of recruitment to 6 or more years after enrollment. In addition, investigation of years of healthy living, years of independent living, and hospitalizations each provide different challenges in data definition and interpretation.
Implications: Analysis of positive aging indicators to identify a phenotype of positive aging is feasible for advancing the understanding of positive aging and its measurement for future research.

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MODELING OLDER WOMEN'S HEALTH USING THE WOMEN'S HEALTH INITIATIVE DATABASE

Developing a Conceptual Framework of Frailty and Abuse in Older Women

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Purpose/Aims: The purpose of this endeavor was to develop a conceptual framework of frailty and abuse in older women, including factors associated with reported abuse and its health outcomes. Specific aims were to: (1) identify relevant theoretical and methodological considerations for using primary research versus secondary analysis based on the framework and (2) identify appropriate measures and time points for testing relationships within that framework.
Rationale: As many as 2.9 million older adults may be victims of elder mistreatment by 2030. Based on current trends, most of these victims of abuse, neglect, or exploitation will be women aged 60 and older. With a three-fold increased mortality in mistreated, vulnerable older adults compared to peers who were not mistreated, there is an urgent need to gain a comprehensive understanding of factors that increase older women's vulnerability to abuse and its health consequences.
Methods: Based on previous research, an explanatory model was identified that incorporated risk (abuser characteristics) and vulnerability (victim characteristics) as a framework for considering the relationships of geriatric syndromes, such as frailty, to elder mistreatment, chronic stress, and early mortality. WHI investigators, protocols, and database documentation were consulted in order to weigh methodological considerations for conducting secondary analysis versus primary research.
Results: Key factors in the decision to carry out secondary analysis using the WHI database included: the large number of older women participants who self-reported physical or verbal abuse (over 18,000 women who were 50 to 79 years at baseline); a comprehensive assessment of vulnerability factors at baseline (demographic, physical health, psychosocial data, as well as indicators of frailty); availability of self-report data on both physical and verbal abuse; an accurate assessment of health consequences over time (adjudication of all-cause and cause-specific mortality); and the fact that ethical concerns (human subjects and legal) had been adequately addressed. All participant data were de-identified, and institutional review board approval and full informed consent had already been obtained. Trade-offs in the use of this dataset included the fact that certain aspects of the explanatory model—risk factors (i.e., characteristics of the abuser) and a comprehensive measurement of elder mistreatment (i.e., abuse, neglect, and exploitation)—were not available.
Implications: Although a full analysis and testing of the conceptual model was not possible using the WHI database, the ability to determine the prevalence of physical and verbal abuse in older women, vulnerability factors such as frailty, and mortality outcomes further establishes the significance of the problem and the relevance of key aspects of the conceptual framework for future research.

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MODELING OLDER WOMEN'S HEALTH USING THE WOMEN'S HEALTH INITIATIVE DATABASE

Trajectories of Change in Frailty Research: Methodological Perspectives

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Purpose/Aims: The purpose of this methodological paper is to determine strategies for exploring trajectories of change in indicators of frailty in older women. Specific aims are to: (1) identify a model of incident frailty in older women that incorporates trajectories of change in frailty indicators, and (2) identify methodological considerations in using data from the Women's Health Initiative (WHI) to analyze these trajectories.

Rationale: As a process of increasing vulnerability, frailty can be regarded as a dynamic indicator of biological aging that predisposes individuals to functional decline and, ultimately, death. The prevalence of frailty in community-dwelling older women has identified at over 16%, and frailty has been shown to be an independent predictor of mortality, hip fracture, disability in activities of daily living, and hospitalizations. To date, research on frailty has focused on finding the ultimate constellation of physical measures and biomarkers that ought to be collected to determine frailty status, rather than defining the ways in which these measures should be obtained to enhance prediction and target intervention. The analysis of potential trajectories of change that predict frailty, therefore, is an important priority in research.

Methods: Based on a comprehensive review of the research literature on biological changes of aging and frailty research, indicators of frailty were identified, including weakness, fatigue, weight loss, decreased balance and gait speed, low levels of physical activity, and social and neurocognitive changes. WHI protocols, codebooks, publications, and investigators were consulted to determine if variables within the WHI database were available that corresponded to these indicators and whether or not sufficient numbers of participants had data on these variables to support an analysis of trajectories of change. Methodological considerations, such as whether statistical assumptions for specific trajectory analyses could be met, were also addressed.

Results: The WHI database includes both subjective and objective data corresponding to key indicators of frailty collected over time, as well as baseline predictors and health outcomes. Study protocols resulted in only certain subsamples of WHI participants having specific indicators of frailty over time, and the number of participants with data on all frailty indicators over time is relatively small compared to the large number of participants overall. Intervals between data collection points are not consistent, and death and loss to follow-up resulted in fewer data collection time points for participants with the greatest decline in frailty indicators. Despite these limitations, the WHI database represents a unique opportunity to analyze these trajectories of change.

Implications: Analysis of trajectories of change in frailty indicators is feasible and can be used to advance the science of frailty.

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NEXUS: THE COLLABORATIVE JOURNEY CONTINUES

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OVERVIEW: NEXUS: THE COLLABORATIVE JOURNEY CONTINUES

J. Kathy Magilvy

PHD AND DNP: A BRIDGE TO COLLABORATION THROUGH NEXUS

Pauline Komnenich

NEXUS BEST PRACTICE EXEMPLARS ALONG THE WAY

Janice S. Hayes

LAUNCHING STUDENTS ON THE JOURNEY: A NEW COLLABORATOR'S VIEW

Barbara K. Haas

FUTURE DREAMS AND JOURNEYS FOR NEXUS

Marie L. Lobo

NEXUS: THE COLLABORATIVE JOURNEY CONTINUES

Overview: NEXus: The Collaborative Journey Continues

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Purpose: This symposium describes milestones along the collaborative journey of the Nursing Education Xchange (NEXus), a partnership among select universities offering doctoral programs in nursing (PhD and DNP). The four papers in this symposium speak to the ways PhD and DNP programs exchange courses and ideas; best practice exemplars in the collaborative; the process of launching the journey as a new collaborating member; and dreams for the future of NEXus.
Rationale: The NEXus collaborative is unique in nursing education, making courses available by distance to doctoral students enrolled in other academic collaborating institutions supported by a strong administrative model and common course pricing. As a proven collaboration NEXus provides a cost effective way to facilitate doctoral education to meet current and future needs of nursing education, research, and practice. Formative evaluation and best practices inform the collaborative journey and offer strategies especially useful in a time of nurse educator and nursing shortages.
Description: Twelve universities currently participate as full or affiliating collaborators in NEXus. Beginning with universities in the Western US, three institutions outside the West have recently joined and the partnership is open to any university offering online, hybrid, or distance nursing doctoral programs. Following an overview of a brief history and current status of the collaborative, additional papers describe the collaborative process, best practices, and milestones along the way. Future plans and dreams for the collaborative are identified.
Conclusion: A growing demand for nurse educators, researchers and clinicians in a time of economic and workforce shortages necessitate collaboration and innovative approaches to nursing education. The NEXus collaborative is an effective model for enhancing quality doctoral education and description of the collaborative journey informs current and future best practices.

Funding: US Department of Health and Human Services, Health Resources and Services Administration (HRSA): #D09HP09070.

NEXUS: THE COLLABORATIVE JOURNEY CONTINUES

PhD and DNP: A Bridge to Collaboration through NEXus

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Purpose: The purpose of this paper is to examine the processes for building collaboration between PhD and DNP programs through shared courses and collegial partnerships within the NEXus consortium.
Rationale: A primary objective of NEXus is sharing courses across participating institutions to maximize available resources during a time of shortage of doctorally prepared nurse educators and nurse researchers and to enhance opportunities for newly developing PhD programs to sustain their programs. With implementation of DNP programs in nursing, an effort is now being made to include DNP programs in the NEXus consortium. The bridging of these programs through shared resources, mechanisms for course delivery, potential for faculty mentorship and faculty enrichment provides a creative melding of inter-institutional exchange that has potential for improving quality and quantity of nursing programs. It also provides a way of expanding the number of nurses prepared at the doctoral level in teaching, research and practice.
Description: The NEXus consortium began with the intent to build stronger collaborative relationships through shared courses among Nursing PhD programs across Western Universities. During the last year, a pilot program to include DNP programs in the project was instituted. This paper will address how that implementation has developed and is progressing. As the NEXus program is expanding, more course offerings are available and more opportunities are arising for creative ways of mentoring doctoral students. Examining the potential for maximizing this expansion in a way that enhances both types of programs so they can work together to develop the research that will provide the evidence based knowledge for improved primary care will be discussed.
Conclusion: The consortium has stimulated the development of faculty and student exchanges and new ideas for inter-regional collaboration. Building doctoral student potential in education, research and practice through the institutional exchange is building a model for professional and disciplinary unity that should have a positive outcome in healthcare.

Funding: US Department of Health and Human Services, Health Resources and Services Administration (HRSA): #D09HP09070.

NEXUS: THE COLLABORATIVE JOURNEY CONTINUES

NEXus Best Practice Exemplars along the Way

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Purpose: The purpose of this paper is to describe collaboration within NEXus.
Rationale: Collaboration among universities offering distance education to students in PhD and DNP can help enhance the programs of study for students and address faculty shortages. The program was developed as a collaborative effort. Examples from the implementation of NEXus will be described.
Description: The collaborative efforts of NEXus have allowed students to enhance their programs of study by offering courses in a particular area that is not offered by the home university. It increases the selection for the student. The student is able, with the guidance of an adviser, to develop a cognate by selecting courses from numerous clusters offered by NEXus. Committees composed of members from across the membership meet periodically by teleconference to discuss addressing needs that are identified by the group. By taking NEXus courses, students are also able to collaborate with students from other institutions and engage in networking.
Conclusion: NEXus has set the stage for more collaboration in doctoral nursing education in order for colleges and schools to become more collegial and cooperative rather than competitive. It takes steps in addressing the faculty shortage through course sharing.

Funding: US Department of Health and Human Services, Health Resources and Services Administration (HRSA): #D09HP09070.

NEXUS: THE COLLABORATIVE JOURNEY CONTINUES

Launching Students on the Journey: A New Collaborator's View

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Purpose: The purpose of this paper is to describe the experience of integrating membership in a doctoral nursing education collaborative into the university infrastructure and its impact on student learning opportunities.
Rationale: Doctoral students frequently require specialized courses to become experts in their areas of research. Conversely, economic considerations prohibit programs from offering numerous courses with limited enrollments. Cancelled classes and lack of electives can be frustrating to students who may be forced to seek courses at other institutions, thereby investing time and additional funds in researching possible classes, applying to other universities, and obtaining transcripts for transfer credit. The NEXus collaborative addresses all of these challenges.
Description: Strong administrative support is provided from the point of initial inquiry through formal membership in the NEXus consortium. An orientation, detailed instructions, and telephone support help ensure a seamless experience for students enrolling in courses at member institutions. Faculty and administrators are pleased to have adequate numbers of students enrolling in courses. Students are delighted at the course offerings available. Similar to a journey to a new locale, a student's entry into other program's courses is enlightening. Students benefit from the content provided but also from exposure to other points of view. Furthermore, they are able to network and build relationships that will support their future research journeys.
Conclusion: The NEXus consortium provides a proven model for collaboration across programs and regions. The template for implementation is accompanied by excellent support. Participation in the consortium has enriched our students' doctoral educational experience.

Funding: US Department of Health and Human Services, Health Resources and Services Administration (HRSA): #D09HP09070.

NEXUS: THE COLLABORATIVE JOURNEY CONTINUES

Future Dreams and Journeys for NEXus

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Purpose: The purpose of this paper is to describe plans for the future of NEXus.
Rationale: There is an increased demand for courses in both research and clinical doctoral programs. The NEXus model increases the availability of content specific courses to graduate nursing students across the nation. NEXus is a unique partnership which began in the West and is now spreading across the United States. The future of NEXus depends on planning and execution of an expansion of services.
Description: The future of NEXus depends on identifying and meeting the priorities of the organization. One of the first priorities if NEXus is to survive is economic sustainability. Economic sustainability includes developing a cost recovery system that allows the organization to operate with dues from member agencies and survive without grants. The second priority is to expand NEXus beyond the West. This has begun with membership by Rush University in Chicago, University of Texas at Tyler and the University of Kansas. Others have indicated interest in joining. Marketing for this expansion began at the American Association of Colleges of Nursing Doctoral Conference in January, 2010. The third priority is to integrate more Doctor of Nursing Practice programs even if the college is not offering Doctor of Philosophy courses. The NEXus Executive Board will begin exploring the possibility of courses beyond the doctoral level. An example would be the inclusion of BSN-PhD bridge courses. The goal is to increase the number of courses overall. The fourth priority is to develop a "key word" coding system that allows a student to identify "clusters" that is, courses that contain related content but are not a part of the formalized clusters. This would be similar to "key word" coding for articles or research abstracts. The final priority for the future is to expand the number of clusters and label them so the cluster is clearly identified. NEXus has identified specific groups of courses which allow a student to major or minor in a specific content area such as gerontology. The goal for the future is to expand the number of clusters, to increase the numbers of students taking substantive courses which lead to the major or minor supporting their ability to study their phenomenon of interest.
Conclusion: In conclusion, NEXus is becoming a cutting edge organization; leading the country in facilitating access to on-line education for both Doctor of Philosophy in Nursing and Doctor of Nursing Practice students.

NURSING RESEARCH IN FIBROMYALGIA: TRANSLATING RESEARCH INTO CLINICAL PRACTICE

Moderator:
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OVERVIEW: NURSING RESEARCH IN FIBROMYALGIA: TRANSLATING RESEARCH INTO CLINICAL PRACTICE

Lindsay L. Kindler, Cheryl L. Wright, Linda Morrow Torma, Kim Dupree Jones, Rebecca Ross

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MECHANISMS OF FIBROMYALGIA AND THEIR TREATMENT IMPLICATIONS

Lindsay L. Kindler

BIOMARKERS OF THE HPA AXIS AND INFLAMMATORY RESPONSE SYSTEM IN FIBROMYALGIA

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Cheryl L. Wright

NURSING RESEARCH IN FIBROMYALGIA: TRANSLATING RESEARCH INTO CLINICAL PRACTICE

Overview: Nursing Research in Fibromyalgia: Translating Research into Clinical Practice

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Fibromyalgia (FM) is a common widespread pain disorder characterized not only by pain but also by muscle stiffness, persistent fatigue, sleep disturbance, and often mood alterations. A growing body of research in the past decade has led to an enhanced understanding of the physiological factors leading to this multi-symptom experience. Mechanistic studies have led to a shift in the biobehavioral treatment of this disorder, favoring direct targeting of neurobiological abnormalities. These trials are also well positioned to increase our understanding of the symptom experience and treatment of FM subgroups. For instance, understanding how mechanisms such as altered reactivity of the hypothalamic-pituitary-adrenal axis (HPAA) and inflammatory response system (IRS) differ in FM subgroups with different types of major depressive disorder will enable individualized treatments associated with greater efficacy. Alternatively, the study of a growing FM subgroup, older adults with this disorder, demonstrates that biological mechanisms tell only part of the story. Findings that older adults with FM present with decreased physical function but enhanced resilience and lower impact of disease, suggests an interaction of psychosocial protective factors with neurobiological disease mechanisms. Symposium speakers will address the translation of mechanistic and symptom based research in enhancing the understanding and care of individuals with FM.

The increasing recognition that adequate management of FM requires intervention at the biological, psychosocial, and behavioral levels has led patients, clinicians, and researchers to explore the utility of numerous complementary care approaches. While some studies have shown promise, such as two completed by the OHSU Fibromyalgia Research team, many such studies are small, underpowered, and have led to inconclusive results. Symposium speakers will discuss these findings and explore the need for a wider body of rigorous research to investigate the mechanisms by which the complementary approaches exert their effect, which could lead to targeted recommendations for particular subgroups.

NURSING RESEARCH IN FIBROMYALGIA: TRANSLATING RESEARCH INTO CLINICAL PRACTICE

Mechanisms of Fibromyalgia and Their Treatment Implications

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Fibromyalgia (FM) has long perplexed clinicians who strive to gain control over the multiple symptoms that plague their patients with this disorder. It has come to be recognized that adequate treatment of FM requires understanding and intervention at both the biological and behavioral levels. As emerging research informs our understanding of this chronic pain disorder, we are learning to directly target underlying neurobiological abnormalities with improved treatment outcomes. The purpose of this discussion is to highlight pathological processes driving the multi-symptom experience of FM and to describe how this knowledge is informing treatment.

A growing body of research documents that FM is characterized by central pain and sensory augmentation. Using multiple experimental pain modalities, abundant evidence reveals that individuals with FM display a leftward shift in stimulus response functions such that they experience hyperalgesia and allodynia to multiple stimuli. Biochemical and imaging studies reveal that both ascending and descending pain processing abnormalities are responsible for the enhanced pain of FM. Hyperactivity of pro-nociceptive pathways produce enhanced sensitivity to painful and non-painful stimuli. Emerging research also demonstrates alterations in descending pain inhibitory mechanisms in FM as evidenced by inefficient activation of descending inhibition and abnormalities in the two principle descending inhibitory pathways; the opioidergic and serotonergic-noradrendergic pathways. We now know that, despite having elevated levels of endogenous opioids, individuals with FM have decreased mu opioid receptor binding potential. Genetic research supports a potential key role of descending inhibitory aberrations through the discovery of single nucleotide polymorphisms in genes regulating the transport, receptors, and metabolism of serotonin, dopamine, norepinephrine, and epinephrine.

Now that a growing body of research has better characterized the pathophysiology of FM, treatments have emerged that target these mechanisms. Several pharmacological treatments serve to augment the deficient descending serotonin-noradrenergic system. Alpha 2 delta ligands decrease the release of excitatory neurotransmitters and decrease hyperexcitable ascending pathways. Two widely recommended non-pharmacological treatments also work to target biological mechanisms of FM. Exercise is thought to bolster descending pain inhibition through strengthening endogenous analgesia systems and increasing serotonin and norepinephrine. Cognitive strategies that target disordered thinking patterns such as catastrophizing might work to decrease enhanced pain sensitivity since this type of thinking has been associated with less efficient pain inhibition.

Using a mechanism based approach to understand and treat FM will bring us closer to providing adequate treatment for individuals with FM. Nurses are well suited to use such an approach given their biopsychosocial framework for providing care. As our understanding of the biology of FM expands, nurses can readily integrate this new knowledge into their existing schema to improve the treatment of these individuals.

Funding: LLK is supported by NINR training grant NR007061.

NURSING RESEARCH IN FIBROMYALGIA: TRANSLATING RESEARCH INTO CLINICAL PRACTICE

Biomarkers of the HPA Axis and Inflammatory Response System in Fibromyalgia

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Purposes: The purpose of this study was to test the hypotheses that, in people with fibromyalgia (FM) comorbid with major depressive disorder (MDD), inflammatory cytokine levels would differ between diagnostic subgroups plus correlate with cortisol and clinical symptoms of FM and MDD due to variable reactivity of the hypothalamic-pituitary-adrenal axis (HPAA) and the inflammatory response system (IRS).
Background: The lifetime prevalence of MDD in FM is 60%. Biomedical and behavioral research has shown MDD compounds the impairments imposed by FM and is associated with symptom burden, defined here as increased pain, fatigue, sleep disturbances, physical impairment and poorer quality of life. Five distinct subtypes of MDD have been identified in depressed populations, with the two most prevalent being atypical depressive episodes (ADE) (30%) and melancholic depressive episodes (MDE) (20%- 30%). Physiologically, ADE and MDE have distinct perturbations of the HPAA, which is of interest to this study as previous research in this sample has shown ADE and MDE to be correlated with serum cortisol levels.
Methods: We examined group differences and relationships among inflammatory cytokines, cortisol and symptom burden among three groups: FM with no depression (n= 9), FM with MDE (n= 21) and FM with ADE (n= 30). The Fibromyalgia Impact Questionnaire, Flannigan's Quality of Life Scale, Cumulative Myalgic Scale and the Hamilton Depression Rating Scale measured symptom burden. Serum cortisol levels were measured using standard radioimmunoassays (ICN). Serum Interlukin (IL)-1α, IL-6 and IL-8 levels were measured via bead-based immune-fluorescence assays (MilliPlex).
Results: Although cytokines did not differ by diagnostic group, a trend existed for the mean IL-8 level to be highest in the MDE group (p= .09). IL-1α correlated with hypersomnia (r= 0.368; p= .04; n= 33) and physical impairment (r= 0.345; p= .05; n= 32). IL-8 correlated with physical impairment (r= 0.345; p= .05; n= 57) and depression being worse in the morning (r= 0.285; p= .03; n= 59). IL-6 correlated with pain (r= 0.390; p= .05; n= 36). Cortisol did not correlate with any of the cytokines.
Implications: The data support IL-1α, IL-6 and IL-8 are associated with some FM/MDD symptoms. Future studies utilizing larger samples are warranted to clarify the research and clinical implications of these relationships. We propose this research trajectory will produce a broader perspective of the role of inflammatory cytokines in FM thus leading to superior treatments.

NURSING RESEARCH IN FIBROMYALGIA: TRANSLATING RESEARCH INTO CLINICAL PRACTICE

Fibromyalgia in Older Adults

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Purposes/Aims: The purpose of this research is to explore the relationships between age and selected health-related variables in community dwelling older adults living with fibromyalgia (FM).
Rationale/Conceptual Basis/Background: The percentage of persons over 65 years of age is expected to grow to almost 20% of the U.S. population by 2030. Unfortunately, the prevalence of FM, a chronic condition that can significantly limit physical function and threaten an older adult's health and ability to live independently, also grows from 5% in the fifth decade of life to over 7% in persons over 70 years of age. FM is a persistent, widespread pain condition that is also characterized by tenderness, fatigue, depression, and sleep disturbance. The disease often begins in the third or fourth decade of life and is as disabling, or more, than osteoarthritis and rheumatoid arthritis. Despite the increasing prevalence of FM in older adults, little is known about the relationship between advanced age and the impact of FM on a person's health and physical function. The limited number of studies exploring FM that have included older adults thus far have found that, despite longer duration of disease, older adults reported less impact from FM than middle-aged persons. Research exploring the relationships between older age and selected health-related variables in older adults living with FM is needed to inform the development of strategies designed to promote health and physical function in a growing number of older adults living with FM.
Methods: Descriptive correlational design was used to explore relationships between age and selected demographic and health-related variables. Demographic and health-related data were collected via mailed questionnaire from a convenience sample of older adults who met the ACR 1990 FM classification criteria (N=224, M_{age} = 62.1 yrs, SD = 6.75).
Results: The sample was predominantly female (94%), Caucasian (92%), married (68%), well-educated, had a low level of physical activity and moderate levels of income and tangible social support. Three fourths (75%) were classified as overweight or obese. Advancing age was associated with the following: 1) lower FM impact, measured with the Fibromyalgia Impact Questionnaire Revised-Impact Score (r^2 = -0.16, $p < 0.05$); 2) lower levels of physical function, measured with the Late Life Function & Disability Index-Function Scale (r^2 = -0.15, $p < 0.05$); and, 3) higher levels of resilience, measured with the Resilience Scale (r^2 = 0.19, $p < 0.01$).
Implications: This research supports previous findings that physical function declines with age in persons with FM, but also found that, with advancing age, the reported overall impact from FM decreases and resilience increases. Given the increased prevalence of FM in older age groups and anticipated growth in the number of older adults expected to occur over the next 20 years, it is important for nurses to research interventions that protect physical function in older adults with FM and also explore factors that may contribute to reports of reduced FM impact and increased resilience.

Funding: In part by the Dean's Dissertation Award, Oregon Health & Science University, Portland, OR.

NURSING RESEARCH IN FIBROMYALGIA: TRANSLATING RESEARCH INTO CLINICAL PRACTICE

Yoga and Tai Chi in Fibromyalgia: Multi-Symptom Effects

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Background: Fibromyalgia (FM) is a prevalent, debilitating, chronic pain condition which has proven only moderately responsive to standard medical approaches. FDA indicated medications provide only 30% relief of symptoms and even less improvement in function. Emerging research reveals that exercise and coping skills training offer more consistent improvements in individuals with FM. Complementary therapies such as yoga and tai chi offer opportunities for gentle exercise and enhanced coping through mind/body awareness.
Aims: The aim of this research program is to evaluate the effects of two complementary approaches that combine gentle movement and mindfulness based coping on FM symptoms including pain and functional deficits and to determine the ability of these approaches to improve disease specific coping abilities.
Methods: Two separate randomized, controlled trials were conducted. One involved a novel type of yoga, termed Yoga of Awareness, in which 8 weeks of gentle yoga poses, exercises, and yoga-based coping presentations are complemented by meditation and breathing. The other trial, funded by the NIH, evaluated the effects of a simplified type of an 8-form yang style Tai Chi, progressing over 16 weeks.
Results: Compared to wait listed subjects, participants in the Yoga of Awareness program demonstrated significant improvements in coping, symptoms, and physical function as measured by the Fibromyalgia Impact Questionnaire-Revised, the Pain Catastrophizing subscale of the Coping Strategies Questionnaire, the Vanderbilt Multidimensional Pain Coping Inventory, and Chronic Pain Acceptance Questionnaire. The yoga program also led to significant gains in objective measures of strength and balance. Participants of the Tai Chi program, compared to a parallel education control group, demonstrated significant improvements in the Fibromyalgia Impact Questionnaire, the Brief Pain Inventory, and objective measures of strength and balance including an 8 meter “get up and go”, functional reach evaluation and one legged stand.
Implications: Taken together, these studies demonstrate the ability of two complementary approaches to improve the pain and functional deficits of FM. Both approaches led to significant decreases in pain, the hallmark symptom of FM. This is an important finding given that the pain of FM is often resistant to standard treatments such as higher intensity exercise or cognitive behavioral therapy. That Yoga and Tai chi also led to gains in functional ability attests to the ability of these gentle movement programs to strike a crucial balance in providing exercise that gently works the muscle but does not aggravate abnormal muscular sensitivity characteristic of FM. Equally important as the gains in pain relief and function, the Yoga of Awareness program showed a beneficial shift in how patients cope with pain, a critical component in managing a chronic disease. Future trials could test these therapies in conjunction with FM medications to maximize symptom relief and physical functioning.

Funding: The OHSU Medical Research Foundation and the NIH (1R21AR053506-01A2).

NURSING RESEARCH IN FIBROMYALGIA: TRANSLATING RESEARCH INTO CLINICAL PRACTICE

Best Practices: Complementary/Alternative Therapy for Fibromyalgia

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Specific Aims: 1) To analyze extant literature that has examined various complementary and alternative medicine (CAM) therapies specific for fibromyalgia symptom management. 2) Based on the literature review, to assess best practices for CAM and fibromyalgia symptom management.
Methods: A systematic review of empirical studies, randomized and pragmatic clinical trials, were examined for quality, grade and level of evidence in commonly used CAM therapies for fibromyalgia symptom management. Databases used: PubMed, Ovid MEDLINE 1947-2010, PsycINFO 1806-2101, EBM Reviews - Cochrane Database of Systematic Reviews 2005 to September 2010, CINAHL (EBSCO). Key words used: fibromyalgia, fibrositis, chronic muscle pain, acupuncture, balneotherapy, yoga, tai chi, electrostimluation, laser, herbal therapy, homeopathy, and massage. The literature was assessed for quality of design, statistical analyses, power and effect sizes, if available.
Background and Rationale: A comprehensive state-of-the-science review for effective/appropriate CAM interventions for fibromyalgia symptoms is of critical importance for nurses who work with patients suffering with chronic pain. People who experience chronic pain are very likely to use some form of CAM. In one sample of 289 people with fibromyalgia, 98% had used some form of CAM in the prior 6 months. These therapies can be expensive, and are rarely covered by insurance, thus represent a significant shift of health care dollars to modalities which may not be as effective as established modalities such as exercise, cognitive behavioral therapy or pharmaceuticals. Examination of the literature will help to assess CAM therapies that are effective for fibromyalgia or those which may show promise.
Results: Most studies that have examined CAM therapies are small, under-powered pilot studies. However, among those studies, the ones which show most promise for improving fibromyalgia-associated symptoms include balneotherapy, yoga, tai chi and electrical stimulation with acupuncture.
Conclusions: Nurses may make recommendations to those with fibromyalgia with some evidence base; however, most of these trials are under-powered pilot studies, and more adequately powered research is needed before firm conclusions can be made.

NURTURING CULTURAL COMPETENCE IN NURSING

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OVERVIEW: NURTURING CULTURAL COMPETENCE IN NURSING

Peggy Wros, Linda L. Eddy, Joanne Noone, Rebecca Kopecky, Margo A. Halm

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LATINO BIRTH, IS IT SALSA AND SPICE OR MAL OJO? ONE SIZE DOESN'T FIT ALL

Margo A. Halm, Edward Wilgus

USING PARTNERSHIPS TO DEVELOP CULTURAL LEARNING ACTIVITIES

Joanne Noone

CREATING AND TESTING A CULTURAL COMPETENCE RUBRIC

Linda L. Eddy, Barbara May, Sheela Choppala-Nestor, Peggy Wros

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COMMUNICATING FOR PATIENT SAFETY: TEAM COMMUNICATION AND HEALTH SAFETY

Rebecca Kopecky

NURTURING CULTURAL COMPETENCE IN NURSING

Overview: Nurturing Cultural Competence in Nursing

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Given the increasingly diverse population of the U.S., nurses are challenged to improve their abilities to respond to health care issues in a culturally competent manner. A more culturally competent nursing workforce has the potential to impact longstanding health disparities, affect health care outcomes, improve our ability to recruit and retain nurses from underrepresented groups, and create supportive work environments.

The Nurturing Cultural Competence in Nursing (NCCN) program is a collaborative project between the Oregon Center for Nursing and The Oregon Community Foundation to provide funding to support projects promoting cultural competence of practicing nurses, nursing faculty, and nursing students in Oregon and Southwest Washington. For the NCCN program, cultural competence is described as the lifelong process of examining values and beliefs and developing an inclusive approach to practice with active intercultural engagement. This definition reflects a broad description of culture that includes but is not limited to age, gender, race, ethnicity, religion, sexual orientation, socioeconomic status, and physical or mental abilities.

Through the work of the NCCN program, 13 organizations received funding to develop initiatives focused on various approaches to improving cultural competence in nurses. The NCCN program was designed to encourage collaboration among project teams and to create a "community of experts" to raise the standard of knowledge and improve the level of cultural competence at their organizations. The "promising practices" identified by these mini-grant projects included strategies and models for replication and resulted in collaborative partnerships among regional nursing schools, community health agencies, and health care organizations. Findings from four of the NCCN projects, two each from nursing schools and healthcare organizations, will describe their promising practices to offer solutions to workforce and workplace issues related to cultural competence.

Funding: The Partners Investing in Nursing's Future (PIN) program, an initiative of the Robert Wood Johnson Foundation and the Northwest Health Foundation. Additional funding is provided by the Ann and Bill Swindells Charitable Trust, Providence Health System, the Samuel S. Johnson Foundation and Legacy Health Systems.

NURTURING CULTURAL COMPETENCE IN NURSING

Latino Birth, Is It Salsa and Spice or Mal Ojo? One Size Doesn't Fit All

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Purpose: To evaluate the usefulness of an educationally-based intervention in promoting intercultural competence of nurses caring for Latino patients in a Family Birth Center.

Background/Rationale: In Oregon's Mid-Willamette Valley, the Latino culture now represents 30 percent of the local population. Based on Latino birthing experiences at a 454-bed regional community hospital, staff focused on areas in need of improvement including respect for dignity, management of pain, involvement of family/friends, and post-discharge care.

Methods: Using an action learning framework, 100 nurses practicing in a Mother/Baby Unit participated in a cultural competence training program (CCTP). Using a creative arts approach, nurses experienced the realities of the Latino birth experience. A bilingual theatre production group incorporated dramatic birthing themes with Latino culture, Spanish language and original music to highlight critical reflections, cross cultural practice, and cross cultural communication standards for culturally competent nursing care. Methods to evaluate perceptions of cultural sensitivity included patient interviews, the Intercultural Development Inventory (IDI), and staff focus groups.

Outcomes: Staff's level of understanding, comfort and effectiveness in providing care to the Latino population improved from pre to post IDI scores. Despite heightened awareness, the team's cultural orientation remained unchanged from the pre to 6-month post IDI scores. 'Acceptance' (appreciation of patterns in cultural differences) and 'minimization' (tendency to highlight commonalities across cultures that can mask important cultural differences in values, perceptions and behaviors) were the predominant perceived and development orientations, respectively, indicating the team overestimates their level of intercultural competence. While patients reported satisfaction with various components of their care, many Latino mothers shared moments where their care could have been more culturally sensitive.

Conclusion: Based on IDI and focus group data, the CCTP increased staff knowledge and understanding of how to effectively serve Latino patients by attending to cultural norms, customs and values as it relates to the maternity experience. Implications for designing CCTPs include consideration of experiential learning techniques to fully engage clinicians and promote informal dialogue so that nurses can share insights and lessons learned as new information is acquired and applied in practice. Recommendations for further research include systematically testing CCTPs and identifying training activities to assist individuals and teams in moving along the intercultural development continuum.

NURTURING CULTURAL COMPETENCE IN NURSING

Using Partnerships to Develop Cultural Learning Activities

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Purpose/Aims: The purpose of this presentation is to describe two projects that brought together nursing faculty, clinical partners and cultural consultants to develop cultural learning activities for an undergraduate curriculum.
Rationale/Background: Preparing nurses who can provide culturally competent care to diverse clients is recognized as a vital component of undergraduate nursing education.
Description: The purpose of the first project was to develop online cultural competence tutorials. These were developed in conjunction with a health system and two cultural consultants for an audience of nursing students, faculty and direct health care providers. These tutorials became the basis for the second grant, whose purpose was to create, with the assistance of cultural consultants, a series of didactic and clinical cultural learning activities to address different course outcomes within an undergraduate nursing program. Five faculty from two partner baccalaureate and associate degree schools developed a series of cultural learning activities throughout three years of an undergraduate nursing curriculum.
Outcomes: For the first project, two hundred and sixty students, faculty and direct care providers completed all modules. Pre/post test knowledge scores changes showed a significant increase, at p =.000. We also measured participants' pre and post-test self-perceived cultural competency rating. We used the Caffrey Cultural Competence in Healthcare Scale – a 28 item scale to measure self-perceived knowledge, self-awareness, and comfort with skills of cultural competence. Mean scores improved from a 3.04 to 3.44 (significant at p = .000). Twenty of the 28 items had a significant increase. There were no items that had a significant decrease. For the second project, fourteen new didactic and clinical learning activities and a faculty resource list were developed for eight courses. They are in the process of being implemented this academic year. These learning activities were shared with over 200 nursing faculty from our partner schools.
Conclusions: Promising best practices include academic and community partnerships. The involved faculty derived great benefit from working together, including collegiality and creativity. The partnership continues with implementing these projects. Another promising best practice is use of cultural consultants to verify cultural learning activities and screen for bias and stereotyping.

Funding: The Oregon Center for Nursing.

NURTURING CULTURAL COMPETENCE IN NURSING

Creating and Testing a Cultural Competence Rubric

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Purpose/Aims: The aims of this paper are to: 1) describe development of a cultural competence assessment rubric for use with nursing students at all levels, and 2) to summarize the process of validation and revision of the rubric.
Background/Rationale: In 2008 the American Association of Colleges of Nursing indicated that cultural competence was an essential aspect of nursing education. However, in a review of the status of cultural competency in nursing education, the authors found that, although nursing programs are employing more teaching strategies aimed at cultural competency, few efforts to evaluate those strategies are employed (Grant & Letzring, 2003). The goal of this project was to better understand cultural competence in nursing students at all levels, and to use that knowledge to develop a research-based, psychometrically valid tool for its evaluation.
Methods: Rubric development: Focus groups were conducted with nursing students at the BSN, RNB, masters, and doctoral levels to elicit meaning and indicators of cultural competence from their perspective. Transcripts were analyzed by project faculty and themes and exemplar cases were identified that led to an initial version of a cultural competence rubric. Rubric validation and refinement: The rubric development team received input from an external content expert that led to initial revisions. Nursing faculty not involved in rubric development reviewed five stories containing cultural content written by nursing students at different educational levels. Initial psychometric analyses were undertaken, including descriptive statistics, bivariate correlations, intra-class correlations and analyses of variance to determine rubric's accuracy, consistency, and sensitivity.
Findings: An initial version of a rubric was developed that included four domains: cultural identity, cultural attitude, intercultural engagement, and intercultural communication. Intra-class correlations were obtained for four levels of student's achievement in each rubric domain as well as the total score for each domain. Most intra-class correlations were moderate, with a few low and a few that were substantial. We also analyzed within-person, between story variance using the F test. The CI domain was not sensitive to varying levels of cultural competence nor was the IC domain, but the CA domain and the IE domain showed some evidence of ability to detect difference. These results may indicate actual issues with rubric accuracy, consistency, and stability or they may indicate issues with methodology, or both.
Conclusions: Refinement and analysis is ongoing. Input from cultural competence content experts has been incorporated to supplement data derived from student encounters. We continue to stress that institutionalizing the importance of cultural competence in nursing education and practice requires valid measures so that educators, administrators, nursing staff and public stakeholders are apprised of the outcomes of their ongoing efforts to promote cultural competence.

Funding: NCCN grant through OCN/OCF.

NURTURING CULTURAL COMPETENCE IN NURSING

Communicating for Patient Safety: Team Communication and Health Safety

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Purpose/Aims: To create an environment that respects every individual's unique differences by improving the levels of cultural competence among practicing nurses at a small community hospital in Hood River, Oregon.
Rationale: Having a care environment with a cultural competence focus improves both the quality of patient care and the recruitment and retention of nurses. To create this environment at Providence Hood River Memorial Hospital, the nursing staff knew they would need to be able to describe a method for gauging organizational readiness for cultural competency to respond to this challenge. In addition, patient education is becoming increasingly important in today's health care environment as chronic conditions become more prevalent. Yet even when education is provided, patients may fail to follow recommendations given by healthcare providers because they do not understand the information provided to them.
Methods: The Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals-Revised developed by Dr. Josepha Campinha Bacote was used to conduct an in-depth assessment of our nursing staff's cultural competency awareness. Even after five years of receiving cultural competency training at the hospital, the results showed gaps which needed to be addressed in the way nursing staff provides care to patients from different cultures. Through this assessment, nursing staff identified a problem with communicating discharge instructions with a cultural mindset to improve patient safety. Tools have been incorporated that encourage the use of storytelling, teach back and show me techniques to present health care information in an easily understandable and captivating manner.
Findings: The development of "Cultural Moments" as a teaching tool for the nursing workforce came as an afterthought in the multiple nursing group debriefings and showed how important it is for nurses to share their own experiences and learn from them. Because of the tools incorporated to improve patient education, patient satisfaction has risen from 65 percent to 82 percent in ambulatory surgery and inpatient care since the start of this project.
Conclusions: Leadership commitment, structural linkages, organizational culture, and continuous measurement constitute the framework for Providence Hood River Memorial Hospital Competency Model assessment and training. Cultural competence leaders do not need to be ethnically or culturally diverse in order to provide culturally competent care or to be an example to others. Cultural competence is not about stereotyping people; it's about working comfortably with people who need a shift in thinking in the way care is provided. Cultural competence is a critical component of patient safety and quality of care.

Funding: The Oregon Center for Nursing and the Oregon Community Foundation.

PROVIDING A GOOD DEATH: PERCEPTIONS OF NURSES

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OVERVIEW: PROVIDING A GOOD DEATH: PERCEPTIONS OF NURSES

Renea L. Beckstrand

PREVENTING SUFFERING: CREATING A PEACEFUL DEATH IN THE EMERGENCY DEPARTMENT

Daniel Wood, Renea L. Beckstrand, Lynn Clark Callister, Sondra Heaston

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ONCOLOGY NURSES' PERCEPTIONS OF THE MAGNITUDE OF OBSTACLES AND SUPPORTIVE BEHAVIORS IN END-OF-LIFE CARE

Renea L. Beckstrand, Joan Collett, Lynn Clark Callister, Karlene Luthy

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PREVENTING SUFFERING: FACILITATING A PEACEFUL DEATH IN CHILDREN

Renea L. Beckstrand, Nicole Rawls, Lynn Clark Callister, Barbara Mandleco

PROVIDING A GOOD DEATH: PERCEPTIONS OF NURSES

Overview: Providing a Good Death: Perceptions of Nurses

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Providing appropriate end-of-life care has become a primary concern of nurses caring for those who are dying in a variety of clinical settings. Highly technological acute care environments may not facilitate the provision of "a good death," or a quality end-of-life experience for patients and their families.

This symposium reports on descriptive survey research on (a) qualitative data reflecting the perceptions of neonatal and pediatric intensive care nurses of barriers and facilitators of end-of-life care, (b) specific suggestions given by emergency department nurses to improve end-of-life care, and (c) oncology nurses' perceptions of the magnitude of obstacles and supportive behaviors in end-of-life care.

Care dilemmas arise as dying patients are placed in an environment created to sustain life. The real choice may not be between life or death, but what happens in the provision of end-of-life care. This symposium documents studies that illuminate the perceptions of nurses caring for patients and their families at the end of life. Survey research including open-ended questions in which nurses gave specific suggestions for improvement of end-of-life care provides important evidence that should be utilized to improve care of patients and families. Facilitating a "good death" should be the goal of nurses working in a variety of clinical settings.

PROVIDING A GOOD DEATH: PERCEPTIONS OF NURSES

Preventing Suffering: Creating a Peaceful Death in the Emergency Department

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Purpose: The purpose of this study was to describe and categorize suggestions made by a national sample of emergency nurses that would facilitate quality end-of-life care.
Rationale/Background: Emergency nurses are often in a position to provide end-of-life care, and yet they are practicing in a highly technological environment with a focus on saving life rather than facilitating a peaceful passing.
Methods: In a descriptive survey which identified emergency nurses' perceptions of obstacles and supportive behaviors in end-of-life care, respondents offered one or more suggestions in response to an open-ended question about what one thing they would want to change in end-of-life care in emergency departments. There were 441 responses received out of 1000 questionnaires mailed. These qualitative data were analyzed and coded by the research team and themes identified. Facilitators of quality end-of-life care by nurses working in high levels of acuity critical care units were described.
Results: Analysis of data showed the major themes to be: The need for more patient support, i.e., better comfort measures, more 1:1 nursing care, and upholding adv directives; creating better physical environment i.e., privacy and comfortable rooms; the need for better family support i.e., allowing family presence and a place to grieve in private; and, the need for better EOL education. One nurse noted, "For sudden, traumatic events, family will need time—time and long-term care issues aren't really available in the emergency department environment." Another study participant cautioned that, "Each situation is unique—it's difficult to generalize—there are so many contributing factors; for example, staffing, how busy the department is, space, and how much time the dying patient has."

Facilitators of creating a peaceful passing include creating a place of comfort (physical environment); offering professional support for both the patient and family; caring for the caregiver, and providing education on end-of-life care.
Implications for Clinical Practice: Made by these nurses could be implemented to facilitate quality end-of-life care by emergency department nurses.

Funding: Brigham Young University College of Nursing Research Grant.

PROVIDING A GOOD DEATH: PERCEPTIONS OF NURSES

Oncology Nurses' Perceptions of the Magnitude of Obstacles and Supportive Behaviors in End-of-Life Care

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Purpose: The purpose of this descriptive survey research was to determine the magnitude of obstacles and supportive behaviors in end-of-life-care of oncology patients as perceived by oncology nurses.

Rationale/Background: Cancer is the second leading cause of death in the United States, with 50% of patients with cancer dying in hospitals and another 20-25% in nursing homes. Hospital-based oncology nurses are on the front-line of healthcare providers who care for dying patients. Oncology nurses provide end-of-life-care on a daily basis. Their perceptions of giving quality care to dying patients in a hospital setting provide an important addition to the ongoing research on quality end-of-life-care.

Methods: A national geographically dispersed sample of 1,000 oncology nurses who were members of the Oncology Nursing Society (ONS) completed a 76-item questionnaire. 377 usable questionnaires were analyzed (a return rate of 41.5%). Data were entered into SPSS with items ranked from highest to lowest on the basis of magnitude scores (the mean score for size multiplied by the mean score for frequency of occurrence) to determine which obstacle items and supportive behavior items had the largest magnitude scores.

Results: Items with the highest perceived obstacle magnitude scores (POMS) were: (a) dealing with anxious family members, (b) families not accepting what the physician is telling them about the patient's poor prognosis, and (c) nurses being called away from the dying patient and family to care for other patients. Items with the highest supportive behavior magnitude scores (SBMS) were: (a) allowing family members adequate time to be alone with the patient after he or she has died, (b) providing a peaceful, dignified bedside scene for family members once the patient has died, and (c) allowing families unlimited access to the dying patient even if visiting conflicted with nursing care.

Implications for Clinical Practice: Oncology nurses play a vital role in the delivery of end-of-life care and are dedicated in providing the best end-of-life care to their patients and families. This study helps identify research-based obstacles and supportive behaviors to providing the best end-of-life care. EoL issues with the care of patients' families need to be addressed to improve care for patients. Communication issues with family members are also an important part of EoL care. Educating family members and the community regarding issues of EoL care is needed.

PROVIDING A GOOD DEATH: PERCEPTIONS OF NURSES

Preventing Suffering: Facilitating a Peaceful Death in Children

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Purpose: The purpose of this study was to identify suggestions made by pediatric and neonatal intensive care nurses that would facilitate quality end-of-life care in infants and children.

Rationale/Background: Neonatal (NICU) and pediatric intensive care (PICU) nurses often are in a position to care for infants and children at the end-of-life, and yet they are practicing in a highly technological environment with a focus on saving life rather than facilitating a peaceful passing.

Methods: Survey data identified nurses' perceptions of obstacles and supportive behaviors in end-of-life care (Beckstrand, Rawle, Callister & Mandleco, in press). Open-ended responses associated with those surveys were analyzed and coded and themes identified by the researcher team. Qualitative data were analyzed by the research team, and facilitators of quality end-of-life care by NICU and PICU nurses working in high level of acuity critical care units were described.

Results: Some nurses felt that quality end-of-life-care was provided on their units, while others expressed frustration about their current work environment in the provision of end-of-life care. The overall theme was "Preventing suffering: Facilitating a peaceful death in children." Themes included creating a peaceful passing through the physical environment; offering professional support for both the patient and the family; letting go when futility exists; increasing the quality of communication with the healthcare team; caring for the caregiver and providing education. One study participant suggested that it is important to, "Embrace the concept of a good death, as a facilitated or supported aspect of critical intensive care."

Implications for Clinical Practice: One nurse beautifully expressed her vision: "Failure is often looked upon as death—however, I feel I fail families whom I cannot provide a careful, calm, loving environment when the child transitions from life to death." Suggestions made by these nurses could be implemented to facilitate quality end-of-life care in infants and children.

Reference: Beckstrand, R.L., Rawle, N.L., Callister, L. & Mandleco, B. (2010). Pediatric nurses' perceptions of obstacles and supportive behaviors in end-of-life care. Pediatric Critical Care, in press. Available on line ahead of print.

Funding: Brigham Young University College of Nursing Research Grant.

SOCIOECOLOGIC FRAMEWORK OF ASIAN PACIFIC ISLANDERS WITH CHRONIC ILLNESS

Moderator:
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OVERVIEW: SOCIOECOLOGIC FRAMEWORK OF CHRONIC ILLNESS IN ASIAN PACIFIC ISLANDERS

Jillian Inouye

RELATION OF DEPRESSION TO SUBSTANCE USE AND CHRONIC ILLNESS IN API

Marife C. Aczon-Armstrong

BODY IMAGE RELATED TO LARGE BODY SIZE

Nafanua Braginsky

RECRUITMENT OF ASIANS AND PACIFIC ISLANDERS INTO A CLINICAL RESEARCH TRIAL

Lorrie Wong, Malia Ribeiro, Jillian Inouye

ADVANCE DIRECTIVES AND DECISION-MAKING: API FAMILY CAREGIVERS OF HEMODIALYSIS PATIENTS

Merle R. Kataoka-Yahiro

OUTCOMES IN A LIFESTYLE INTERVENTION FOR FILIPINO-AMERICANS TO PREVENT DIABETES

Anne Leake

Note: Paper was not presented.

SOCIOECOLOGIC FRAMEWORK OF ASIAN PACIFIC ISLANDERS WITH CHRONIC ILLNESS

Overview: Socioecologic Framework of Chronic Illnesses in Asian Pacific Islanders

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While much is known about chronic conditions in the majority population, little is known about their impact on the Asian/Pacific Islander (API) individuals in their community. This symposium explores studies of Asian/Pacific Islanders with various chronic conditions, such as type 2 diabetes, depression, chronic kidney disorder, and obesity. The theoretical construct underlying these papers is the social ecological framework and the relationships among ethnicity, community values, and conditions. More specifically, the five papers presented here examine the relationship of ethnicity and culture to: a) depression and substance use; b) barriers and facilitators to recruitment into clinical trials; c) a specific cultural value for large body size and its relation to obesity and disease; d) importance of family in end of life decision making; and e) outcomes of interventions in the community. Findings indicate there are unique differences and some similarities among API in values, moods, behaviors, decision making, and responses to research and interventions, and that they should be studied in the context of their communities. The findings have impact on increasing our understanding of disparities and outcomes in the API population.

Funding: Partially supported by NINR- NR010671 and NR007883.

SOCIOECOLOGIC FRAMEWORK OF ASIAN PACIFIC ISLANDERS WITH CHRONIC ILLNESS

Relation of Depression to Substance Use and Chronic Illness in API

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Purpose: The purpose of this study was to a) identify the prevalence of current depression, substance use (cigarette smoking and alcohol use) and chronic illnesses (diabetes, cardiovascular diseases, and asthma) among Asian American/Pacific Islander (API) adults in Hawaii; b) determine if there are significant differences in the prevalence of current depression, substance use, and chronic illnesses between Asians and PI adults in Hawaii; and c) determine if there is a relationship between current depression, substance use, chronic illnesses and individual characteristics.
Background: Few studies have focused on API, and even fewer reported findings for each API subgroup separately despite the unique characteristics of each subgroup. Using the aggregate group makes identifying actual differences in health and mental health of these subgroups. As a result, little is known about the specific characteristics of API subgroups. Nationally minority health is emphasized in its Healthy People 2010 objectives relevant to diverse ethnic group. One of the overarching goals of Healthy People 2010 was to eliminate health disparities among different segments of the population. API population is projected to reach 41 million by year 2050 (Ghosh, 2003). Hawaii's ethnic diversity is illustrated with approximately 48.4% of its population of API descent. API is approximately 4.8% of the total U.S. population. (U.S. Bureau Census, 2010).
Methods: The study design uses descriptive statistical analysis of cross-sectional data collected by the Hawaii Behavioral Risk Factor Surveillance System (HBRFSS) in 2008. The initial analysis used univariate and bivariate analysis. In-depth analysis was conducted using a cumulative model of multiple logistic regression.
Results: The sample for this study was 3,113 with a mean age of 51.5 years. More than one in four participants (26.1%) were 65 years or older. Three out of five participants were female (60.6%). The sample distribution by ethnic groups were: Japanese (1,273; 40.9%)), Hawaiians/Part-Hawaiians (728; 23.4%), Filipinos (618; 19.9%), and Chinese (321; 10.3%). Significant differences in prevalence of depression between Asians and PI were found. PIs in Hawaii were two times more likely to have severe/moderately severe depression compared to the Asian group. Several factors affect these prevalence rates including selected social determinants.
Implications: The result of this study could serve as a guide for development of culturally sensitive interventions that will effectively improve assessment of early signs of depression in API with chronic illness and substance use. This was one of few studies which described disaggregated information used to identify the specific subpopulations who experienced high prevalence of current depression, substance use and chronic illness and identified the challenges that some API subgroups face.

References:

Ghosh, C. (2003). Healthy People 2010 and Asian Americans/Pacific Islanders: Defining a baseline of information. *American Journal of Public Health, 93:*12m 2093-98.
U.S. Bureau of Census (2010). State and County Quick Facts. Retrieved on October 17, 2010 from http://quickfacts.census.gov/qfd/states/15000.html.

SOCIOECOLOGIC FRAMEWORK OF ASIAN PACIFIC ISLANDERS WITH CHRONIC ILLNESS

Body Image Related to Large Body Size

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Purpose: The Pacific Island population has the highest prevalence of obesity related to their cultural acceptance of a large body size. The purpose of this concept analysis was to explore the dimensions of body image in relation to obesity from ethnic and cultural perspectives, and to determine its relevancy to future nursing research.
Definition of Concept: Body image is defined as the perceptions of and attitudes toward one's own physical appearance (Cash, Phillips, Santos & Hrabosky, 2004).
Concept Analysis Approach: Literature review included 32 research articles from the fields of nursing, medicine, psychology, and sociology. Of the sample, there were two qualitative studies in the African Americans, one mixed method, and 29 used quantitative methods. The evolutionary approach proposed by Rodgers (1989) guided this analysis. Antecedents included socio-cultural factors, interpersonal experiences, physical characteristics, and personality factors. Results of this analysis revealed that large body sizes are perceived as beautiful, attractive, sexually desired, status and stamina, and are socially acceptable.
Linking Concept to Nursing Research: Positive body images of large body sizes indicate more flexibility in weight tolerance. The increased prevalence of obesity and chronic diseases within the Pacific Island communities indicates the need for nurses to be part of community action plans and collaborative partnerships with communities.
Utility of Concept in Nursing Research: Body image research provides evidence that ethnic and cultural groups have different views of body image from the mainstream society. The prevalence of obesity in the Pacific Island population highlights the need for nurses in developing culturally appropriate programs to empower communities to take ownership and control of their health in making behavior changes (Kumanyika, et al., 2002). Programs with early intervention targeting younger age groups have shown potential to make an impact on obesity in other ethnic groups. This could be an approach to target younger Pacific Island populations and their families with the goal of ultimately reducing chronic disease in the future.

SOCIOECOLOGIC FRAMEWORK OF ASIAN PACIFIC ISLANDERS WITH CHRONIC ILLNESS

Recruitment of Asians and Pacific Islanders into a Clinical Research Trial

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Purpose: The purpose of the study was to evaluate strategies and barriers in recruiting Asians and Pacific Islanders (API) with type 2 diabetes in a clinical trial related to improving self-management.

Background: A study of API patients with diabetes was undertaken to determine the effectiveness of Cognitive Behavioral Intervention (CBI) in enhancing adherence to self-management strategies and to identify unique ethnic responses. The process utilized to recruit participants into this CBI clinical trial and reasons for non-participation were analyzed and reported.

Methods: Descriptive statistics and content analysis were utilized to analyze reasons for non-participation. Traditional recruitment methods were originally employed in the first year with low recruitment yield. After evaluating the situation, methods were modified. Recruiters were allowed to follow the key points outlined in the recruitment script and to incorporate a culturally accepted relaxed style of communication referred to as "talk story". This method is aimed at establishing trust and is described as a sincere empathic communication style that creates a sense of familiarity and is a valued part of API cultures in Hawaii (McDermott, et al, 1980, Affonso et al, 2007). This "talk story" interview method was employed to obtain rationale for nonparticipation.

Outcomes: A total of 1891 potential participants were identified. After pre-screening, 631 were deemed eligible and 207 (32.8 %) enrolled. Of those meeting the eligibility requirements, 340 individuals declined participation. We randomly selected 80 of the declining individuals to provide their reasons for non-participation. Fifty three of 80 people responded to this query and the rationale were categorized into the following themes: "too busy" (24), care giving (8), health condition (7), work (5), not interested (4), travel (personal) (3), and travel to study location (2).

Conclusion: Recruitment of the API population proved to be challenging yet the enrollment goal was met using standard methods such as personalized letters, phone calls, incentives, and travel vouchers. Utilization of a "talk story" approach of contact identified that socioeconomic issues faced by this population was an important recruitment consideration. Ongoing assessment of barriers to participation and evaluation of the effectiveness of recruitment strategies may be beneficial in assisting researchers to meet recruitment goals.

References:

McDermott, J., Tseng, W., & Maretzki, T. (1980). People and cultures of Hawaii: A psychocultural profile. Honolulu: The University Press of Hawaii.

Affonso D, Shibuya J, & Frueh B. (2007). Talk-story: Perspectives of children, parents, and community leaders on community violence in rural Hawaii. *Pub Health Nurs*e, 24:400-408.

Funding: National Institute of Nursing Research at the National Institute of Health [5R01NR007883 to JI].

SOCIOECOLOGIC FRAMEWORK OF ASIAN PACIFIC ISLANDERS WITH CHRONIC ILLNESS

Advance Directives and Decision-Making: API Family Caregivers of Hemodialysis Patients

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Purpose: The study purpose was to describe the attitudes, subjective norms, and perceived behavioral control among API family caregivers of hemodialysis patients and their intentions to complete advance directives (AD)s using the Theory of Planned Behavior (TPB) and the Social Ecological Framework.
Background: Most hemodialysis patients know about ADs and believe it is important, but less than half have completed an AD. Similarly, a majority of dialysis patients report knowing which family member they wanted to make decisions for them at the end-of-life, but less than half have appointed a surrogate decision maker in writing. There are discrepancies between what hemodialysis patients know and believe and their intentions and action to complete ADs. What is evident in the literature is that a family and patient-centered approach to AD is preferable among ethnically diverse groups and is critical to health care decision making. Studies on family caregivers of hemodialysis patients are rare. In practice, cultural research findings on API families' influence on patient decision-making have rarely been validated using a theoretical or conceptual framework (Fried, Bullock, Iannone, & O'Leary, 2009; Sessanna & Jezewski, 2008).
Methods: This is a descriptive study using focus groups, field notes, and demographic information.
Results: Four focus group sessions with a purposive sample of 14 participants from a dialysis center located on Oahu, Hawaii were completed. Using content analysis, categories and subcategories emerged based on attitudes, subjective norms, and perceived behavioral control. In addition, study findings showed that 'patient's wishes' and family decision-making appears to be linked together with implication of the decision-making process as both patient and family centered. Studies in the literature have suggested that APIs are culturally unique regarding end-of-life decision-making – moving away from patient autonomy to family autonomy. The findings indicate that family caregivers of hemodialysis patients do not make AD decisions for the patient. The family considers the patient's wishes in decision-making and the process is then both patient and family centered with patient autonomy superseding family autonomy. Finally, family member's role and communication style in decision-making were integral parts of perceived control. The findings suggest that API family caregivers and patients interact and are dependent on each other; the family organization is the processing system in which decisions are made; and the cultural community embraces different patterns of roles, styles of communication, and means of decision-making.
Implications: The results of this study based on the TPB and the Social Ecological framework will increase our understanding of attitudes, subjective norms, and perceived control of API family caregivers of hemodialysis patients and their intentions to complete ADs. Creating this foundation will lead to further studies in developing culturally appropriate instruments and culturally competent care management strategies.

Funding: The National Kidney Foundation of Hawaii.

SOCIOECOLOGIC FRAMEWORK OF ASIAN PACIFIC ISLANDERS WITH CHRONIC ILLNESS

Outcomes in a Lifestyle Intervention for Filipino-Americans to Prevent Diabetes

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Purpose: The purpose of the study was to obtain preliminary data on outcome measures from a community-based feasibility study of a lifestyle intervention adapted from the Diabetes Prevention Program (DPP) and culturally-tailored for Filipino-Americans.

Background: Filipino-Americans in Hawaii have a higher than average prevalence of diabetes even with lower rates of obesity. The DPP showed that 7% loss of body weight was efficacious for preventing diabetes in high risk groups. Lack of time is a barrier to participation in lifestyle programs. A pilot study (N = 40) of the feasibility of flexible scheduling for 8 stand-alone classes for community-dwelling Filipino-Americans at high risk for diabetes was aimed at improving attendance at classes and measuring satisfaction of participants, resulting in 88% attendance and a high level of participant satisfaction. A further aim of the feasibility study was to determine if preliminary data on outcome measurement suggested efficacy for weight loss and improved self-efficacy for lifestyle improvements.

Methods: All participants received the intervention with N = 19 randomized to a wait-listed control group. Biophysical measurements included height, weight, BMI, waist and hip circumference, waist-to-hip ratio, blood pressure and pulse. Psychosocial measures included the SF-36, WHO-QOL BREF (quality of life), depression (CES-D) and self-efficacy for self-care and exercise scales. Descriptive statistics and analysis of pre- and post-test measures were completed to analyze for efficacy.

Results: The participants were overweight at baseline with an average fasting blood glucose 95 mg %. One-third of participants spoke only a Filipino dialect at home and 22% were potentially depressed. They lost an average of 3.3 pounds, an amount that was statistically significant compared to the control group. Waist circumference and BMI reductions were also significant. None of the other biometric or psychosocial outcomes reached significance. Self-efficacy for a healthy lifestyle was high at baseline and did not change. Comparison of the participants who lost weight to those who did not lose showed a higher quality of life at baseline. Participants who were potentially depressed at baseline showed a greater reduction in fasting blood glucose than those who were not depressed as measured by the CES-D.

Implications: This low-intensity lifestyle intervention shows promise for preventing diabetes through weight loss. Improving the quality of life for participants is a possible direction for improving weight loss that is suggested by this preliminary data.

Funding: National Institute of Nursing Research at the National Institute of Health [P20 NR010671-01 13 to Jillian Inouye].

THE UTILITY OF THEORETICAL FRAMEWORKS IN GUIDING MIXED METHODS STUDIES: *MOMENTO CRUCIAL*

Moderator:
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OVERVIEW: THE UTILITY OF THEORETICAL FRAMEWORKS IN GUIDING MIXED METHODS STUDIES: *MOMENTO CRUCIAL*

Bronwynne C. Evans

USE OF THEORETICAL FRAMEWORKS (OR NOT) IN MIXED METHODS STUDIES

David W. Coon, Bronwynne C. Evans, Ebere Ume, Michael J. Belyea, Felipe González Castro

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GET OUT OF MY HOUSE: SENATE BILL 1070 AND TRANSITIONS IN RESEARCH RECRUITMENT

Ebere Ume, Bronwynne C. Evans, David W. Coon, Michael J. Belyea, Felipe González Castro

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LIFE COURSE PERSPECTIVE: EXAMINING DISTRESS PATTERNS OF MEXICAN-AMERICAN CAREGIVERS

Michael J. Belyea, Ebere Ume, Bronwynne C. Evans, David W. Coon, Felipe González Castro

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TRANSITIONS IN CAREGIVING: PERSONAL CARE OF MOTHERS BY MEXICAN-AMERICAN SONS

Bronwynne C. Evans, Michael J. Belyea, Ebere Ume, David W. Coon, Felipe González Castro

THE UTILITY OF THEORETICAL FRAMEWORKS IN GUIDING MIXED METHODS STUDIES: *MOMENTO CRUCIAL*

Overview: The Utility of Theoretical Frameworks in Guiding Mixed Methods Studies: *Momento Crucial*

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Purposes/Aims: The purpose of this symposium is to demonstrate the worth of an *a priori* theoretical framework as an organizing structure for conceptualizing our work, accomplishing study aims by successfully navigating through intricate mixed method designs, integrating or linking concepts at the level of data analysis and interpretation, and opening the qualitative "black box" in regard to methodological detail. Our goal is not only to facilitate our own work but to create an easily-followed audit trail for other researchers or set forth methods that can be replicated. Pragmatically, then, how does a theoretical framework provide structure for a complex investigation of health behaviors, social determinants of health, or patient and family-focused health care, and facilitate translation of research findings into practice?

Background: The term "mixed methods" is a recent one. Although definitions, language, nomenclature, and typologies of mixed methods designs remain varied, mixed methods are commonly considered, "Research in which the investigator collects and analyses the data, integrates the findings, and draws inferences using both qualitative and quantitative approaches or methods in a single study or program of inquiry" (Tashakkori and Creswell, 2007, p. 4). Although we presented the use of *life course perspective* (LCP) at WIN three years ago as a useful theoretical approach for studying caregiving in Mexican-American families, our literature reviews since that time show that few other mixed methods studies rely on explicit frameworks.

Methods/Results/Implications: In this symposium session, we will provide detailed examples from *Momento Crucial*, a federally-funded, longitudinal, multi-site mixed methods study that uses a theoretical framework, *life course perspective*, to guide design; sampling; recruitment; data collection, analysis and interpretation; and conceptualization of future research. The first paper will discuss our use of LCP as a guiding framework across this complex study, emphasizing ways in which such a framework opens the "black box" of qualitative research. Next, we will use three of the major constructs from LCP (transitions, turning points, contextual and cultural influences) to describe theory-based but pragmatic changes in recruitment strategies for Mexican-American participants affected by Senate Bill 1070. The third paper will illustrate the use of LCP, especially in relation to cultural and contextual factors, in variable-oriented data analysis of distress patterns in Mexican-American caregivers. We will complete the session with an illustration of case- and variable-oriented analysis based on the constructs of LCP, using a case study of two Mexican-American males caring for their female parents, and re-presentation of data. Taken together, these papers will offer a comprehensive picture into the worth of a theoretical framework as a guide for completing rigorous mixed methods studies that avoid conceptual drift.

Funding: NINR, National Institutes of Health (5R01NR0101541-02).

THE UTILITY OF THEORETICAL FRAMEWORKS IN GUIDING MIXED METHODS STUDIES: *MOMENTO CRUCIAL*

Use of Theoretical Frameworks (or Not) in Mixed Methods Studies

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Purposes/Aims: There is little conceptual or empirical work on choice of design in mixed methods (MM) studies and no widely accepted ideas about using a theoretical framework to guide inquiry or a set of conventions to integrate data analysis. A recent critical review of health science literature for the last 5 years revealed that many MM studies do not use theoretical frameworks to guide inquiry into complex health problems, and that guidelines for MM practice are needed. This presentation will trace the use of a theoretical framework in design and implementation of *Momento Crucial*, a funded four-year NINR study.
Rationale/Conceptual Basis/Background: MM, sometimes called a "third methodological movement", is slowly gaining acceptance. MM nourishes research in practice disciplines because it acknowledges context, recognizes both the particular and the general, identifies recurring patterns, fosters insight into variations, seeks multidimensional results, and searches for neutrality with advocacy. Pragmatism, the leading philosophy in MM research, helps us focus on social and historical context rather than on method, and uses multiple data sources to answer research questions. Once past philosophy, however, we need conceptual maps provided by theoretical frameworks to help us recognize and work through intricate design issues and to open the qualitative "black box" in MM studies.
Methods: A current MM R01 focusing on transitions in caregiving for Mexican-American families provides an ideal vehicle for illustrating the role of a theoretical framework in providing structure for multifaceted investigation of health behaviors, social determinants of health, family-focused health care, and translation of research findings into practice.
Results: *Momento's* theoretical framework, *life course perspective* (LCP), guides our purpose and research questions; influences theoretical drive; assists in conceptualizing and carrying out the temporal elements of our complex MM design; and applies a set of related constructs such as LCP transitions, turning point, and adaptive strategies to our project. LCP shapes our sampling and recruitment; opens the "black box" of data collection, analysis and interpretation with straightforward theory-derived methods; and authenticates validity/credibility as data are compared to theory. LCP serves as the structure for development of "start codes", a coding book, and themes organized under its constructs; focuses proposition statements for future testing; and furnishes an explanatory framework for dissemination. It provides an orderly, efficient scheme for bringing together observations and facts from separate paradigms; assists in summarizing and linking findings into an accessible, coherent, useful structure; guides understanding of phenomena – both the *what* and the *why* of their occurrence; and provides a basis for prediction.
Implications: LCP assists with every phase of research in *Momento* by facilitating integration of MM in at data collection, analysis, and interpretation, and fostering translation of results into practice. Health science researchers could more fully use theoretical frameworks to guide MM studies that explore behavior change and factors influencing that behavior change, an area that holds great research promise.

Funding: NINR, National Institutes of Health (5R01NR0101541-02).

THE UTILITY OF THEORETICAL FRAMEWORKS IN GUIDING MIXED METHODS STUDIES: *MOMENTO CRUCIAL*

Get Out of My House: Senate Bill 1070 and Transitions in Research Recruitment

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Purposes/Aims: The purpose of this presentation is to review the effects on nursing research of an immigration bill (Senate Bill 1070) recently passed by the Arizona State legislature. Using *Momento Crucial*, a mixed methods study funded by NINR to explore transitions in the caregiving trajectory of Mexican-American (MA) families, we will explore SB1070 threats to recruitment, use of a theoretical framework to guide responses to such threats, and recruitment strategies for the increasingly apprehensive MA population.

Rationale/Background: The passing of SB 1070 triggered widespread fear because the law affects both undocumented and documented immigrants; both these groups report fear of deportation. Even before implementation, stories of requests for citizenship documents from people who "looked like illegal immigrants" culminated in a preliminary injunction against the most stringent sections of the law. The remainder went into effect on July 29, 2010 and, of 34 active cases in Phoenix, 10 expressed concerns about its impact on their ability to provide informal care. Although we do not ask about immigration status as part *Momento's* aims, previous successful recruitment through home care agencies, schools, and community events where MAs might be targeted by immigration officials dwindled and we have begun to encounter unprecedented rejection or drop-out.

Best Practice: Approach/Methods/Process: Drawing heavily on the transitional and cultural/contextual elements of our *life course perspective* (LCP) framework, we re-doubled efforts to find culturally-appropriate ways to foster recruitment of MA participants, whose extensive family networks often include persons with varying immigration status. *Momento's* cultural brokers relied on *personalismo*, dropping back almost exclusively to personal contacts and increasing their frequency as we attempted to maintain the sample and foster future recruitment. Thank-you cards following each of 6 visits, birthday cards with colorful bookmarks, sympathy cards, regular personal phone calls, written health information, and the encouraging visits of the MA cultural brokers every 10 weeks were reinforced by another remarkably effective strategy. We made it very clear to families that the $20 incentive for each of the first 5 visits is not reported to the IRS. Then, in accordance with federal law, we gave no cash past that $100 limit but provided a gift bag as an incentive/thank-you for the 6th visit. We used special bags that are commonly available in Mexico and delighted our participants, filling them with personalized gifts especially selected for their family: toiletries, dog treats, or food such as fresh tortillas, sacks of dried beans, and other staples.

Outcomes: Although cultural brokers' efforts devote more hours to recruitment than ever before, our sample continues to build and dropouts have almost stopped.

Conclusions/Implications/Recommendations: We use LCP as a guide to more than study design. The utility of this strong, carefully-selected framework in all aspects of the study, including recruitment, provides a vehicle for successful grant implementation.

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THE UTILITY OF THEORETICAL FRAMEWORKS IN GUIDING MIXED METHODS STUDIES: *MOMENTO CRUCIAL*

Life Course Perspective: Examining Distress Patterns of Mexican-American Caregivers

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Purposes/Aims: This presentation will describe how a theoretical framework, *life course perspective* (LCP), guides examination of psychological and physical distress patterns (burden, strain, depression, worry, vigilance, well being, ADLs, and IADLs) in relation to cultural and contextual factors that impact Mexican-American (MA) caregivers (CGs).
Rationale/Conceptual Basis/Background: Thirty-six percent of Hispanic households report having at least one family caregiver, with 8,147,000 such CGs in the U.S. *Momento Crucial*, a descriptive, longitudinal, multi-site, mixed methods study using LCP, allows us to examine CG distress in MA families over time. The core component of *Momento* is an intensive case-oriented approach exploring configurations of similarities and differences. A simultaneous, complementary, variable-oriented component looks for broad patterns across cases and enables the drawing of inferences. The two approaches are integrated throughout the analytic and interpretive phases of the study with the long-term goal of generating patient-centered interventions that allow MA families to maintain elders in their homes.
Methods: After screening to ensure that eligibility criteria are met and informed consent, CGs participate in semi-structured interviews. Along with interviews, the CES-D, Zarit Burden Index, Penn State Worry Questionnaire, Positive Aspects of Caregiving, Caregiver Vigilance Scale, Activities of Daily Living, Instrumental Activities of Daily Living, and General Well-Being Inventory are completed every 10 weeks for 15 months, with care recipients also completing several instruments. Latent class analysis (LCA), a latent variable model that clusters similar participants into classes based on the variables used in the analysis, was used to summarize classes of psychological and physical distress among 93 CGs. The CGs averaged 53 years of age and 61% were married. Care recipients averaged 78 years of age with average ADLs of 2.5 and IADLs of 6.9.
Results: Latent class analysis identified 4 classes which differed on the trajectories of distress and physical variables over the 6 measurement points. *Low distress CGs* (n=59) had the highest well being scores and low scores on all other measures, except for vigilance. *High depressive CGs* (n=21) reported the highest depressive symptoms and worry, the lowest scores on well being; care recipients (CRs) reported the highest number of depressive symptoms. *High physical distress* CGs (n=5) had the highest scores on ADLs, IADLs, and acculturation. Of this group, only 20% of CGs were married while care recipients were the oldest and had the highest ADLs. *Low vigilance CGs* (n=7), the highest percent married, had the lowest home vigilance and CRs with the lowest depression scores.
Implications: The classes differed on amount and type of distress. These differences continued across 15 months and can be viewed from the *life course perspective,* where cultural and contextual factors shape the caregiving trajectory. Addition of case-oriented data could help investigators better understand these differences and identify causal mechanisms of distress so that supportive nursing interventions could be developed.

Funding: NINR, National Institutes of Health (5R01NR0101541-02).

THE UTILITY OF THEORETICAL FRAMEWORKS IN GUIDING MIXED METHODS STUDIES: *MOMENTO CRUCIAL*

Transitions in Caregiving: Personal Care of Mothers by Mexican-American Sons

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Purposes/Aims: Our research has uncovered a virtually undescribed phenomenon, that of personal care by Mexican-American (MA) sons for their aging mothers, which signals a significant caregiving trend in MA families. The purpose of this presentation is to describe how two empirically real cases of MA males came to provide personal care for their aging mothers and how that experience unfolded over the 15 months they were in our study.
Rationale/Conceptual Basis/Background: Although MAs are the largest ethnic minority in the U.S., we know little about transitions and turning points in their informal caregiving experience. Traditionally, female family members provide personal care, rather than sons who are unwilling to break long-standing cultural taboos. In today's economic and social turmoil, however, sons must sometimes step up to provide personal care for their aging mothers. Our study, *Momento Crucial,* examines caregiving in such families through *life course perspective* (LCP), a leading theoretical orientation for the longitudinal study of health and behavior patterns. LCP's organizing constructs (cultural and contextual differences, timing of life events, adaptive strategies, trajectories, transitions, and turning points) allow integration of disparate explanations for differences in caregiver stressors, gain, and cultural expectations, and facilitate derivation of testable propositions.
Methods: Case-oriented methods offer insight into the particulars of empirically real cases encountered during the process of inquiry. From our longitudinal, mixed methods study of 110 MA caregiving families with visits every 10 weeks for 15 months, we selected two cases to identify important common patterns and illustrate the phenomenon of son-mother caregiving intensely. They were chosen because of wide variation in acculturation, age, socioeconomic status, education, and caregiving intensity. Combining interviews, caregiving trajectory drawings, and variable-oriented instruments including the CES-D, Zarit Burden Index, Penn State Worry Questionnaire, Positive Aspects of Caregiving, Caregiver Vigilance Scale, and General Well-Being Inventory, we completed two mixed-methods within-case analyses and plotted results over time. Using LCP organizing constructs to guide data analysis and interpretation, subsequent cross-case analysis allowed us to identify differences and commonalities, and generate propositions for future testing.
Results: Although quite different on demographic variables, caregiving intensity, and caregiver stress levels, use of LCP revealed that both men adapted to transitions and turning points by relying on caregiver gain (the rewards of caregiving) as a powerful motivating factor. They saw personal care in the context of their culturally-defined role as providers and protectors, were willing to engage in caregiving long-term, and took a matter-of-fact approach, citing reciprocity of care as an important consideration.
Implications: LCP provided clear guidance for data analysis and interpretation in these complex MM case studies. Further research is needed to determine if the approach taken to personal care by these men is common to other MA caregiving sons and if nurses could teach that approach to men reluctantly facing this cultural taboo.

Funding: NINR, National Institutes of Health (5R01NR0101541-02).

ADVANCED ROLES IN NURSING

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AN ANALYSIS OF MASTER OF NURSING STUDENTS' SCHOLARLY PROJECTS

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RESEARCH SUPPORT IN DOCTORAL-GRANTING SCHOOLS OF NURSING

Carolyn B. Yucha, Catherine A. Bevil, Marlene Z. Cohen, Saunjoo "Sunny" Yoon

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BEYOND SURVIVAL: FOSTERING GROWTH AND INNOVATION IN DOCTORAL STUDY

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JUST A NURSE: CRITICAL REFLECTIONS ON ADVANCED PRACTICE NURSING

Patricia A. Quinn, Jane Georges, Susan Instone

ETHICAL CONCERNS IN END-OF-LIFE RESEARCH: PERSPECTIVES AND EXPERIENCES OF RESEARCHERS

Juliana Cartwright, Susan Hickman, Christine Nelson, Kathy Knafl, Susan Bankowski

AN ANALYSIS OF MASTER OF NURSING STUDENTS' SCHOLARLY PROJECTS

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Purpose/Aim: While graduates of Master's of Nursing (MN) programs are expected to demonstrate competence in systematic inquiry, few reports describe how this knowledge is acquired. With all students in the MN required to complete a project related to scholarly inquiry prior to graduation, this presentation is a comparative analysis of 118 scholarly projects from 2004 to 2009 (Group #1) with an earlier sample of 113 projects from 1996 to 2003 (Group #2). The following questions that guided this analysis: 1) Is there a change in the method of scholarly inquiry selected by MN students? 2) Is there a change in the outcomes or products of scholarly inquiry conducted by MN students? 3) Is there a change in the population type selected by MN students?
Approach/Process: Data from a *Scholarly Inquiry Evaluation Checklist* that all chairs of MN students' supervisory committees complete at graduation was transcribed and analyzed. Data for MN graduates in three curriculum options: Communities, Populations & Health, Health Care Leadership, and Nurse Educator were aggregated. As recorded on the checklist, frequencies and percentages were calculated for the method of inquiry, selected population, and outcome or product of scholarly inquiry.
Outcomes: Literature review continued to be the most frequent method of scholarly inquiry, with few group differences (Group #1, 35%; Group #2, 33%). There was an increase in primary quantitative analysis from Group #1 (13.5%) to Group #2 (1.8%), while community assessments declined from 17 (15. 2%) in the earlier group to only one from 2004-09. For Group #1, the population type most selected was healthcare provider (included nurses at point of care) (32. 6%) as compared to 16.1% in Group #2. In terms of outcomes, evidence-based clinical or practice projects (included quality improvement projects) increased from 1.8% to 12.5% and scholarly papers of a publishable quality from 18% to 28.5%. From the early to the later group of scholarly projects, educational materials (9.8 to 15.3%) and curriculum development (3.6% to 8.1%) increased.
Conclusions: While this analysis is limited by incomplete data and a need to clarify checklist categories, the increased number of clinical-based projects supports a shift to evidence-based practice outcomes. The increase in the number of educational and curriculum scholarly projects is attributed to the Nurse Educator option that was started in 2002, while the decline in community assessments may also reflect the program's changing enrollments.

RESEARCH SUPPORT IN DOCTORAL-GRANTING SCHOOLS OF NURSING

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Purposes/Aims: To describe the resources available for research support in schools of nursing with doctoral-degree granting programs and the ways research offices are evaluated.

Rationale/Conceptual Basis/Background: There are over 250 PhD and DNP programs in the United States. Most of the schools in which these programs are located are attempting to strengthen their research programs to become more competitive for external funding. Many of the schools invest resources in nursing research centers and offices to support faculty research efforts. These centers and the support they provide differ widely.

Methods: This study was approved by the Institutional Review Board (IRB) for the Protection of Human Subjects and used a descriptive survey design. Invitations to participate were sent to nursing deans of colleges and schools offering doctoral degrees as identified by the American Association of Colleges of Nursing and links to the online survey were provided. Unique identifiers were removed and data were transferred into SPSS 17.0 for analysis.

Results: A total of 120 responses were received from 170 eligible institutions (response rate 70.6%); 75% have a research facility/office/center and 75% provide start-up research packages for new faculty. Presence of a research office was associated with being in an academic health sciences center ($\chi^2 = 21.511$, $p < .001$), being located in a public institution ($\chi^2 = 11.802$, $p < .001$), and offering a PhD program ($\chi^2 = 20.348$, $p < .001$).

Excluding wet laboratories, space allocated for the research center was less than 1,000 sq ft (32.9%); 1,000-1,999 sq ft (24.7%); 2,000-2,999 sq ft (14.1%), 3,000 to 5,999 sq ft (16.5%) and more than 6,000 sq ft. (11.8%). This space was used for faculty/staff offices, examination / interview rooms, and conference rooms. Wet labs were available in 28.3% of responding colleges.

In 2009-10, the average budget for the research offices $390,000 ± $510,000 was funded using federal, state, private contributions, and indirect costs. Research offices were staffed by a director (88.6%), grant administrator (53.6%), and clerical staff (58.6%). Fewer employ research consultants, statisticians, and editors. The research offices provide a variety of services including grant support, research / scholarly support, faculty development services, manuscript preparation, information technology support, and clerical services.

Most schools (74%) conduct a formal evaluation of their research office while others obtain informal feedback annually. Evaluation is based on outcomes (e.g., grant dollars, publications) and satisfaction.

Implications: Nursing schools provide numerous ways to support research. Schools who had research offices existing for longer periods of time, reported greater NIH funding ($r=.448$, $p<.001$).

BEYOND SURVIVAL: FOSTERING GROWTH AND INNOVATION IN DOCTORAL STUDY

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Purpose: This concept analysis seeks to examine Shimizu's Ba-Principle as a central tenet of doctoral study in nursing and health care innovation, particularly in interdisciplinary programs such as the program at Arizona State University.

Description of Concept: The Ba-principle originates from Japanese philosophy and serves as a foundational element in the birth and sustaining of environments that foster knowledge creation. The concept is also used in management science and is referred to there as simply Ba or the Ba space. The Ba-principle manifests itself only in environments where participants' emotional investment exists and relies heavily on the tacit knowledge of each individual participant, allowing for synthesis of rationality and intuition. It creates a safe environment for individuals' tacit knowledge to be shared and subsequently used by other members of the group, resulting in innovation and creativity.

Logic linking concept to practice: Because of its insistence on emotional investment and reliance on tacit knowledge, Ba is especially relevant for doctoral programs promoting interdisciplinary collaboration and innovation. Within the Ba space, the integrity of each individual participant's worldview is retained while the group comes together in a meaningful and transcendent relationship. Ba enables participants to be focused together at one time and place, virtual or physical, a characteristic important to both traditional and distance-learning programs. The Ba-principle is a means to concentrate and distill the spectrum of knowledge of an interdisciplinary group and serves as a catalyst for extending the robustness of that concentrated knowledge created within the Ba space toward the future.

The concept was made apparent to the authors, a nurse, an information technologist and an anthropologist, who identified the Ba-principle in their small, highly-diverse, self-selected doctoral study group. Recognizing Ba as enabling their close relationships with one another and creating a safe space for discussion and disagreement, the authors identified Ba as a tool for illuminating the tacit knowledge of each individual group member as well as a central contributor to the group's success and advancement.

Internal Consistency: Walker and Avant's concept analysis methodology will be used to identify antecedents, defining attributes, consequences, empirical referents, and cases associated with the concept. The Ba-Principle's importance for interdisciplinary education will also be discussed, as well as its utility in fostering innovation and creativity. The application of these principles in doctoral study will be illustrated.

Conclusion: The Ba-principle is of great utility in doctoral programs promoting interdisciplinary collaboration and innovation. Ba permits each group member a voice and fosters a safe and respectful environment where relationships can be created and sustained. Most importantly, it allows group members to rely on each other's tacit knowledge, to build deep connections with one another, and look forward to the future with confidence while making the doctoral experience a little less intimidating.

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INTERRUPTED TIME SERIES DESIGN EVALUATING CNL INTERVENTION EFFECT ON PATIENT OUTCOMES

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Purpose: An Interrupted Time Series (ITS) quasi-experimental design and simulation modeling analysis (SMA) was used to determine if there was a statistically significant relationship between the implementation of a Clinical Nurse Leader role on a progressive care unit and the subsequent increase in Press-Ganey patient satisfaction scores.
Background: Nursing is dynamic, process driven and often time-dependent. Unfortunately many statistical methods have an assumption of independent observations, which is often violated in the event of serial dependency and/or autocorrelated structures such as the nursing process, which cannot easily be separated into distinct quantum of care and result. An experimental approach is needed that takes this knowledge into account. ITS design provides such an approach. The power of the design comes from having many data points instead of many subjects. The power of ITS analysis is that it takes into account human interaction and connection by assuming the past influences the future. This interdependence, called autocorrelation, is a parameter that can be statistically calculated to determine if there is a relationship between adjacent observations, and whether a change in this relationship occurs because of an intervention. Typical ITS statistical analysis, such as ARIMA modeling, requires a minimum of 50 data points for optimal power. Fortunately, an SMA program has been developed for short time series studies (<30 data points per phase), which applies to our pilot study.
Methods: Press-Ganey scores for the unit were obtained (after IRB approval) 10 months pre implementation and 12 months post implementation of the Clinical Nurse Leader (CNL) role. SMA of the data was completed using Jeffrey Borckhardt's SMA program for short time series data.
Results: SMA for a nursing-specific Press-Ganey score -Skill of the Nurse- showed relatively strong autocorrelation (Pearson's-R=0.583), which violates the null hypothesis that scores were independent of the intervention. Level change between phases (pre and post implementation) was shown to be significant ($R = +0.826$, $p = 0.0026$), which results in rejecting the null hypothesis of no difference between pre and post scores. Slope vector tests, which test the adequacy of the model by how well it fits the data, showed best fit with a slope that rises and then steadies post intervention ($R = +0.780$, $p = 0.0054$), meaning the CNL intervention raised scores and then kept them stable at the new level within 1 month of implementation.
Implications: Short time frame ITS quasi-experimental design is well suited to clinical nursing practice pilot studies. It can be performed inexpensively with pre-existing secondary data, as well as original data. The use of free SMA software for our data provided evidence that the CNL intervention was effective in increasing Press-Ganey patient satisfaction scores. Significant results such as these provide the legitimacy needed to progress from pilot study to rigorous ITS research design with more sophisticated regression analysis as more data are collected over time.

JUST A NURSE: CRITICAL REFLECTIONS ON ADVANCED PRACTICE NURSING

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Purpose: Numerous studies over four decades consistently reveal that Nurse Practitioners (NPs) provide a quality of care equal to, and often exceeding, that of physicians. Despite this, NPs remain significantly underutilized. This contradiction represents, sociologically, a legitimation crisis. The purpose of this study was to examine the problematic legitimation of NPs and to uncover primary etiological determinants of this crisis.
Definition: Legitimacy is the extent to which an expectation is viewed as right and proper by members of a social system. When role expectations and performances are legitimated, authority becomes prescribed and inherent. The nature of the NP's legitimation crisis suggests fundamental problems in the social relations between NPs and other players in health care. The fact that no amount of empirical evidence supportive of NPs has convinced the prevailing powers to utilize NPs to their full potential is a clear example of dysfunctional social relations in health care. Traditional research continues to adhere to the belief that more empirical studies will somehow be helpful. Inherent is the assumption that the problem is rational, and can be solved by additional rational knowledge.
Internal Consistency: The legitimation of the NP was explored using the case study methodology of Yin, informed by a critical theoretical framework. Data from three sources was analyzed: literature review, historical critique, and an exemplar interview with an experienced NP. Utilized were the classic themes of critical theory: oppression, alienation, ideology and false consciousness. The use of multiple data collection methods and multiple sources provided for a more convincing and rigorous study.
Logic Linking Concept: The origins of the legitimation crisis lie not in lack of sufficient quantitative measures or poor design, but rather within the historical roots of nursing, women's roles and hierarchical relationships. Analysis of the three case studies reveals the inherent ideology and false consciousness which underpin the role of the NP and subvert legitimation.
Conclusion: A shared ideology of false consciousness is a powerful tool that maintains the status quo and inhibits change. The dilemmas of NP practice are both determined by, and reflect contradictions of the nursing profession. The false consciousness, that NPs possess "skills" of medicine and are therefore more "advanced," has served to derail the legitimation of NPs. A definition of advanced practice cannot be built on the implicit assumption that the foundational profession, nursing, is inadequate. Instead, the analysis of the case studies reveals that all nurses possess the "skills" of advanced practice, and always have. The imaginary line in the sand between medicine and nursing is shown to be the true barrier to practice, and it has not been externally imposed, but supported by nursing's shared ideology. Nursing was afraid to embrace the skill and intellect that have always been at the core of the profession, and tried to gain credence by claiming some of the perceived perquisites of medicine. The true strength and joy of nursing is revealed; a profession that does not need to draw on the skills of any other.

ETHICAL CONCERNS IN END-OF-LIFE RESEARCH: PERSPECTIVES AND EXPERIENCES OF RESEARCHERS

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Purpose: This NIH-funded study of ethical challenges in the conduct of end-of-life research describes ethical concerns identified by investigators, the strategies investigators use to manage those concerns, and advice about how best to minimize ethical risks that investigators provide for other researchers planning end-of-life studies.

Background: Ethical concerns were identified as a potential barrier to advancing end-of-life science at the 2004 NIH State of the Science Consensus Conference. Anecdotal information from investigators suggests that well-intentioned IRBs who are unfamiliar with this population typically err on the side of being overly protective, inadvertently inhibiting research in the process. Empirical data are lacking regarding best practices for managing these issues to assist investigators and IRBs in designing and reviewing research that balances ethical considerations with the advancement of science. The goal of this exploratory study was to generate data regarding investigators' experiences with ethical challenges in EOL studies that might be a barrier to research with this population.

Methods: A qualitative, exploratory case study design followed the development of end-of-life research from proposal submission through the review process. Inclusion criteria mirrored those used in the NIH State of the Science Report. Cases were identified active studies in the NIH RePORT database and an internet search of privately funded, active research. Data were collected from a purposive sample of 43 investigators who participated in semi-structured telephone interviews and provided document data regarding their experiences with the grant and IRB review processes. Data were analyzed using exploratory qualitative case study methods.

Results: The most common ethical concerns about research with end-of-life populations were emotional distress, the burden of study procedures, and vulnerability. Strategies to address these concerns included using non-threatening and protective language in the consent and data collection materials, being flexible in data collection protocols to accommodate participant limitations, creating back-up plans in the event of crisis, partnering with clinicians to ensure prompt attention to symptom reports, and addressing the training and emotional needs of research staff. Investigators cited their own experiences and the literature to support strategies. Building positive relationships with IRB staff and members was critical and happened through pro-active consultation and establishing a record of successful studies with dying people and their families. Participants emphasized the importance of knowing the target population when planning research and educating IRBs regarding the ability of dying people and their families to autonomously make decisions regarding research participation.

Implications: Investigators use a variety of strategies to avoid or minimize risk of ethical issues. Because the science of end-of-life research is young, investigators are encouraged to volunteer as members of IRBs and to publish their experiences related to studying dying people and their families.

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ISSUES RELATED TO BSN STUDENT EXPERIENCES

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OPPORTUNITY FOR SUCCESS: BSN UNDERGRADUATES

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WHAT'S IN YOUR WATER? WHAT DO BSN STUDENTS KNOW?

Kathleen Gilchrist, Cherie Rector

THE HEALTH EFFECTS OF ATTENDING COLLEGE FOR LATINA UNDERGRADUATE STUDENTS

Jill Mount

RN-BSN EDUCATION: WAS IT WORTH THE INVESTMENT?

Troy J. Larkin, Renee Hoeksel, Deborah A. Burton, Pamela Huso

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A STUDY OF A VIRTUAL COMMUNITY'S IMPACT ON BSN STUDENT ENGAGEMENT

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SELF-EFFICACY AND PREDICTORS OF NCLEX-RN® SUCCESS FOR BACCALAUREATE NURSING STUDENTS

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Purpose/Aim: The purpose of this study was to determine if an evidence-based remediation course led to improved student outcomes, including success with a program-required exit HESI exam and ultimate first-time success on the NCLEX-RN licensing exam.

Rationale/Background: Schools are adopting the HESI exit exam as a benchmark for progression (Nibert, Young, & Britt, 2003). Students at risk for successful completion in nursing programs have been shown to benefit from a focused remediation course. Research shows that the content of successful remediation courses varies, but all feature common strategies to help students become successful. These strategies include faculty mentoring, test-taking strategies, and self-directed student activities. Frierson, Malone, and Shelton (1993) used a course designed to address test-taking strategies, faculty involvement, and the group process. The content of McGann and Thompson's (2008) remediation course consisted of faculty mentoring, journaling, tutorials, and self-directed student activities. Their findings suggest that faculty mentoring may facilitate student success (McGann & Thompson, 2008). Allen (2006) agrees and her study found mentors can serve as a catalyst for student success (Allen, 2006).

Research Question: Will students who take a remediation course based on strategies that promote student success be successful on the HESI Exit Exam and on the NCLEX-RN?

Methodology: At risk students in danger of program failure (N=13) were enrolled in a remediation course designed around faculty engagement and mentoring, focused reviews, self-directed student assessment and engagement with their own learning process. Students were also provided individual testing related counseling as desired to assess study techniques and offer alternative methods of study. Students took the HESI Exit Exam as part of another course while enrolled in the remediation course.

Results: The sample included 13 students in their final semester of a BSN nursing program. The sample included 7 female, 6 males with a mean group age of 29 (range 23-41). The cohort ethnic mix was 4 Anglo, 7 Hispanic, 1 Asian, and 1 African American. All students successfully completed the course and passed the HESI Exit Exam. NCLEX first-time pass rate results for this cohort is currently 85% with 11/13 student results reported to date.

Conclusion: A focused remediation course with engaged faculty involvement supports positive student outcomes and the production of qualified BSN graduates prepared to take the NCLEX-RN examination successfully.

WHAT'S IN YOUR WATER? WHAT DO BSN STUDENTS KNOW?

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Background: Water is the number one environmental concern among the US public (Gallup Poll, 2009). Most counties in the agriculturally rich, central California San Joaquin Valley are dependant on ground water supply for most of their domestic drinking water. However, pollution from agricultural byproducts and naturally occurring substances, such as arsenic, has contaminated increasing numbers of underground aquifers affecting both public water systems and private domestic wells (Tulare County Board, 2007). Water quality continues to be a major issue, although environmental health is often minimized or not included in undergraduate nursing curricula (Hewitt, Candek, & Engel, 2006; Backus, Hewitt, & Chalupka, 2006).
Purpose: The purpose of this study was to assess senior baccalaureate nursing students' knowledge, attitudes and behaviors related to drinking water quality and the adverse health effects of water contaminants after completion of community health nursing coursework.
Methodology: Senior baccalaureate nursing students (81) were invited to complete a researcher-developed questionnaire on SurveyMonkey© regarding their knowledge of drinking water contaminants, adverse health effects that can result from exposure, and signs and symptoms that may require additional investigation. Attitudes and behaviors related to the assessment and education of BSN students regarding sources of drinking water contamination were also investigated.
Results: Thirty-four senior baccalaureate nursing students answered the online questionnaire (41.9% response rate). All of the nursing students had completed their community health coursework. The majority of respondents were female (91.2%), between the ages of 20 and 30 (64.7%), and 76.5% were RN-BSN students. Of the 23.5% of seniors who designated that they had some specialized environmental health training, 57.1% had taken a previous course, 14.3% had information from a conference workshop, and 28.6% had previous web-based training. Almost 30% of the BSN students indicated they had experienced personal environmental health problems and 52.9% had previously worked with someone who had environmental health problems. A majority of students were able to select only three of the eight health effects of arsenic, and 18% reported having no knowledge of common signs and symptoms of the health effects related to agricultural contamination of water. Over 28% had no knowledge of the effects of nitrates in drinking water or nursing interventions required if nitrates were found in their drinking water. Only 8.8% stated that, in their opinion, there were no problems with the quality of their drinking water, indicating that the majority were either not sure or thought there were some problems.
Implications: The majority of BSN students were unable to identify all of the adverse health effects of arsenic and other contaminants in their drinking water, despite the documented high levels of nitrates, arsenic and other contaminants in their county's water systems. Nursing programs need to include information on water quality, especially location-specific environmental health content, in the undergraduate curriculum. Some of these BSN graduates will be working in public health departments after graduation and need to be able to educate the public about their local water contaminants, signs and symptoms of related health problems, and preventive measures.

THE HEALTH EFFECTS OF ATTENDING COLLEGE FOR LATINA UNDERGRADUATE STUDENTS

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Purpose: The purpose of this study was to explore how Latina undergraduate students define personal health and how they believe attending college affects their health.

Background: Latinos are the largest ethnic minority in the U.S. and by 2050 they are estimated to become one quarter of the population, yet only one in ten has a college degree. More Latino women (Latinas) are currently attending college than Latino men. To date, research has focused on their experiences and where they obtain support at college. The purpose of this study was to learn how attending college affected the health of Latina undergraduate students.

Methods: Using a focused ethnographic design, four focus groups were conducted with 34 Latina undergraduate students at a large university in the northwestern U.S. Students were asked to define the meaning of personal health and how they believed attending college affected their health. The focus group interviews were digitally recorded and transcribed verbatim. The transcripts were imported into ATLAS-ti6 software for management and analysis.

Results: The Latinas defined personal health as having five components: being happy or mentally healthy, having a balance of physical and emotional health, eating right, having enough money to afford it if they became sick, and exercise. When asked to describe how their health was affected by attending college they described positive and negative themes related to these components of health. Examples of themes include: leaving a close-knit family, finding your niche, motivating other family members and lost insurance coverage. The participants believed attending college both facilitated and provided barriers to being healthy.

Implications: Nursing professionals who work with Latina undergraduate students could incorporate this information into intervention strategies aimed at increasing the students' use of campus health services. Nursing research focused on Latina college students is relatively scarce and continued research is needed to identify the most effective theory-based interventions for evidence-based nursing practice in this growing population.

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RN-BSN EDUCATION: WAS IT WORTH THE INVESTMENT?

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Purposes/Aims: This qualitative study examines the meanings and outcomes ascribed to the completion of a RN-BSN degree completion program by both graduates and their managers. **Rationale/Background:** A well-educated nursing workforce is one remedy for the increasing complexity of patients' needs within the context of a sometimes chaotic and ever-evolving health care system. Hospitals seeking magnet status are attempting to increase the percentage of nursing staff with advanced education. A regional health system created an innovative RN-BSN program in partnership with a small Catholic liberal arts university in an effort to respond to the research that patient outcomes improve with increasing percentages of BSN prepared nurses. The university is a member of the five-state ministry which incorporates both health care and educational institutions. The program is structured using a cohort model to increase collegial support for nurses returning after many years away from university studies. As the first cohort completed the BSN degree, program outcomes were examined from the point of view of both students and their managers. **Methods:** A descriptive exploratory study was undertaken in two phases. First, the graduating students' perspective was captured using a model of best practices in self-reflection to uncover the meanings and perceptions of returning for the BSN. Self-reflection is particularly appropriate for professionals with many years of clinical practice and a great deal of clinical judgment. In their final semester in the nursing program, students completed a professional portfolio which included a comprehensive reflective growth statement. All of the growth states were analyzed using qualitative content analysis and themes were uncovered. A random sample of alumni was surveyed for the confirmability and trustworthiness of the resulting themes. In Phase Two, nurse educators conducted individual interviews with the managers of the BSN graduates. A script of global questions was utilized to explore the managers' perceptions of the professional and personal growth of their recent BSN graduates. The transcripts were analyzed using qualitative content analysis and two investigators uncovered themes independently. **Results:** Three themes were uncovered and confirmed from the student perspective: **Confidence**, **improved nursing practice**, and **valuing** of the process, content, and outcomes of baccalaureate nursing education. From their managers' of five different hospitals points of view, five themes emerged: **Leadership and confidence** (a more strategic and broader view of nursing), **professionalism** (advocacy, quality of work), **evidence-based practice** (strategic use of evidence at the bedside), **attainment of program outcomes**, and an **affirmation of the investment** made by co-workers, management, and the corporation. **Implications:** Students and manager perceptions were extraordinarily positive both during their studies and after graduation. The synergy between the themes is powerful evidence of the impact increasing the BSN workforce can bring to a shift, unit, hospital, and corporation.

A STUDY OF A VIRTUAL COMMUNITY'S IMPACT ON BSN STUDENT ENGAGEMENT

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Purposes/Aims: The purpose of this presentation is to present findings from a quasi-experimental study which evaluated the effectiveness of a virtual community (an emerging pedagogical application) on student engagement and academic performance. Three research questions for this study were:
1) Is there a difference in learner engagement of nursing students exposed to the intervention compared to those not exposed to the intervention?
2) Is there a difference in perceived quality of instruction between students exposed to the intervention compared to those not exposed to the intervention?
3) Is there a difference in academic performance between students exposed to the intervention compared to those not exposed to the intervention?
Rationale/Conceptual Basis/Background: Because nurses place a high value on knowing the patient to achieve the best possible care, virtual communities mirror real life unfolding patient histories and relationship development over time. Students also become more engaged in learning by creating personally meaningful knowledge of a concept (Rogers & Stone, 2007). Virtual communities offer one teaching strategy to assist students in learning complex, health-related content in a contextualized manner that mimics real life situations.
Methods: This quasi-experimental study involved first semester baccalaureate nursing students enrolled in a course at two campuses of a nursing program at a large university in the Southwest. Three key strategies were used to assess the impact of the virtual community on student engagement and learning: third party observational measurement, end-of-class student/faculty surveys, and use of knowledge items in student exams for the class.
Results: Significant differences between the control and experimental group were found regarding learning engagement and communication exchanges; the groups appeared similar related to ratings of quality of instruction and academic performance/ understanding of course content.
Implications: Use of virtual communities can help nursing educators address the recent Carnegie Foundation study's (Benner, Sutphen, Leonard & Day, 2010) counsel to implement "pedagogies of contextualization" in which theoretical and factual information about diseases and conditions are placed in the context of a patient's experience.

SELF-EFFICACY AND PREDICTORS OF NCLEX-RN® SUCCESS FOR BACCALAUREATE NURSING STUDENTS

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Purpose: Though numerous studies have examined academic predictors of NCLEX® success, few have investigated nonacademic predictors. The purpose of this study was to provide new knowledge to educators to assist them to identify interventions that facilitate success on NCLEX and determine strategic points for intervention during the nursing program.
Conceptual Background: This quantitative study was guided by Albert Bandura's Social Learning Theory (Bandura, 1977). The Self-Efficacy for NCLEX® Success Model was developed by the researchers to investigate the influence of academic and nonacademic variables along with students' perception of self-efficacy on NCLEX® passage.
Methods: Data were collected via an email survey from one hundred and ninety six graduates from accredited baccalaureate programs representing four regions in the United States. The ages of the sample ranged from 20 to 54. Ethnic groups included Caucasian, Hispanic, Black, Filipino, Asian, and American Indian. The instruments used were the Recent Life Changes Questionnaire (Miller & Rahe, 1997), Brief Measure of Worry Severity (Gladstone, et al., 2004), and General Perceived Self-Efficacy scale (Scholz, Gutierrez Dona, Sud, & Swartzer, 2002). The instruments demonstrated good reliability and validity (Cronbach's alpha levels greater than .9).
Results: Logistic regression analysis demonstrated medical-surgical grade, home/family events and responsibilities, and self-efficacy expectations as predictive of NCLEX® passage. The first logistic regression model investigated academic and self-efficacy variables that influence NCLEX® passage and included 169 cases. Of these 169 cases, 87% (n = 147) reported a pass on the NCLEX® and 13% (n = 22) reported a fail. The model revealed statistical significance, X^2 (n=169) = 56.338, p = .000. The medical-surgical grade (p = .021) and self-efficacy expectations (p = .011) were statistically significant. The second model examined nonacademic variables that influence self-efficacy's effect on NCLEX passage. Of the 179 cases, 87% (n = 156) reported a pass and 13% (n = 23) reported a fail. This model also revealed statistical significance, X^2 (n=179) = 39.367, p = .000. Home/family events and responsibilities (p = .039) and self-efficacy expectations (p = .006) were statistically significant.
Implications: Implications for nursing education entail including medical-surgical concepts throughout the curriculum, as well as discovering ways to increase a student's self-efficacy expectations and identifying ways for providing support systems for students who are burdened by out-of-school events and responsibilities.

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CARE OF INFANTS AND CHILDREN

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AN EVIDENCE BASED REVIEW OF SEDATION PRACTICES IN THE PEDIATRIC INTENSIVE CARE UNIT

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RETINOPATHY OF PREMATURITY: EVIDENCE FOR A CHANGE IN AAP SCREENING GUIDELINES?

Kathryn Friddle, Robert DeGeronimo, Bradley Yoder, Joanna Beachy, Erick Henry

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DOES 36-HOUR BILIRUBIN SCREEN FIND AT RISK BABIES NOT FOUND AT 24-HOUR SCREEN?

Terry Zeilinger, Dana N. Rutledge

PARENTS' PERCEPTIONS OF THEIR CHILD'S SURGICAL PROCEDURE USING NITROUS OXIDE

Tina Jill Shapiro

NONINVASIVE BRAIN MONITORING IN PRETERM INFANTS: AMPLITUDE-INTEGRATED EEG

Shuyuann Wang Foreman, Lauren Thorngate, Karen A. Thomas, Robert Burr

AN EVIDENCE BASED REVIEW OF SEDATION PRACTICES IN THE PEDIATRIC INTENSIVE CARE UNIT

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Purpose: The goal of this project was to review benzodiazepam administration following postoperative congenital heart surgery to address concerns of oversedation in this population.

Background: Complications that can result from oversedation include delayed or failed extubation, withdrawal syndrome and a prolonged intensive care stay. Historically, postoperative cardiac surgery patients were heavily sedated using a combination of benzodiazepams and opiods. More recently the trend is to lightly sedate patients so that they can be more conscious to comply with medical treatment. Nurses in the cardiac intensive care unit (CICU) were sharing concerns regarding oversedation of patients in the postoperative period. A multidisciplinary task force was developed to address concerns regarding sedation practices and develop best practices for assessing and managing sedation. Currently, the CICU does not utilize a sedation scale tool or a withdrawal assessment tool for patients who are receiving frequent or continuous benzodiazepam medications.

Method: This was an IRB approved quality improvement project that consisted of fifty two chart reviews examing benzodiazepam administration during the first twenty four hours following postoperative congenital heart surgery between November and December 2009.

Outcomes: Thirty one patients received one to five doses of a benzodiazepam or a continuous drip in the first twenty four hours following surgery. Three patients received six or more doses of benzodiazepam in the same period of time following surgery with two of these patients developing withdrawal symptoms. Nine patients who received either PRN benzodiazepam dosing or a continuous drip had extubation times longer than twenty four hours. The chart review demonstrated that oversedation occurs much less frequently than perceived by nursing staff. Patients did receive frequent opiod dosing for pain management but required infrequent benzodiazepam dosing for sedation. Most postoperative cardiac patients had ventilator times less than twenty four hours. However, two patients did present with withdrawal symptoms which provided more challenges in the management of their care and a longer ICU stay.

Conclusions: The multidisciplinary task force is now a unit based committee that has developed short and long term goals to formulate best practice guidelines. Case reviews will be performed on patients that were oversedated or not optimally sedated in the CICU. A randomized study will be developed to validate the use of the State Behavioral Scale (SBS) for the pediatric postoperative cardiac patient. The Withdrawal Assessment Tool (WAT) will be implemented for patients that receive continuous drips of an opiod or benzodiazepam for greater than twenty four hours.

RETINOPATHY OF PREMATURITY: EVIDENCE FOR A CHANGE IN AAP SCREENING GUIDELINES

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Background: Retinopathy of prematurity (ROP) screening remains a costly and labor-intensive process for neonatal intensive care units. Current AAP guidelines recommend screening all infants born < 1500 gms or ≤ 30 wks or with a birth weight 1500 to 2000 gms with an associated complicated course. Our clinical experience within the Intermountain Health Care (IHC) system is that few if any babies over 29 weeks and 1200 gms develop severe ROP without other risk factors.

Purpose/Aim: To identify all cases of ROP in the IHC database that involves premature infants born at > 29 weeks and > 1200 gms with and without associated risk factors.

Methods: A retrospective, IRB approved, review of data prospectively entered into the IHC database was completed. De-identified information (January 2000-June 2008) from all premature neonates born at < 33 weeks was reviewed for a coded diagnosis of ROP to include disease severity and whether or not surgical therapy was required.

Results: During the specified period, 4195 premature infants < 33 weeks were identified. Of these, 151 (3.6%) were documented as having severe ROP and required surgery. An additional 112 were Stage 3 but did not require treatment. Nine babies diagnosed with ≥ Stage 3 ROP were > 29 weeks and 1200 grams. All had known associated risk factors for ROP including either confirmed sepsis, NEC (Bell's stage ≥ 2), and/or mechanical ventilation > 5 days.

Implications: Changing the current practice of ROP screening to only those premature infants born at < 29 weeks and < 1200 gms or up to 32 weeks and 2000 gms with known risk factors would be unlikely to miss any infants with significant ROP and provide substantial cost savings to the IHC system.

DOES 36-HOUR BILIRUBIN SCREEN FIND AT RISK BABIES NOT FOUND AT 24-HOUR SCREEN?

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Purpose: To determine whether adding a 36-hour transcutaneous bilirubin (TcB) screening for newborns increases numbers of newborns ≥ 35 weeks gestational age classified as high risk of having/getting hyperbilirubinemia.
Background: Hyperbilirubinemia, occurring in up to 7.5 cases per 100,000 live births, accompanies jaundice. High bilirubin levels can become toxic, particularly to the developing nervous system. The current national standard of care for newborns (American Academy of Pediatrics, 2004) calls for screening at 24 hrs/pre-discharge from the hospital. A sentinel event occurred with a baby discharged from our hospital in 2006 when he was hospitalized with a bilirubin > 30. This led to a practice change such that infants still hospitalized are now screened at 36+ hrs after delivery on top of the 24 hr screen.
Purpose: This study aimed to evaluate how many newborns would be determined *high* risk for hyperbilirubinemia at 36+ hours vs. at 24 hours (in other words, do we "catch" more babies with this potential life-threatening condition?).
Methods: In this retrospective comparative study, medical records were reviewed of newborns ≥ 35 weeks gestational age (GA) born for 3 months summer 2007 who were not discharged before 36 hrs post delivery. The study received hospital institutional review board approval with waiver of consent; that is, because the study evaluated standard care, parental consent was not obtained.

The following were collected from charts: delivery mode, baby GA, mother's ethnicity, type of feeding, and when available, TcB and TSB levels (24 hrs, >24-<36 hrs, 36 hrs, >36-<48 hrs, 48+ hrs). Not all babies had bilirubin levels at each time point. Based upon the hr-specific and GA (35-37 6/7 wks; 38-39 6/7 wks; 40+ wks), nomograms for TcB measurements for healthy newborns (≥ 35 wks GA), # of babies categorized as *low/low intermediate/high intermediate/high* risk for hyperbilirubinemia (Maisels & Kring, 2006) was determined for TcB measurements at 24 and 36+ hrs.
Results: The sample consisted of 1117 babies with GA from 35 to 42 wks (82% between 38-40 wks). Most were Hispanic (52%) or white (35%), delivered vaginally (65%), and being fed exclusively by breast (44%) or by breast and bottle (43%).

Using the Maisels & Kring nomogram, 15 babies (1.3%) screened at 24 hrs went from a lower risk category to *high* risk (95th percentile) at 36+ hrs. That was on top of the 15 babies already deemed *high* at 24 hrs.
Implications: Since TcB readings underestimate actual bilirubin levels (Grohmann et al., 2006), particularly at high levels, our data support using the Maisels & Kring nomogram for TcB screenings at both 24 and 36 hrs for babies with GAs ≥ 35 wks. Assuming that babies deemed high risk are appropriately assessed and treated, this would maximize the likelihood that hyperbilirubinemia is adequately treated and kernicterus is prevented.

PARENTS' PERCEPTIONS OF THEIR CHILD'S SURGICAL PROCEDURE USING NITROUS OXIDE

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The **purpose** of this study was to develop a substantive theory of parental perceptions of their school-aged child's responses to an outpatient minor surgical procedure with nitrous oxide.

Background: Invasive procedures are often painful and distressing for children and disturbing for parents. Procedure-related pain is a major source of distress for children/families. Minor invasive procedures in children need adequate pain control with the reduction of anxiety and limited movement. Nitrous oxide is efficacious, cost effective, an ideal sedative drug providing rapid onset, has short recovery time, possesses minimum side effects, safe, easy to administer and well suited for use in children (Burnweit, et al, 2004). No studies were found exploring parent's perceptions of their child's responses undergoing minor surgical procedures with nitrous oxide. Parents are in a unique position to evaluate their child's response to a minor surgical procedure with nitrous oxide. Parents are a valuable asset in signaling their child's pain sooner.

Methods: In order to assess parent satisfaction and clinical ways in which nitrous oxide benefits children, a qualitative study was conducted using grounded theory methodology investigating parents' perceptions of their child's responses. The sample included 22 parents of 21 children who underwent a nitrous procedure at a children's hospital. Semi-structured, audio-recorded interviews were conducted with each participant. Grounded theory, according to Glaser and Strauss (1967), was used to simultaneously collect and analyze the data using the constant comparative method.

Results: The sample included 16 mothers, 3 fathers, one mother-father dyad, and one grandparent, predominantly between 36-44 years old (63.6%), Hispanic (63.6%), fluent in English and Spanish (63.7%). Children ranged from 5-18 (mean age = 8.2 years). Findings revealed parental impressions involving a process of various emotions and behaviors. The identified process began at procedural scheduling, progressing through the procedure, and terminated going home. The core category derived from the data was *Weathering the Storm Before the Calm by Securing Connections.* This core category describes the complexity of parental impressions and all categories subsumed by the core category. Six major categories and seven subcategories derived from the data represent parental impressions. Parental feelings of anxiety and fear arose during initial phases of the process. Parents attempted to deal with these stormy feelings in several ways. Parents experienced a sense of calmness after the procedure upon realizing their child was safe. The theme that wove through the entire process was the parental-child connection and parental presence during the nitrous procedure. Parents also identified barriers and facilitators they faced during this process. The substantive theory that emerged provides nurses with an understanding of the stormy and subsequent calm phases parents endured. Furthermore, the data obtained can help design interventions to improve the child's experience of an invasive procedure using nitrous oxide.

Implications: These findings offer clinicians unique interventions to help parents get through this process, thus enhancing parental support. Future research should extend to other settings such as radiology and other specialties such as plastic surgery and urology. Further research warrants investigating children's perceptions to their procedure with nitrous oxide.

NONINVASIVE BRAIN MONITORING IN PRETERM INFANTS: AMPLITUDE-INTEGRATED EEG

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Purpose/Aims: To determine the feasibility of brain monitoring using amplitude-integrated electroencephalography (aEEG) in preterm infants at the bedside. Specific aims include evaluating the aEEG recording quality, establishing the hydrogel electrode placement procedure, as well as assessing parental and nursing staff acceptability.

Background: aEEG is a novel technology for continuous real-time brain monitoring of infants in the neonatal intensive care. aEEG is limited channel EEG that reflects the cerebral background activity, sleep-wake cycling, and the presence of seizures. Preterm infants are vulnerable to adverse neurologic outcomes because of their immature central nervous system and compromised adaptability to extra-uterine stimulation. Routine brain monitoring using aEEG offers a noninvasive and simple tool to evaluate the cerebral background activity of preterm infants for developmentally supportive care and treatments. However, its clinical and research applications for the preterm infant population are still limited in the United States.

Methods: 16 medically stable preterm infants were studied in the neonatal intensive care unit (NICU) of a Northwest hospital. Single channel aEEGs were recorded using the cerebral function monitor (CFM 6000, Natus Medical Incorporated, USA) with hydrogel electrodes placed on the biparietal or frontal sites of the infant's scalp. aEEG traces were analyzed when at least 60 minutes of satisfactory recording with impedance level < 20 kΩ was obtained. Infants were recorded once between caregiving and feedings for approximately three hours. Nurses and parents completed a short survey of clinical acceptability of the brain monitoring.

Results: Of the 16 aEEG recordings obtained, 14 had acceptable recording quality, and two were of poor recording quality with high impedance (≥ 20 kΩ) and less than 60 minutes of uninterrupted traces. A modified hydrogel electrode placement procedure was then developed to lower and stabilize the impedance with improved recording quality. No skin irritation or infant discomfort was found during the recordings. Parents and staff nurses reported high acceptability of aEEG as a brain monitor for preterm infants at the bedside in the NICU.

Implications: aEEG is an accessible and noninvasive method for continuous or serial brain monitoring in preterm infants at the bedside. The accuracy of aEEG recording using hydrogel electrodes can be achieved with appropriate skin preparation procedures. aEEG can be used to inform caregiving and intervention decisions, evaluate effects of treatments, and monitor for early signs of neurological abnormality. aEEG presents as a clinically valuable tool for optimizing the neurodevelopmental outcomes of preterm infants.

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HEALTH CARE ISSUES IN CULTURALLY DIVERSE POPULATIONS

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LOCUS OF CONTROL IN AMERICAN MUSLIM WOMEN

Carise Elizabeth Charles, Ellen Beth Daroszewski

SEEKING HEALTHCARE: PERCEPTIONS OF HISPANIC WOMEN

Judy H. Pedro

NURSING IN UNDERSERVED AREAS: AN ATYPICAL CRISIS

Nuhad Y. Dumit, Fadi El-Jardali, Susan Fairley Murray, Diana Jamal, Maha Jaafar

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DECIDING TO SEEK HEALTHCARE IN MYOCARDIAL INFARCTION: THE LEBANESE EXPERIENCE

Samar Noureddine, Nuhad Y. Dumit

PERINATAL EXPERIENCES OF SOMALI IMMIGRANT COUPLES IN THE USA

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LOCUS OF CONTROL IN AMERICAN MUSLIM WOMEN

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Background and Purpose: Muslims have a prominent presence in America and reside in every state. Practicing Muslims follow the Islamic faith and practice the five pillars of Islam as dictated by the Holy Qur'an. Islamic teachings have a strong influence on healthcare behaviors and may place Muslim women at a disadvantage because devotion to Islam means engaging in practices that can serve as barriers to seeking and utilizing healthcare (University of Michigan Health System, 2005). The purpose of this study was to describe the healthcare locus of control (HLOC) of practicing Muslim women and examine the relationship between following the five pillars of Islam, and internal, external, and Allah (God) HLOC.
Conceptual Basis: The Health Promotion Model (HPM) (Pender, Murdaugh, & Parsons, 2006) provides a multidimensional view of factors that impact healthcare behaviors including HLOC. Devotion to Islam has been surmised to indicate that Muslim women are controlled by "powerful others" and therefore have external HLOC. If the HLOC for Muslim women was found to be external, using the HPM, they would respond best to intervention, coaching, and clues that used external prompts. The determination of HLOC for Muslim women would aid in the design of culturally competent and responsible approaches for the delivery of their healthcare services.
Methods: This study utilized a quantitative cross-sectional survey design to measure the practice of Islam and HLOC in a convenience sample of adult Muslim women. The practice of Islam was assessed through the self report of practice of the five pillars of Islam. Wallston's (2007) Multidimensional Health Locus of Control Scale was used to measure HLOC. The validity and reliability of the self report measure of the five pillars was established by a judge panel (CVI = .96) and test-retest (r = .99). The HLOC scale has well established validity and reliability.
Results: One hundred and nineteen Muslim women, from 21 different countries, with a mean age 35.66 (SD = 12.67, range 18-63) completed the surveys. Eighty nine (74.6%) were White, 19 (16%) Asian, 5 (4.2%) African American, and 5 (4.2%) Mexican. The number of pillars practiced ranged from 3-5. Ninety six (80.7 %) practiced all 5 pillars, 22 (18.5%) 4, and 1 (.8%) practiced 3 pillars. Most participants (93, 78.2%) reported an internal locus of control. Of those who reported external locus of control (26, 21.8%), 8 (6.7%) reported chance control and 18 (15.1%) reported powerful other control. The important role of Allah in HLOC was demonstrated by a mean score of 29.03 (SD 8.6) out of a possible score of 36 on the Allah HLOC scale. A significant relationship was found between internal HLOC score and practice of the five pillars of Islam (r = .33; p = .000).
Implications: Nearly four fifths (78.2%) of the participants reported an internal HLOC in contrast to the perception of Muslin women as being externally controlled. Internal HLOC was found to be significantly correlated with the practice of the pillars of Islam. Allah was found to be a strong and important influence on the sample. Best practices to provide healthcare for practicing Muslim women should include respect for their devotion to Islam and interventions, coaching, and clues developed with internally focused prompts.

SEEKING HEALTHCARE: PERCEPTIONS OF HISPANIC WOMEN

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Purpose: Explore the perceptions and examine the meaning of perceived barriers and facilitators of Hispanic women seeking healthcare.
Background: Hispanics have experienced numerous barriers when seeking health care including: language barriers, low socioeconomic status, lack of health care system knowledge, and differences in cultural beliefs. In order to facilitate seeking healthcare, valuing the patient and communicating effectively are important in providing culturally competent care. The literature has demonstrated that Hispanic women are primarily the health care decision makers of the family. Increased knowledge of their lived experiences related to barriers and facilitators in seeking healthcare will support the goal of decreasing healthcare disparities.
Methods: This qualitative study utilized Van Manen's (1990) phenomenological approach to explore the perceptions of Hispanic women seeking healthcare. The research question was: "What is the health care experience as perceived by Hispanic women?" Participants were enrolled until data saturation occurred. Ten Hispanic women consented to an audio tape-recorded face to face interview. The audio taped interviews were transcribed and coded by the researcher to identify emergent themes. Trustworthiness was assured by bracketing, verbatim transcription, and external validation of themes.
Results: Data from the interviews was compiled and found to include three major themes. The themes unearthed were: (a) Barriers, (b) Facilitators, and (c) Culture. Within the three major themes, there were additional sub-themes that were evident from the lived experiences of these Hispanic women. The sub-themes that emerged from the discussion of barriers were: (a) Long Wait, (b) Lack of Finances, (c) Doctor Knows Best, (d) Rushing, and (e) Language. The sub-themes elicited from the interviews related to facilitators were: (a) Knowing, (b) Feeling Valued, (c) Education and Explanation, (d) Friendliness and Warmth, (e) Attentiveness, and (f) Trust. With regard to the major theme of culture, the sub-themes that were revealed were: (a) Remedies for minor ailments and (b) If serious, see the doctor. It was found that the culture of these women did not affect these barriers or facilitators, but influenced their decision as to when to seek an appointment with the health care provider. It was also discovered that participants used culture-sensitive home remedies unless the condition warranted the attention of a physician. Exemplars are used to portray the findings.
Implications: The study contributed to the knowledge of delivering culturally competent care to Hispanic women, who are considered a vulnerable population. Nurses strive to meet the needs of underserved and vulnerable populations. Findings from this study can help nurses to understand and recognize the numerous barriers and implement nursing strategies to overcome these barriers through strengthening community resources and promoting program development to target this vulnerable population. Understanding the facilitators of Hispanic women seeking healthcare is key to providing culturally competent care and encouraging future health care seeking behaviors in Hispanics. In addition, health care providers should be aware of the cultural influences when Hispanic women seek health care.

NURSING IN UNDERSERVED AREAS: AN ATYPICAL CRISIS

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Limited research has addressed nursing workforce issues in remote and underserved areas in Lebanon and the region. The paucity of research in this realm of nursing brings about a need to identify and outline policies and incentives relevant to nurses practicing in underserved areas.

The **aims** of this study are to explore nursing workforce issues in underserved areas in Lebanon; locate these within their historical and geo-political contexts; determine the characteristics of nursing staff working in healthcare in underserved areas; and explore the origins, roles, motivations, career decisions, incentives, experiences and discourses of internally and externally trained nurses who are working in 'difficult to staff' areas.

Methods: The study follows a qualitative descriptive research design. An estimated 30 key informant interviews with government and healthcare officials, professional organizations, recruitment agencies, nursing schools, and nurse managers and healthcare center directors from remote areas were conducted. Key informants were identified through consultations with WHO, Ministry of Health, research network, and examining our existing database of key informants, which was compiled through national/regional studies. An interview schedule was developed for data collection. All interviews were tape recorded after securing permission of participants. Data analysis yielded five themes specific to the nursing workforce in remote underserved areas in Lebanon.

Results: The five themes that emerged from the analysis of the data are:

- Nursing shortage is regarded in terms of quantity and quality;
- Divergent perspectives of the nursing workforce exist in remote underserved areas among key informants;
- Many nurses in remote underserved areas do not have jobs despite mounting healthcare problems and their need to work;
- Socio-cultural, geo-political, and economic factors hold back female nurses of remote areas from seeking jobs outside their territories; and
- Root causes of the nursing workforce issues in Lebanon are embedded in the nursing education programs.

Conclusion: The geo-political and socio-cultural context of the nursing workforce may differ profoundly among regions of the same country affecting nursing practice and outcomes.

Implications: Policies, regulations, and incentives pertaining to the nursing workforce in urban and well-served areas may not be pertinent to the nursing workforce in remote underserved areas. Nursing leaders and health authorities need to examine and design appropriate policies and regulations that address the individual needs of those nurses.

DECIDING TO SEEK HEALTHCARE IN MYOCARDIAL INFARCTION: THE LEBANESE EXPERIENCE

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Prompt delivery of treatment for myocardial infarction (MI) was shown to reduce mortality. However, timely treatment remains hindered by the patients' delay in seeking health care in a number of countries, including Lebanon.

Aims: To explore decision making processes to seek care that patients with MI go through and factors that influence that decision. To describe knowledge and beliefs related to MI.

Method: A two-phase mixed methods design. In the qualitative phase of the study, patients admitted to coronary care in Beirut were interviewed within 72 hours of admission about their MI experience from symptom onset till arrival to the hospital. In the quantitative phase one month after discharge, patients were interviewed at home regarding their knowledge and beliefs about MI, using the Acute Coronary Syndrome Response Index and the Control-Attitude Scale-Revised. A total of 38 patients completed both phases of the study.

Results: The themes that transpired from the qualitative interviews were: appraisal of symptoms, waiting to see what happens, barriers and triggers to seeking care. Barriers included the ability to tolerate the symptoms, self management, lack of money and fatalism, whereas triggers included intolerance of symptoms, novelty of symptoms and being needed by one's family. Patients often consulted their acquaintances from the medical field before deciding to come to the hospital.

The mean delay time was 15.12 $\pm$ 31.02 hours; median 3 hours and 15 minutes. A knowledge deficit was apparent related to atypical symptoms (only 36.8% identified indigestion as MI symptom) and incorrect symptoms (slurred speech was endorsed by 34.2%, arm paralysis by 47.4%, and tingling in the upper extremity by 60.5%). Although 71 % were confident in identifying MI in others and 79 % in themselves, 21.1 % were not at all sure they could assist someone having MI, or themselves (10.5%). Almost one fifth of patients (15.8%) said that if they suspected having MI, they would wait to be sure before going to the hospital. Although 78.9% reported they can do a lot to cope with their heart condition, only 55.2% believed they can control their symptoms.

Conclusion: The findings suggest the need to educate patients about the symptoms of MI and what to do when they occur.

Implications: Healthcare professionals, including nurses, need to be aware of how patients cope in the face of cardiac event and tailor their counseling accordingly.

PERINATAL EXPERIENCES OF SOMALI IMMIGRANT COUPLES IN THE USA

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Purpose: The purpose of this descriptive phenomenological study was to explore the perinatal experiences of first generation Somali immigrants in the USA.
Background: Nearly 100,000 Somalis have fled their war-torn homeland to seek refuge in the United States, forming large communities in several urban centers. Research suggests that Somalis are significantly more likely to suffer adverse birth outcomes compared to other ethnic groups. Further inquiry into their perinatal experiences is imperative.
Methods: Participants were recruited through local mosques, community centers and referrals. Data collection took place from July 2009 to April 2010 via in-person interviews lasting from 60 to 90 minutes. Interviews were tape-recorded and transcribed verbatim for analysis. Although study participants were able to communicate in English, some had difficulties using medical terms and required services of a qualified health interpreter. Collaizi's (1978) method guided data analysis.
Findings: Fifteen women and 11 men participated. Although the intention was to interview women and men as couples, in five instances the men had left their wife prior to the agreed upon interview or decided to not be interviewed upon the investigator's arrival. Data from these women were included in the analysis. The average age of women was $M = 26.6 \pm 4.19$ and of men $M = 28.0 \pm 4.60$. Only three women were employed outside the house while all men were employed. The individual income for women ranged from 0-4,999K and for men from 12,000K to 30,000 with the mean of $20,000 a year. The majority of men had high school or college education. Only seven women had high school or higher education. The rest had elementary or incomplete elementary education. The number of the participants' children ranged from one to eight. Two families experienced perinatal loss. Over 40% of children were born by c-section in the USA.

The overarching theme that captured the perinatal experience of study participants was: *"Pregnancy as a Balancing Act."* There were two sub-themes *"Preserving the Old Culture and Traditions"* and *"Becoming Americanized."* There were also several processes within the sub-themes: 1) *Gaining strength from the Somali community wisdom;* 2) *Having babies "our way"; and Longing for the "old world's order"* accompanied the sub-theme *"Preserving the Old Culture and Traditions"* while 1) *Experiencing mistrust of American healthcare system and 'informed' consent process;* 2) *Experiencing distress about having to have C-section;* 3) *Yearning to be understood and supported in reproductive decisions;* and 4) *Learning to take on the best from the new world accompanied the sub-theme "Becoming Americanized."*
Implications: The findings provide new knowledge about the experiences and care needs of Somali couples in the perinatal period. Insight into Somali perinatal experiences, culturally appropriate healthcare and prenatal education are imperative. Most notably, participants desired physical spaces free of anatomical drawings, separate rooms for women and men, day-care facility, qualified interpretation services, and access to care supportive of natural birth and accepting of Somali family size.

HEALTH CONCEPTS AND INTERVENTIONS

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CONCEPT DELINEATION: SELF-CARE AND RELATED CONCEPTS

Angela A. Richard

FEMALE SEXUAL DYSFUNCTION AND ACUPUNCTURE: PILOT STUDY RESULTS

Alice Running, Mary Wellhoner, George Mars, Julie S. Gagen

INCREASED INTERPROFESSIONALISM INTERACTIONS IN A COMMUNITY HEALTH SCREENING CLINIC

Glenda Carr, Miki Goodwin

AN INNOVATIVE POLICY ANALYSIS UNTANGLES PRECONCEPTION HEALTH AND CARE DEFINITIONS

Fuqin Liu

RACIAL DIFFERENCES IN SUBSTANCE USE WITHIN AN URBAN HIV PRIMARY CARE CLINIC

Emiko Kamitani, Carol Dawson-Rose, Paula Lum, Shannon Eng

CONCEPT DELINEATION: SELF-CARE AND RELATED CONCEPTS

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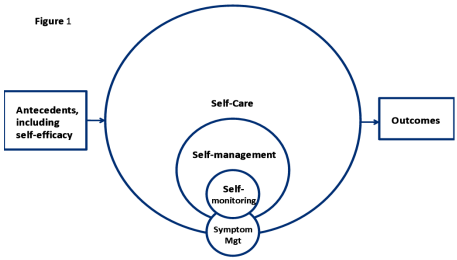
Purposes/Aims: The purpose of the paper is to delineate commonalities, differences and relationships among five concepts that are often used synonymously in the nursing and related literature: self-care, self-management, self-monitoring, symptom management and self-efficacy for self-care.
Rationale/Background: Nurses have long been concerned with providing education and support to patients so that they can manage their own health (individually or with family or other informal support). Evaluation of patients' abilities and behaviors for caring of themselves encompasses many different concepts such as self-care, self-management, self-monitoring, symptom management, and self-efficacy. A clear conceptual understanding of the different but related terms is helpful for planning nursing interventions and research.
Concept analysis approach and process: When concepts appear that are almost uniformly linked together, concept delineation is helpful in clarifying differences among them Concept delineation includes review of literature, identification of attributes and rules of relation, search concepts for commonalities, and contrast differences (Morse, 1995).
Outcomes achieved/documented: While overlap exists, it is possible to clearly differentiate the concepts and illustrate the relationships among them (see Fig. 1).

Figure 1



Self-care is the most encompassing concept, including ability and actual performance of activities for promotion and maintenance of optimal health. Self-management, self-monitoring, and symptom management (when performed by the patient) fall under the self-care umbrella, typically referring specifically to the one's ability and performance of activities related to chronic health conditions, although also applicable to acute illness and, to some extent, to health promotion activities. Self-management incorporates self-monitoring and symptom management, but also addresses the management of emotional/psychosocial, functional, and physical/comfort ramifications of a disease. Self-monitoring is one aspect of self-management, specific to awareness and measurement of specific parameters and symptoms that are indicators of the need to take action or consult with a health care provider. Self-efficacy is fundamentally different from the other concepts because it does not involve ability or performance, but the level of confidence in one's ability to perform self-care activities. It may be a mediator between knowledge/abilities and performance or a moderator of the effectiveness of interventions to improve self-care.
Conclusions/Utility for Nursing Practice and Research: Clear concept specification, along with an understanding of antecedents/influencing factors (e.g., cultural context, etc.) and potential outcomes can aid nurse researchers in specifically identifying and measuring the concept that is most relevant for research questions. At the systems level, a delineation of concepts can facilitate the ability of researchers and policymakers to identify and measure the specific outcomes that are best aligned with the goals of health care delivery.

FEMALE SEXUAL DYSFUNCTION AND ACUPUNCTURE: PILOT STUDY RESULTS

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Purpose/Aims: To develop and assess the ability of an acupuncture protocol to reduce distress and interpersonal difficulty in patients with Female Sexual Dysfunction.

Rationale/Conceptual Basis/Background: Female Sexual Dysfunctions (FSD) are disturbances in the sexual response cycle resulting in distress and interpersonal difficulty[1]. FSD affects up to 50% of the general population. Current FSD treatments include hormones and phosphodiesterases which may pose cancer and cardiovascular risks[2]. Many patients turn to complementary and alternative medicine in an effort to avoid pharmacotherapeutics. Acupuncture has shown promise as a treatment for a variety of women's health concerns including vasomotor and menopausal symptoms[3]. Acupuncture involves stimulation and activation of neuroendocrine, vasoactive, and immune modulators,[4] all of which play a role in female sexual physiology[5]. While the literature addressing FSD has recently expanded, little attention has been focused on the potential efficacy of acupuncture as a treatment modality.

Methods: This prospective longitudinal study recruited a convenience sample of 14 female patients diagnosed with FSD from a Women's Health Clinic. Four questionnaires (Greene Climacteric Scale, Menopause Rating Scale, Urinary Distress Inventory, Quality-of-Life Scale) were administered to assess distress and interpersonal difficulty (psychological symptoms, sexual dysfunction, somato-vegatative symptoms and quality-of-life) at three time periods, before acupuncture treatment, after the last acupuncture treatment and three weeks later. Acupuncture was administered for four consecutive weeks. Mean scores for each scale were assessed over time using repeated measures analysis of variance and Wilks Lamba test statistic using SPSS.

Results: Scores for psychological symptoms decreased after acupuncture, as measured by the Greene anxiety scale (time 1 mean=3.36, time 2=1.93, time 3=2.4, p-value 0.05), and by the Menopause Rating Scale physiological scale (time 1=3.07, time 2=2.14, time 3=1.43, p-value 0.005). Sexual dysfunction scores also decreased after the acupuncture (time1=2.36 time 2 and time 3 1.43; p=0.004). Somato-vegetative scores were reduced after acupuncture as measured by the Greene Somatic scale and Menopause Rating Scale somato-vegetative symptom scale: Green time 1=2.5, time 2=1.5 p=0.04; MRS time 1=4.00 time 3=2.70 p=0.05) Quality of life improved after acupuncture (time1=86.4 time 3=91.9 p=0.03). There were no improvements as measured by the urinary distress inventory.

Implications for Practice: FSD, a relatively new diagnosis that is present in approximately 50% of the general population, can be improved with an acupuncture intervention and may provide alternative therapy for FSD in an effort to avoid pharmacotherapeutics. This pilot study will serve as foundation work for future studies.

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INCREASED INTERPROFESSIONALISM INTERACTIONS IN A COMMUNITY HEALTH SCREENING CLINIC

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Purposes: The purpose of the project is to encourage students from different professions to collaborate by providing preventive health screenings and immunizations to community members with little or no access to health care. The purpose of the health screenings is twofold, the first is to help indigent individuals access health care (medical, dental and mental health) and ultimately reduce emergency department visits. The second is for students to understand the education process and scope of practice of other disciplines.

Rationale: Health care is changing significantly in the way that it is delivered. More practices are moving to a primary medical home model. This model assumes that individuals from different professions will be assisting in the care of a patient. Engaging in this attitude and behavior as students is important to provide experience and understanding of different professions prior to practicing in their chosen field.

Description: Student interaction between professions is arranged through community health screening events held at rotating off-campus locations. Each discipline at Idaho State University Health Science Center is represented at various clinical stations, and individuals are escorted from station to station. Stations include vital signs; medication review; brief physical exam; oral health exam; laboratory assessment of random glucose measurements, HIV and Hepatitis C screenings; depression screenings; and hearing screenings. Departmental faculty supervise the students who are initially assigned to a station most commonly related to their discipline, such as a dietetic student at the nutritional assessment station. At regular intervals students switch and orient each other to the screening they have just performed. During quiet times students are encouraged to talk with one another about their professional education including didactic and experiential requirements. Patients progress through the stations and visit with a faculty member prior to exiting, in the event that findings suggest follow up care is required.

Outcomes: A survey of 27 participating students indicated that nursing students felt well prepared all around to screen and teach others (except in the area of audiology) while clinical lab science students were most surprised by how many areas they could be placed in post graduation. Counseling students were less likely to rotate through all the stations, and pharmacy students were most likely to. In all cases, there was an overall increase in knowledge about other professions' curriculum and experiential requirements, as well as an increase in awareness about the value of working with other professionals in multiple areas.

Conclusions: Understanding other health professionals' academic preparation prior to practice is hoped to encourage increased interprofessional collaboration in the students' future careers, especially where health disparities are concerned. Interactions during this activity were dynamic and suggest more opportunities to collaborate would be beneficial. As the primary medical home model expands the implications of learning how to collaborate with other health professionals is likely to result in a more complete approach to patient care.

AN INNOVATIVE POLICY ANALYSIS UNTANGLES PRECONCEPTION HEALTH AND CARE DEFINITIONS

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Aims: The study aims conducted in rural Zhejiang were: (a) To define and critically analyze preconception health and care in the context of Chinese governmental policies; and (b) To explore how adult daughters, their maternal mothers, and healthcare providers engaged with preconception health and care related governmental policies.
Background: Although China's maternal and child health has improved dramatically in the last three decades, congenital abnormalities have increased during this period. Preconception health, a focus on the health of women and men prior to pregnancy, is an increasingly important global health topic as countries strive for better maternal and child health outcomes. Policies are important, because they guide practice and research. However, little research has been done on preconception health and care related policies. Furthermore, it is important to know if the policy language captures what people think. However, the public reaction to preconception health and care policies has not been studied carefully.
Methods: Policy text and interview texts were the two data sources in this study. The field work of the study was conducted in Tonglu County, Zhejiang, China. Fourteen nationally and provincially issued preconception related policy documents met the inclusion criteria and were analyzed. Eighty-six in-depth individual interviews completed with three groups of study participants, namely adult daughters, their maternal mothers, and healthcare providers. Adult daughter was a term used in this study to differentiate the population of adult reproductive-age women from other groups. Maternal mother was also a socially constructed term to specify their relationship with adult daughters. Policy discourse analysis to critical discourse analysis was used to analyze policy texts.
Results: Two major discourses were identified from the policy documents in relation to constructing preconception health. These were (a) a health condition before marriage and (b) a health condition after marriage. Five major discourses were identified from the policy documents in relation to constructing preconception care. These were (a) menstrual care, (b) married women's care, (c) intending to be married couple's care, (d) couple's family planning, and (e) married couple's care. Adult daughters, their maternal mothers, and healthcare providers varied in their perspectives on preconception health and care policies. Seeing policy as a formality was voiced by both adult daughter and healthcare provider groups. All study groups engaged with policies to an extent, but healthcare providers were most able to discuss the details of the policies, and most engaged with policies.
Implications: This was the first study to examine the language use of Chinese preconception policies. The study found that the concept of preconception health and care was mainly constructed around marriage in Chinese policy text, and that the current policies do not meet the needs of women who get pregnant before marriage. Future preconception health and care policy effort needs to tackle the issue of growing number of pregnant brides. The study also found seeing policy as a formality was a common view among participants. This finding implies that unique obstacles exist for preconception policy implementation in China.

RACIAL DIFFERENCES IN SUBSTANCE USE WITHIN AN URBAN HIV PRIMARY CARE CLINIC

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Purpose/Aims: The purpose of this study is to examine racial/ethnic differences in risky levels of tobacco, alcohol, cannabis, cocaine, amphetamine, inhalants, sedatives, hallucinogens, and opioids by using Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) developed by the WHO.

Background: Risky levels of alcohol, illicit drug, and tobacco use among HIV-infected patients are known to exacerbate HIV transmission risk behavior, medication adherence, and overall health. However, little is known about prevalence of risky substance use and racial differences among HIV-infected patients in care. Screening, Brief Intervention and Referral to Treatment (SBIRT) was developed to identify and prevent the negative sequelae of risky substance use.

Methods: We administered the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) to determine the prevalence of low, moderate, and high-risk substance use in a convenience sample of HIV-infected patients at the UCSF Positive Health Program (PHP) at San Francisco General Hospital (SFGH). The PHP provides primary medical care to some 2,500 low-income people living with HIV in San Francisco.

Results: In a preliminary analysis of the first 57 participants, mean age was 45.1 years (range:27-58); 58% male, 31% female, and 11% transgender; 46% African American, 21% White, 19% Hispanic/Latino. Self-report median CD4 count was 568 (IQR: 216-761), and median viral load was 2,207 copies (IQR: 520- 54,500). Kruskal-Wallis H Test followed by Mann-Whitney U test was utilized to determine the differences in risky level of alcohol, tobacco, and illicit drugs within racial groups. Among these substances, cannabis (chi-square=10.4, p=.02), cocaine (chi-square=7.8, p=0.05), amphetamine (chi-square=20.6, p<0.0005), and inhalants (chi-squre=8.8, p=0.032) were statistical significantly different among racial groups. Whites are more likely to be at a higher risk for cannabis (75% reported moderate and 17% for high risk), cocaine (50% reported moderate and 25% for high risk), and amphetamine (42% reported moderate and 25% for high risk) when compared to other racial groups. Hispanics/Latinos are more likely to be at a higher risk for inhalants (18% reported moderate and 9% for high risk) than White or African Americans.

Implications: The prevalence of risky substance use in an urban HIV primary care clinic is disproportionately high compared to 2009 national estimates of the general U.S. population, in which use in prior month of cocaine was only 0.7%; marijuana, 6%; binge alcohol use, 8.7%; and tobacco, 23.3%. Since these reported differences in substance use are not broken down by race, these findings underscore the importance of substance use screening and a potential benefit of implementing screening to detect and treat risky substance use in HIV primary care settings as part of an integrated health care strategy. As a clinician, it is important to be aware of racial differences in substance use to increase awareness of which substances are more prevalent in this population and to highlight that risky substance use correlates with other risks, including non-adherence to medications and sexual risk behavior.

HEALTH ISSUES FOR SPECIAL POPULATIONS

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SYMPTOM INTERFERENCE WITH WORK AND RELATIONSHIPS DURING THE PERIMENOPAUSE

Nancy Fugate Woods, Ellen Mitchell

TRANSITIONING BEYOND WESTERN TRADITIONS: CULTURAL PERCEPTIONS OF IPV

Jan Shoultz, Lois Magnussen, Karol Richardson

OUT OF SERVICE: COMMUNITY TREATMENT POST- PRISON RELEASE FOR PEOPLE WITH SMI

Kristin G. Cloyes, Bob Wong

SYMPTOM INTERFERENCE WITH WORK AND RELATIONSHIPS DURING THE PERIMENOPAUSE

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Purposes: Studies of symptom interference in the nursing literature have enhanced our understanding of the consequence of symptoms in the lives of oncology patients, but similar understanding in other populations is limited. The purposes of this study were to: 1) determine effects of symptoms experienced during the menopausal transition (MT) and early postmenopause (PM) on interference with work and relationships; and 2) test a model relating age, MT-related factors (urinary estrone, FSH, testosterone, MT stages), symptoms (hot flashes, depressed mood, awakening during the night, anxiety, backache, joint pain, forgetfulness, and difficulty concentrating), health-related factors (perceived health), and stress-related factors (perceived stress, cortisol) on interference with work and relationships.

Rationale: Symptom interference has been defined as the degree to which a symptom such as hot flashes interferes with daily activities, including work, social, leisure, sleep, mood, concentration, relationships, sexuality, and enjoyment. The impact of symptoms women experience during the menopausal transition is likely to be related to the primary and salient roles performed by midlife women, including their employment roles and their capacity to engage in relationships with their families and others. Moreover, perceived interference may be differentially related to the type of symptoms women experience. Symptom interference may reflect women's sensitivity to their symptoms as a function of stressful environments, as well as physiologic arousal, indicated by perceived stress and cortisol levels, respectively.

Methods: A subset of Seattle Midlife Women's Health Study participants provided data during the late reproductive, early and late MT stages or early postmenopause (N=184) including menstrual calendars for staging the MT, annual health reports completed between 1990 and 2008, morning urine samples assayed for estrone glucuronide (E1G), follicle stimulating hormone (FSH) and cortisol and symptom diary ratings several times each year. Interference was rated in the diary along with symptoms, perceived health, stress, and symptoms. Multilevel modeling with an R program was used to test patterns of symptom interference related to age, MT-related factors, symptoms, health-related and stress-related factors with as many as 5656 observations. Age was centered at 47.4 years

Results: Interference with work was significantly associated with individual covariates perceived health, stress, hot flashes, depressed mood, anxiety, difficulty getting to sleep, awakening during the night, early morning awakening, backache, joint pain, forgetfulness and difficulty concentrating ($p=.01$ for hot flashes, all others $p<.001$). A final multivariate model included perceived health, stress, depressed mood and difficulty concentrating. Interference with relationships was significantly associated with age and individual covariates perceived health, estrone, perceived stress, depressed mood, anxiety, the sleep symptoms, backache, joint pain, forgetfulness and difficulty concentrating ($p=.03$ for estrone, all others $p<.001$). A final multivariate model included perceived health, stress, depressed mood, anxiety, difficulty concentrating, and awakening during the night.

Conclusions: Women's reports of how much the way they felt interfered with work and relationships were influenced by both their perceived health and stress levels. Interference was also influenced by depressed mood and difficulty concentrating, suggesting that these two symptoms may be most important to address to enhance functioning during the menopausal transition and early postmenopause.

TRANSITIONING BEYOND WESTERN TRADITIONS: CULTURAL PERCEPTIONS OF IPV

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Purpose/Aims: The aim of this Community Based Participatory Research (CBPR) study was to answer, "What are the cultural perceptions, responses and needs of women from selected groups in Hawaii (Chuukese (Micronesian), Ilocano (Filipino), Native Hawaiian, and Samoan) regarding Intimate Partner Violence (IPV)?" The long-term purpose of the research is development of culturally appropriate prevention and interventions for IPV.
Rationale/ Conceptual Basis/ Background: Critical social theory (CST) is the theoretical framework for this research. The intent of the theory is to "challenge conventional assumptions and social arrangements." CBPR is consistent with the perspective of CST. An expected outcome of CBPR is the attainment of new knowledge that guides actions, increases the relevancy of studies, leading to a deeper understanding.
IPV is a complex health and social issue affecting women around the world. Annually in the US, IPV is responsible for 40 – 50% of murders of women. An estimated $5.6 billion is spent on health care for more than 2.5 million injuries. Unfortunately, Hawaii, a State with a culturally diverse population, frequently has the highest annual national average for DV murders per capita. Differences in cultural perspectives may lead to barriers that prevent women from receiving effective care. Prevention and intervention strategies have traditionally been based on Western notions of family and family life.
Methods: This cross sectional, descriptive study collected qualitative and quantitative data from 55 women. Individual interviews were conducted with women who had experienced IPV. Focus groups were conducted with other women from the same cultures who might or might not have experienced IPV. Three tools were used: two qualitative semi-structured interview guides and a quantitative tool. Inclusion criteria included women 18 years and older from each cultural group. Analysis of qualitative data used content analysis. Quantitative data was analyzed with descriptive methods.
Results: This presentation focuses on the need for nurses to make transitions from the Western dominated approaches to prevention and intervention for IPV. Common themes identified in studies from the four cultural groups will be used to frame the discussion.
Implications: These findings provide a basis for meeting the needs of women from these cultural groups. Currently, IPV prevention and interventions are based on a model of care that necessitates disruption of the family. Women want alternatives that allow safety and prevent injuries beyond having to move to a shelter. They seek help consistent with their cultural roles and priorities. Their perceptions, responses, and needs provide guidance for culturally sensitive approaches to prevention, intervention and policy development. Building on traditional protective factors may offer solutions for IPV that are culturally relevant and effective. The challenge for nurses is to recognize that change may be needed in their own perspective and the systems that support them to transition to culturally appropriate care.

Funding: NIH/NINR 1 R15 NR009424-01A2.

OUT OF SERVICE: COMMUNITY TREATMENT POST-PRISON RELEASE FOR PEOPLE WITH SMI

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Background: Our previous research identified serious mental illness (SMI) as a significant risk factor for recidivism and shorter time in community between incarcerations for persons released from state prison. Although women generally have lower recidivism rates and longer community tenure than men, SMI had a significantly greater negative effect on recidivism patterns for the women in our sample than their male counterparts. While numerous programs are designed to ensure the availability of post-release services, few examine large cohorts over time or analyze which services work best for whom.

Purpose: This study seeks to explain and expand our earlier findings through two aims: 1) To analyze the effect of community mental health services on recidivism rates and length of community tenure for persons with SMI released from state prison; 2) To analyze differences between those who receive community-based services those who do not.

Methods: We cross-referenced our sample of persons with SMI released from Utah State Prison 1998-2002 (N = 2112) with treatment records from Valley Mental Health, the state's largest community-based psychiatric service provider. We found records for more than half our subjects (n = 1223) existed within their database, indicating that these subjects had either received some form of treatment in the past or were enrolled for services through VMH during the study period. We then matched release dates chronologically with service dates, with the intention of performing survival analysis to compare outcomes. We used logistic regression to examine which subject variables, including illness severity, gender, age, alcohol or drug use and history of violent offense, were significant predictors of service. We based variable selection on scientific and policy arguments about treatment and service mandates for those with SMI.

Results: Only 7% (n = 154) of the entire SMI sample, or just under 13% of those showing up in VMH records, had actually received any mental health services from the agency after release from prison. This remarkably small number prevented us from proceeding with our planned analysis of the effect of community treatment on recidivism and survival time. However, logistic regression showed that high severity of illness associated with psychotic symptoms was a significant predictor of community service receipt, with this group being almost twice as likely to obtain community-based services post-release (OR = 1.97, p = 0.042). Gender approached significance as a predictor while controlling for severity, with women with SMI being less likely to receive post-release community services (OR = .656, p = 0.042).

Implications: Only a small proportion of persons with SMI receive community mental health services after release from prison, although this number does appear to include those men who are most severely ill. Women with mental illness—who may benefit most from services aimed at reducing the effects of SMI on recidivism risk—are not making it into services after release from prison. Research, policy and practice must address these failures before we can meaningfully examine which services actually reduce recidivism and increase length of community tenure for women and men with SMI.

HEALTH MAINTENANCE: BELIEFS AND ACTIVITIES

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HIV RISK AND PREVENTION BELIEFS AMONG MEN WHO HAVE SEX WITH MEN IN MUMBAI, INDIA

Usha Menon, Laura Szalacha, Abhijit Prabhughate, Priti Prabhughate, Murgesh Subramanian, Vivek Anand, Angela Chia Chen-Chen

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AFRICAN AMERICAN WOMEN'S ATTITUDES TOWARD PHYSICAL ACTIVITY

Eun-Ok Im, Young Ko, Hyenam Hwang, Kyung Hee Yoo, Wonshik Chee, Alexa Stuifbergen, Lorraine Walker, Adama Brown, Chelsea McPeek, Eunice Chee

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MAINTAINING PHYSICAL ACTIVITY AFTER CARDIAC REHABILITATION: A LITERATURE REVIEW

Siobhan K. McMahon, Julie Fleury

LONGITUDINAL ANALYSIS OF BELIEFS AS PREDICTORS OF POST-INTERVENTION SCREENING

Laura A. Szalacha, Usha Menon, Rhonda Belue, Stephanie Wahab, Victoria L. Champion

HIV RISK AND PREVENTION BELIEFS AMONG MEN WHO HAVE SEX WITH MEN IN MUMBAI, INDIA

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Purpose: The purpose of this qualitative study was to describe the knowledge, beliefs, and behaviors related to HIV risk and prevention among men who have sex with men (MSM) in Mumbai, India.
Background: Greater than 3 million individuals are estimated to be infected with HIV in India. Current epidemiological trends suggest that without a concerted and coordinated HIV prevention initiative, India may eclipse all other countries in HIV burden. A key to HIV prevention is the implementation of culturally specific, evidence-based prevention programs focusing on high-risk behaviors and the highest-risk groups. Successful behavior change interventions are built on foundations that incorporate individuals' knowledge and beliefs as a starting point. MSM are a high risk core group and according to sentinel surveillance reports around 15-20% MSM are HIV positive in the five high prevalence states of India. Thus, our study focused on MSM in Mumbai a city located in one of these high-risk states.
Methods: We trained community interviewers, self-identified as MSM, to conduct in-depth interviews. They subsequently interviewed 20 self-identified MSM. Interviews were conducted in the preferred language choice of the participant - Hindi or Marathi – both widely-spoken local languages. Interviews were conducted in pre-arranged community settings, audio-recorded, transcribed verbatim and translated to English. Four members of the investigative team read the same three transcripts and developed codes for themes. Once a coding list was consensually finalized, the remaining 16 interviews were coded with each interview coded by at least two members of the team. An intensive 2-day meeting between coders resulted in a final concept map with themes and connected sub-themes.
Results: Emergent themes were organized broadly into reasons for using/not using condoms; cultural beliefs related to safe sex and partners (using herbs for prevention; withdrawal before ejaculation); abuse, violence, and sex work (forced sex with clients; emotional disempowerment) and cultural patterns of decision-making regarding the use of condoms (sex partner from 'good' family; looks clean; fear of losing partner). Knowledge about the use of condoms as risk prevention was high across participants. Challenges to conducting community-based research in an international setting in different languages are myriad and lessons learned include sustaining solid partnerships with community-based agencies, extensive process evaluations and feasibility testing prior to implementing a study, using manuals and training processes to build capacity in the research setting.
Implications: Many interventions in international communities are conceptualized from heterosexual and even Western cultural perspectives. Successful behavior change interventions must be built on foundations that leverage existing cultural norms to optimize effectiveness. Nurses in India comprise one of the largest community-based health care workers and in many areas are the only care providers, dispensing both community health interventions and acute medical care. Information on factors associated with safe sex behaviors, when confirmed in larger descriptive quantitative studies as we anticipate, will be integral to building a community-centered nursing prevention intervention.

AFRICAN AMERICAN WOMEN'S ATTITUDES TOWARD PHYSICAL ACTIVITY

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Purposes/Aims: The purpose of this study was to explore African American midlife women's attitudes toward physical activity using a feminist perspective.
Rationale/Conceptual Basis/Background: Statistics indicate that more White adults are meeting the recommended guidelines for moderate physical activity compared with African Americans. However, little is clearly known why African Americans, especially midlife women, do not participate in physical activity as much as White counterparts. Furthermore, few studies have specifically explored African American midlife women's attitudes toward physical activity that may influence their low participation rate in physical activity.
Methods: This was a qualitative online forum study among 21 African American midlife women who were recruited using a convenience sampling method. Using 17 online forum topics and related prompts, a 6-month qualitative online forum was conducted. The data were analyzed using thematic analysis by Braun and Clarke. To ensure scientific rigor of the study, the research team used the standards of rigor in feminist research by Hall and Stevens.
Results: Four themes emerged: (a) "culturally acceptable body," (b) "missed opportunity to learn," (c) "physical activity as a luxury," and (d) "want to do by myself." The women had positive body images regardless their actual weight. The women considered physical activity "a luxury" in their busy life, and they thought that they had already missed opportunities to learn. The women wanted to do physical activity by themselves because of their bad childhood experiences and hesitance to show their sweaty hair to others. All these themes reflected that African American midlife women's attitudes toward physical activity were largely influenced by their marginalized experience in the U.S. society. Because of the women's marginalized experience from childhood to the present, they perceived physical activity as a luxury in their heavily burdened daily lives with multiple family responsibilities in the U.S. society.
Implications: The findings suggest development of unique physical activity promotion programs that could consider African American midlife women's ethnic-specific attitudes toward physical activity.

Acknowledgement: This analysis was conducted as a part of a large study funded by NIH/NINR funded study (1R01NR010568-01) entitled "Ethnic Specific Midlife Women's Attitudes Toward Physical Activity".

MAINTAINING PHYSICAL ACTIVITY AFTER CARDIAC REHABILITATION: A LITERATURE REVIEW

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Purpose: The purpose of this review is to: (a) systematically analyze intervention studies designed to promote the maintenance of physical activity behaviors after cardiac rehabilitation; and (b) summarize the strengths and limitations of intervention studies identified.
Rationale: Despite the well-established benefits of cardiac rehabilitation programs, the majority of participants become physically inactive after completing these programs, exposing them to increased risk of disease progression. Analyzing intervention studies that promote physical activity maintenance after cardiac rehabilitation will foster intervention development and translation of research into practice.
Methods: Computer and manual searches were conducted of articles in the English-language literature from 2000-2010. Inclusion criteria for this review were: (a) tested interventions designed to promote the maintenance of physical activity behaviors among persons with CHD following outpatient cardiac rehabilitation; (b) measured physical activity behaviors or physical capacity; and (c) employed quasi-experimental or randomized controlled trial methods. Studies were excluded whose target audience did not include persons participating in cardiac rehabilitation or measure physical activity outcome variable(s). Criteria-based checklists for appraising the quality of intervention descriptions and the quality of study design guided this review.
Results: A total of 108 research reports were screened. Ten studies met inclusion criteria. Participant characteristics, theoretical perspectives, intervention critical inputs, intervention fidelity, outcome measures, direct and mediated effects on outcomes, and attrition were described. The majority of participants in this review were men aged 62; documentation of race and ethnicity, socioeconomic characteristics, and CHD risk factors was limited. Five of the ten studies reviewed referenced at least one theoretical perspective guiding intervention development and implementation. Intervention critical inputs in studies reviewed included enhancing self-efficacy, promoting self-regulation, assisting with goal development, preventing relapse and encouraging social interactions. Aspects of intervention fidelity included using manuals to guide intervention delivery, providing detailed descriptions of interventionist characteristics and training, and describing adherence to intervention protocols. Many of the studies reviewed measured behavioral, psychological, social, and functional outcomes; the use of a wide range of measurement strategies limited the direct comparison of results. Analyses of mediating variables were limited. Follow-up time ranged from 4 to 24 months. Small to large relative effects on physical activity behaviors and physical measures were observed in studies whose data permitted the calculation of intervention effects. Attrition rates in studies reviewed were 18% on average; no consistent patterns of demographic or functional characteristics were noted in comparisons of participants who withdrew from studies to those who completed.
Implications: Strengths identified in this review include the positive effects of tested interventions and intervention delivery schedules that ease the transition from cardiac rehabilitation to independence at home. To improve the impact of cardiac rehabilitation programs, programmatic research is still needed that builds upon current knowledge by: (a) targeting diverse populations; (b) incorporating strong theoretical perspectives; (c) operationalizing intervention critical inputs that foster replication; (d) testing mediating processes; (e) exploring additional measures for physical activity that capture social and environmental interactions; and (f) evaluating the long term feasibility effectiveness of interventions that promote the maintenance of physical activity after cardiac rehabilitation.

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- National Institutes of Health /National Institute of Nursing Research Grant # F31NR012351

LONGITUDINAL ANALYSIS OF BELIEFS AS PREDICTORS OF POST-INTERVENTION SCREENING

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Purpose: Examine longitudinal changes in colon cancer-related beliefs and knowledge and their prediction of post-intervention screening behavior.
Background: Early diagnosis of colorectal cancer (CRC) is associated with high survival, and studies on increasing screening rates focus on changing behavior through manipulating beliefs and knowledge.
Methods: Primary care patients non-adherent with CRC screening, with no history of cancer (n = 515), were block randomized to usual care (n=169), tailored education (n=168) or motivational interviewing (n =178). Trained interventionists delivered both interventions over the telephone. Data were collected on knowledge and belief at three points – baseline, 1-month post-intervention, and 6-months post-intervention. Knowledge and perceived susceptibility were related to CRC and screening overall while perceived benefits, barriers and self-efficacy were gathered separately for three CRC screening tests- stool blood test, sigmoidoscopy and colonoscopy.
Results: Change scores were calculated for beliefs and knowledge over time and by study group, and entered into a multivariate model to assess the effect of changes in beliefs and knowledge on post-intervention CRC screening. The tailored education group was significantly more likely to complete a CRC screening test compared to the control group (AOR = 2.2, CI = 1.2 - 4.0). The motivational interview group was not associated with a significant difference in CRC screening. The intervention content was designed to manipulate/change beliefs and knowledge. Some beliefs did change significantly over time - sigmoidoscopy and colonoscopy barriers decreased over time ($p<.001$), and colonoscopy benefits and self-efficacy increased over time ($p<.05$). Barrier scores for both tests were significantly lower in the TE group compared to the MI and controls ($p<.05$). Surprisingly, however, no change scores predicted post-intervention screening.
Implications: Most behavioral interventions tested in randomized controlled trials are not ready for translation to practice. For wide-spread dissemination and translation practice, it is imperative that we understand the essential elements of the intervention that were successful in changing behavior so we can pare down the program to the minimum needed for behavior change. In our 5-year study, one of three intervention conditions increased screening significantly, but it is unclear why the intervention worked. Was it time and attention as opposed to the actual intervention content? These findings raise an important question about the underlying mechanisms that moderate behavior change interventions.

HEALTH OF OLDER ADULTS

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MANAGING XEROSTOMIA IN NURSING HOMES: PILOT TESTING OF THE SIS INTERVENTION

Neva L. Crogan, Alice E. Dupler

ENVIRONMENTAL AND SOCIAL CORRELATES TO PHYSICAL ACTIVITY IN OLDER ADULTS

Janet Purath, Colleen Keller, Barbara Ainsworth

WIN-WIN: INNOVATIVE LEARNING PROJECT ENHANCES SELF-CARE FOR VULNERABLE OLDER ADULTS

Miki Goodwin, Linda Mikitish

SENIOR RESIDENTS' ABILITY TO EVACUATE IN AN EMERGENCY: A CAUSE FOR CONCERN

Melanie Carrara, Kate Sheppard
Note: Paper was not presented

ANTECEDENTS AND CONSEQUENCES OF ED TRANSITIONS FOR VULNERABLE OLDER ADULTS

Mary P. Cadogan, Linda R. Phillips, Carolyn Ziminski

MANAGING XEROSTOMIA IN NURSING HOMES: PILOT TESTING OF THE SIS INTERVENTION

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The purpose of this pilot study was to test the initial efficacy of the Sorbet Increases Salivation (SIS) intervention by first measuring baseline and pre- post sorbet or water salivation using a modified Schirmer test (MST), and then measuring the effect of sorbet on resident food intake.

Malnutrition is a significant problem in nursing homes, with up to 85% of residents suffering from this disorder. It can result in compromised quality of life and lead to chronic disability, functional decline, increased health care utilization and health care costs, and even death. A multifaceted problem, there is evidence that malnutrition is ultimately due to inadequate food intake. One of the most common problems that negatively impacts food intake is xerostomia, or dry mouth. Persons with xerostomia have difficulty in forming a food bolus or swallowing, and have a decreased ability to taste food. In the elder population, xerostomia is most likely drug-induced and the risk increases with greater numbers of drugs taken. In an extensive review of the literature (using Medline and CINAHL databases), no empirical studies were found on alleviating the effects of drug-induced xerostomia in the nursing home population. Thus, easy to implement interventions aimed at decreasing xerostomia by increasing salivation are greatly needed for elders in nursing homes.

Ten nursing home residents (from a local nursing home) were recruited to participate in this repeated-treatment designed study. Potential residents were first identified by facility nursing staff as taking four or more medications known to cause xerostomia. After measuring baseline and then pre-post (using sorbet or water) salivation levels using a MST, we served 2 ounces of sugar-free lemon-lime sorbet just prior to the lunch meal for two 3-week periods separated by a 6-week observation (no treatment) period. A plate waste protocol was used to determine actual food intake for each resident during the observation and intervention periods. A research assistant weighed filled food plates as they were served and then reweighed plates at the end of each meal (after residents were finished eating).

This study found that salivation significantly increased after consuming sorbet or water. Most important, residents who consumed sorbet salivated more on average in comparison with residents who consumed water. During treatment one, 5 of 10 residents consumed significantly more food during sorbet weeks when compared with non-sorbet weeks. In addition, 9 of 10 residents consumed on average more food during sorbet weeks when compared with non-sorbet weeks. The new knowledge gained from this study will lead to further research and testing of the intervention with the long-term goal of transforming the "care-as-usual" approach to meal service in nursing homes.

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ENVIRONMENTAL AND SOCIAL CORRELATES TO PHYSICAL ACTIVITY IN OLDER ADULTS

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Aims: This paper describes the relationships among physical activity, perceived neighborhood characteristics, and social support for physical activity among community-dwelling older adults who do not meet recommended physical activity levels.

Background: As people age, they are at increased risk for a sedentary lifestyle. Past research suggests a positive relationship between physical activity and the social support of family, friends, and health care providers among older adults. Environmental settings and supports are also thought to affect physical activity and some research notes that the environment may have a greater affect on the physical activity of older adults than their younger counterparts. The Adapted Physical Activity Model provided the framework for this study.

Methods: Seventy-two men and women aged 60-85 years were recruited from a community-based clinic. Data collected at baseline and include: demographics, current health status, social influence (7-item Likert scale that rates physical activity support of family, friends and healthcare provider), self-report and objectively measured physical activity (CHAMPS survey and actical® results), and environment (Environmental Supports for Physical Activity Questionnaire).

Results: Participant's average age was 66.2 and average education was 13.9 years. Most (62.3%) earned less than $20,000/year. Participants' mean BMI of 32.2 is considered to be in the obese range. Correlations identified that the more active participants reported more support for activity from family, friends and health care providers, were more educated, and had more income. Participants who reported more walking lived in neighborhoods with less traffic. Those who described their neighborhood as having fewer unattended dogs and public recreation facilities that were in good condition did not walk more even though they described their neighborhood as a more pleasant place to walk. Older persons in this sample of 60-85 year olds perceived their neighborhoods to be less pleasant for walking and their public recreation facilities to be less safe than the younger participants.

Implications: Older adults benefit from the support of family, friends, and healthcare providers for physical activity. As people increase in age, they may need special considerations related to social support, environment and physical activity.

WIN-WIN: INNOVATIVE LEARNING PROJECT ENHANCES SELF-CARE FOR VULNERABLE OLDER ADULTS

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Purposes/Aims: To develop a program offering health assessments and education focusing on self-care to low-income, older adults from urban and rural communities while enhancing the educational experience of nursing students by increasing their exposure to the geriatric population.

Background: By 2030, the number of Americans over 65 years will reach 71 million, double that of 2005, according to the Hartford Foundation (2008). The increasing complexity of chronic health diseases and co-morbidities places a disproportionate dependency on the health care system. In order to assist older adults to retain personal goals, maximize function, maintain independence, and live in the least restrictive environment the need for geriatric prepared nurses has increased exponentially. The Foster Grandparent Program (FGP) assigns individuals over 55 years, with limited incomes, to schools as mentors or tutors for "at risk" and special needs children. Since 2006, the project leader, a registered nurse with gerontological expertise has collaborated with students from Idaho State University's (ISU) Accelerated Nursing Program to enhance their education in geriatric nursing in the community.

Description of the Practice: The students develop basic assessment, education, and care plans specific to the geriatric population by conducting an annual health fair at the Fall Training for the FGP of Southeast Idaho. Students provide assessment of blood pressure, blood glucose, fall risk, heart attack risk, and stroke risk to over 60 men and women annually. Education on hypertension, diabetes, fall proofing, heart attack and stroke prevention, influenza/cold prevention and a list of current medications is also included. Each foster grandparent progresses through various stations where they discuss health concerns with various nursing students, and cooperatively develop an individualized plan for self-care. Although the event is entirely student-run, faculty and FGP staff are present should abnormal values or questions arise during the screening.

Outcomes: The foster grandparents embrace the opportunity to work with nursing students to assist in their learning while being cared for to promote their own health. Free transportation, lunch with the students and cooperative learning makes a "great day out" according to the grandparents. A survey of the students since 2006 shows that those who were involved with the FGP Health Fair were more likely to seek at least one further experience with geriatric care, either during their final semester or post graduation. Several students choose to follow the foster grandparents after the Health Fair, and FGP staff ensure follow up care is provided, including home visits, and telephone contact.

Conclusion: This innovative education project exemplifies WIN's commitment to advance education and practice through therapeutic relationships with vulnerable populations. The project addresses chronic health conditions while promoting geriatric nursing competency and education. The project also represents benefits of inter-professional collaboration to provide support and to ensure independence for older adults who may otherwise experience unaddressed complex health care needs. Similar outreach to other vulnerable populations can be explored and incorporated into various learning experiences throughout nursing education.

Reference:
Hartford Foundation (2008). *A call for leadership in aging.* Retrieved from John. A Hartford Foundation website: http://www.jhartfound.org/ar2008build/Leaders_of_aging_respond.html

SENIOR RESIDENTS' ABILITY TO EVACUATE IN AN EMERGENCY: A CAUSE FOR CONCERN

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Purpose/Aims: describe senior residents' ability to evacuate in emergency. Aims are to describe components necessary for safe evacuation, describe limitations to safe evacuation, use these principles to analyze evacuation ability at one facility for independent seniors.

Rationale/Background: In a disaster, seniors are the most vulnerable. Fire is the 6th leading cause of death among seniors; those 65 and older are twice as likely to die in fire as any other age group. When Hurricane Katrina hit New Orleans, 15% of its residents were over age 60, yet they comprised 73% of those killed. In a disaster, safe evacuation necessitates the ability to hear fire alarms and voiced instructions, follow signs, interpret environmental cues, negotiate stairs, operate door locks and latches, understand building egress, and process information to access evacuation features. Safe evacuation is enhanced by knowing a plan and practicing the plan. In the U.S. population, 13% are over age 65; 72% have trouble hearing, 34% have visual problems, 94% have arthritis and restrictive movements, 32% describe difficulty walking, 38% use assisted devices, and 20% have cognitive impairments. Therefore, limitations to safe evacuation may include: difficulty negotiating stairs or operating door locks and latches due to arthritis, pain, and stiffness; respiratory compromise and respiratory effort leading to dizziness and difficulty concentrating; difficulty following signs due to poor eyesight; difficulty hearing alarms or verbal instructions due to hearing loss; and difficulty navigating physical spaces and interpreting environmental cues due to cognitive impairments and confusion.

Process: Literature review helped identify components necessary for safe evacuation and limitations faced by seniors that may compromise safe evacuation. Meetings with local Fire Marshall outlined safe evacuation plans and process. Met with administration and residents at a facility for independent senior living, reviewed evacuation plan and ability of residents to carry out plan, gave evaluation of findings and recommendations to administration.

Outcomes Achieved: Based on factors identified by Fire Marshall, the 8-story residential building itself is very safe, and there is an evacuation plan. Residents do not practice evacuations, and it is not clear that all residents understand the evacuation plan. Residents with hearing loss are alerted by flashing lights, which can cause visual confusion. Written instructions indicate residents should stay in their apartments but pre-recorded verbal instructions tell residents to leave the building; this inconsistency raises the risk of confusion. Residents may be incapable of using stairways, and there is no system of ensuring those with decreased mobility are evacuated.

Conclusions: An assumption of independent living is that residents are capable of evacuating safely in an emergency. In fact, this may not be an accurate assumption. Community health nurses are in a prime position to assess for senior residents' ability to evacuate in disasters. We can encourage senior clients to know their evacuation plan and practice the plan, and we can help identify those who have limitations to safe evacuation.

ANTECEDENTS AND CONSEQUENCES OF ED TRANSITIONS FOR VULNERABLE OLDER ADULTS

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Background: Emergency Departments (EDs) are frequent sources of care for vulnerable older adults. However, the current model of ED care may not meet the needs of individuals who have multiple co-morbid conditions and geriatric syndromes. Lack of attention to ED care transitions may also negatively impact on cost and quality outcomes for elders.
Purpose: As part of a larger project on quality and safety of care transitions for older adults, the purpose of this study was to describe from the perspectives of ED nursing staff the antecedents and consequences of ED transitions for vulnerable older adults.
Sample: Nurses who spoke English and had worked in the ED of a large urban hospital in Los Angeles for at least 6 months were eligible to participate. The final sample was 50% male, included nurses with a range of ED experience from 1-33 years, and included representatives from all three shifts.
Methods: A qualitative, descriptive methodology with focus group data was used. After receiving IRB approval, five focus groups were conducted over a three month period. Using a semi-structured interview guide, participants were asked to describe their experiences providing care to vulnerable elders. Examples of initial questions were "Tell me your thoughts about providing care to vulnerable elders in the ED. To you, what are the most difficult and frustrating things about providing good care to vulnerable elders in the ED? All interviews were tape recorded and transcribed verbatim. Data were analyzed using constant comparative analysis to produce categories (groupings of data bits with like meaning), properties (qualitative descriptors of categories) and themes (representations of patterns in the data).
Results: A major **antecedent** of ED transitions for vulnerable elders was a "lack of knowing". This was represented by the lack of information ED nurses had regarding why elders were being transferred to the ED, the factors associated with changes in condition, lack of ability of formal and informal caregivers to describe and interpret changing status, lack of information transfer between settings of care, and assumptions that vulnerable elders were unable to communicate anything relevant about their problems. This antecedent frequently led to what nurses described as "the million dollar workup" that was viewed as costly, unnecessarily invasive and yielding numerous abnormalities, often unrelated to the presenting problem. Separating relevant and irrelevant diagnostic information based on the million dollar workup had implications for the disposition of the patient and the level of care offered. Another interesting **consequence** of ED transitions was "too much information," so much as to obscure exactly what the patient and/or caregiver was to do to follow-up.
Implications: Results of this study suggest that vulnerable older adults may transition into the ED because of incomplete or misunderstood information that continues during the ED visit and frequently results in costly examinations that provide unanticipated and uncertain findings. The policy and ethical implications of these actions will be discussed.

Funding: UCLA School of Nursing Intramural Grant

HEALTH OF SCHOOL AGED CHILDREN

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PERCEPTIONS OF EXERCISE AMONG SCHOOL AGED CHILDREN WITH ASTHMA

Michele R. Shaw, Amy H. T. Davis

WEB-BASED ACTIVE BALANCE CHILDHOOD STUDY FOR CHINESE-AMERICAN ADOLESCENTS

Jyu-Lin Chen, Sandra J. Weiss, Melvin B. Heyman, Bruce Cooper, Robert H. Lustig

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CASE MANAGEMENT DURATION AND FUNCTIONAL OUTCOME IN PEDIATRIC PATIENTS

Elaine Leonard Puppa

THE IMAGE OF HEALTH: CHILDREN'S BODIES AS A REFLECTION

Jane H. Lassetter, Lauren Clark

MODIFYING THE DIABETES PREVENTION PROGRAM TO A SCHOOL-BASED SETTING

Lori Candela, Janet Dufek, Antonio Gutierrez, LeAnn Putney, John Mercer

PERCEPTIONS OF EXERCISE AMONG SCHOOL AGED CHILDREN WITH ASTHMA

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Purpose: The purpose of this grounded theory study was to explicate predominant concepts in perception of exercise among school aged children with asthma, and to describe potential relationships among predominant concepts in order to develop an explanatory theory to guide development of further research and effective interventions.
Background: Asthma is one of the most common chronic illnesses among children, currently effecting ten percent of children in the United States (American Lung Association, 2010). According to the Centers for Disease Control and Prevention, 7.1 million children under the age of 18 years are currently affected, with roughly 4.1 million children reporting an asthma attack during 2009. Research has shown children with asthma are often much less physically active than classmates without the disease (Chiang, Huang & Fu, 2006; Williams, Powell, Hoskins & Neville, 2008). This is a significant problem because increasing childhood physical activity and exercise plays a health promoting role among children with asthma by decreasing symptom severity and improving the general quality of life (Lucas & Platts-Mils, 2005; Williams, Powell, Hoskins & Neville, 2008). Moreover, perception is an important area for further research because the literature strongly suggests perceptions influence health related behaviors (Barrett & Randle, 2008; Keats, Culos-Reed, Courneya & McBride, 2007). There is limited research focusing on perceptions of exercise among school aged children with asthma.
Methods: A grounded theory research approach, according to Corbin and Strauss, was used. Interviews with 10 children, ages 8-12 years, with intermittent to severe persistent asthma were conducted during fall and spring of 2009-2010. In addition, 9 parents completed a health questionnaire while their child was interviewed. All of the interviews took place at the participants' homes and were conducted without input from the parents. Data analysis included open coding, constant comparison, theoretical integration, and theory refinement.
Results: The emergent grounded theory identified was: the process of creating perceptions of exercise. The ongoing creation of perceptions of exercise was influenced by four predominant categories: perceived benefits, striving for normalcy, exercise influences, and asthma's influence. Because process is an ongoing occurrence, the categories may influence the creation of exercise perceptions simultaneously, or at different times and in various ways dependent upon the characteristics of the child and their unique situations and experiences. This theory helps explain how exercise perceptions are developed from the participants' perspective.
Implications: The subjective insight gained through the development of the theory gives light to numerous areas for future research as well as practice implications in hopes of improving quality of life among school aged children with asthma. The categories and concepts of the theory provide target areas for practitioners to touch on while caring for this population, as well as areas for further research. Future research ideas include: continued theory refinement through studying those who do not participate in physical activity, those from lower socio-economic status, and those from other ethnic groups. In addition, intervention studies could include education programs for parents, physical education teachers, health care providers, and school aged children with asthma.

WEB-BASED ACTIVE BALANCE CHILDHOOD STUDY FOR CHINESE-AMERICAN ADOLESCENTS

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Aims: To examine the feasibility and efficacy of a web-based program to promote healthy weight-related behaviors (dietary intake, physical activity and coping) and weights in Chinese-American adolescents.
Background: Approximately 25% of Chinese-American children and adolescents are overweight or obese. Few internet-based programs have been reported to improve children's weight-related health behaviors. A family-based approach to prevent childhood obesity is more successful than are programs that do not involve families. However, to our knowledge, only one internet-based intervention for childhood obesity prevention that included parents has been conducted in minority groups.
Methods: A randomized controlled study was conducted in 54 Chinese-American adolescents (ages, 12-15 years) and their families. Data on anthropometry, blood pressure, dietary intake, physical activity, knowledge and self-efficacy regarding physical activity and nutrition, and coping strategy were collected at baseline and 2, 6, and 8 months after the baseline assessment. Adolescents received weekly session activities online for 8 weeks, and parents received three online sessions within the same 8 weeks. The intervention is based on the Transtheoretical Model–Stages of Change and the social cognitive theory. The intervention was tailored to each adolescent's stage of change in his or her current dietary intake, physical activity level, and problem-solving skills. The intervention program consists of educational play-based activities that increased the adolescents' self-efficacy and facilitated their understanding and use of problem-solving and critical thinking skills. Adolescents in the control group received general and non-tailored health information related to nutrition, physical activity, dental care, common dermatology care, and risk-taking behaviors. Parents in both groups also received three internet sessions related to the topics taught in the groups. Data were analyzed using linear mixed modeling.
Results: Twenty-seven subjects were randomized to either the intervention or control groups (total N=54). The average weekly logon rate was 71.8% for the intervention and 71.3% for the control group. Results indicated that significantly more adolescents in the intervention group than the control group had decreased their waist-to-hip ratio (Effect estimate [ES]= -.01, p=.02) and diastolic blood pressure (ES= -1.12, p=.02) while they had increased physical activity (ES= -59.6, p=.001), increased vegetable and fruit intake (ES= .14, p=.001), increased knowledge related to physical activity (ES= 0.16, p=.008) and nutrition (ES= .18, p=.001), and increased active coping strategies (ES=.09, p=.001).
Implications: This Web-based behavior program for Chinese American adolescents and their families appears feasible and effective in the short term. The successful of the program may be attributable to the interactive nature and individualization of the program. The Web-based program also included information for parents related to their adolescent's weight-related health behaviors and way to improve these behaviors and healthy weight. As Chinese parents are typically heavily involved in every aspect of their children's lives, the involvement of parents in a healthy lifestyle and healthy weight program is imperative. Given the significant impact of overweight on health and the high financial cost of running a weight management program, a Web-based program can involve more families who may not otherwise be able to participate and at lower total cost.

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CASE MANAGEMENT DURATION AND FUNCTIONAL OUTCOME IN PEDIATRIC PATIENTS

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Purposes/Aims: The purpose of this retrospective correlational research was to determine if duration of case management improved functional ability in a population of children with rare disorders enrolled in Maryland Medicaid Rare and Expensive Case Management (REM) Program.

Rationale/Background: Case management has also been proposed as a mechanism for integrating care and improving performance in the health care system. Although adults' responses to case management have been reported, children's responses to case management have not previously been reported. Case management and disease management studies have focused on health utilization of high cost and high volume cases.

An environment of debate regarding health care reform and cost effectiveness provides the backdrop for the current research. Various proposals for health care reform that will improve access, coverage, and related costs are being debated. Agencies in the state and the federal governments are attempting to identify health care practices that promote health and wellness, maximizing function and minimizing long-term effects of chronic illness.

Much of the evidence decision makers have available to support heath care policy is anecdotal. The current correlational research study expands the base of scientific evidence available for use at the policy and clinical levels. The current research explored the relationship between duration of case management and outcomes anecdotally associated with case management for children enrolled in the REM case management program.

Methods: The current research employed descriptive statistics, and statistical correlations and regression, to investigate the relationships between duration in case management and functional ability as assessed by case managers. The samples were selected from archival data collected from the Maryland Medicaid pediatric rare disease population receiving REM case management services during fiscal year 2002. Case managers were assigned to children with chronic disorders who were enrolled in the REM Program. The case managers provided objective assessments of children's activities of daily living using the Barthel Index. Data was selected to include only data for children aged 4 thru 17, enrolled in REM case management, for whom completed Barthel Index data was available. Archival data from the REM Program was examined for statistical correlations between the length of time children received case management and the children's scores on the Barthel Index. Correlations were calculated using Statistical Package for the Social Sciences. Significance was defined as $p < .05$.

Results: Children enrolled in case management for longer durations did not have significantly higher scores on activities of daily living. Duration of case management was not correlated with ability to perform activities of daily living as measured by the Barthel Index.

Implications: Anecdotal reports that case management improves functional ability in children may not be supported at the population level. Case management may be more effective as a time limited intervention. Future research may focus on sequential measures in children to determine whether case management may slow the rate of decline in degenerative disorders.

THE IMAGE OF HEALTH: CHILDREN'S BODIES AS A REFLECTION

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Purpose/Aims: The purpose of this focused ethnography was to describe Pacific Islander (PI) caregivers' values, attitudes, and beliefs about the size and shape of infant bodies.

Rationale/Conceptual Basis/Background: The burden of obesity has spread from adults to children. The World Health Organization estimates there are 155 million overweight children, and about 40 million who are obese (Bouchard, 2009). This is concerning because obese children tend to become obese adults, and childhood obesity contributes to increases in chronic conditions, such as diabetes, elevated blood pressure and lipid levels, cardiovascular diseases, early pubertal maturation, and psychosocial problems. Some ethnic groups are at greater risk for obesity and related sequelae, including Pacific Islanders. Some studies identify PI children as facing up to 60% greater prevalence of obesity than their grade-school peers. Cultural attitudes about food, beliefs about child feeding, and values connected to patterns of child growth likely influence what and how much caregivers feed their children.

Methods: Caregivers of a child 6-18 months of age were interviewed about a series of drawings of PI children with increasing body weights. Interviews were audio-recorded, transcribed, and reviewed. Next data were organized, categorized, and coded. Regular research team meetings were held to discuss findings, distill meaning, and identify themes.

Results: Three themes were identified: nature of the body, one can see quality of parenting in a child's size, and social monitoring assesses and responds to a child's appearance. Participants had concerns about infants at both ends of the weight spectrum and determined weight appropriateness based on functional and genetic determinants and physical characteristics. Good parents feed their children well. Accordingly, caregiving skills were questioned if a child was thin, but a heavy child was considered well-fed by responsive caregivers. Participants' peers and extended family offered advice based on the child's size with more concern voiced about thin children than heavy children. Some grandmothers reportedly took over feeding children they perceived to be too thin. Participants perceived their own child to look most like the drawing they identified as the healthiest boy or girl.

Implications: Interventions to combat the obesity prevalence in PI populations will likely be more successful if based on a model focused on multi-generational family environments. Culturally-linked intervention components will include attention to the historical and social monitoring preferences for a larger infant body size, as these cultural cues may be misleading indicators of caregiving quality.

References:

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MODIFYING THE DIABETES PREVENTION PROGRAM TO A SCHOOL-BASED SETTING

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Purpose: To modify and, evaluate the Diabetes Prevention Program (DPP) with adolescents in a school-based setting.
Background*:* Pediatric obesity is emerging as a 21st century global epidemic. In the U.S, 20% of children are overweight. The highest numbers are disproportionately found among minority children. Nevada has the 11th highest percentage of overweight youth ages 10-17 in the country. Overweight children are more likely to develop Type 2 diabetes (T2DM). Historically, only 2% of children diagnosed with diabetes were Type 1. Today, 30-50% are diagnosed with T2DM. It will likely surpass those with Type 1 in the next 10 years. Numerous individual, family, and school-based interventions have been developed to address the problem, all with varying results. The DPP was a national, multisite study of adults which demonstrated that intensive lifestyle education was more effective than Metformin at reducing the incidence of developing Type 2 diabetes. The DPP has been translated to several adult settings. It has not been studied with adolescence in school-based settings.
Methods: Faculty researchers collaborated with a local K-12 charter school to include grades 7-10 in the study. IRB approval was obtained. Grades 7 and 9 received the intervention with grades 8 and 10 serving as control. The DPP was modified for content and delivery appropriate for adolescence and taught over one school semester. All grades received pre and post measures, including Student Food Knowledge and Multidimensional Health Locus of Control surveys and the Cooper Walk/ Run Test as well as BMI.
Results: 7th grade students demonstrated higher overall scores on food knowledge than 8th, 9th, or 10th grade. On locus of control, the DPP group demonstrated lower mean scores on the Powerful Others scale, indicating that the intervention influenced how they perceived their health locus of control. In essence, the DPP group became more self-reliant at posttest by perceiving more control of their health while perceiving others as exerting less control in their health outcomes. In terms of Cooper distance traveled, the DPP group outperformed the control group. BMI results indicated that both groups demonstrated lower BMI at posttest.
Implications: A modified form of the DPP can be used with adolescence in school-based settings as a method to teach and reinforce principles of healthy eating and physical activity. However, in order to maximize its effectiveness, the DPP must be an integral part of the curriculum. In addition, we learned that in order for the intervention to be truly successful, we must secure the buy-in of not only administration and the instructors who will be delivering the curriculum, but parents as well. The home setting is where physical activity and nutritional habits are formed and role modeled by parents. If parents are not convinced of the relevance and utility of healthier eating habits and more rigorous and frequent physical activity for their children, no intervention, no matter how sophisticated, will be optimally successful at sustained behavior change in adolescents.

Funding: This study funded by a UNLV School of Nursing Obesity Grant.

INTERVENTIONS TO PROMOTE HEALTH I

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THE UNIQUE CONTRIBUTION OF RELIGIOUS/SPIRITUAL COPING WITH HEART FAILURE PATIENTS

Terry A. Larsen

A HEALTH IT INTERVENTION TO REDUCE TRANSITION-RELATED MEDICATION DISCREPANCIES

Cynthia F. Corbett, Stephen Setter, Kenn Daratha, Douglas Weeks, Joshua Neumiller, Alice Dupler, Lindy Wood

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TECHNOLOGY TO PROMOTE EVIDENCE-BASED OBESITY CARE

Bonnie Gance-Cleveland, Diane J. Skiba, Kevin Gibert, Lynn Gilbert

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USE OF PHOTO-ELICITATION IN EXPLORING ILLNESS EXPERIENCES WITH ALS PATIENTS IN KOREA

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THE UNIQUE CONTRIBUTION OF RELIGIOUS/SPIRITUAL COPING WITH HEART FAILURE PATIENTS

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Purpose/Aims: To examine factors that predict health-related quality of life (HRQoL) in adults with heart failure. Specific Aims: (1) to examine level of religious/spiritual coping, spiritual distress, demoralization, depression and HRQoL among adults with heart failure, and (2) to examine the relationships of religious/spiritual coping, spiritual distress, demoralization, depression and selected demographic variables (age, gender, race/ethnicity and length of living with HF) with HRQoL.
Rationale/Conceptual Basis/Background: Research suggests that the heart failure (HF) population is particularly vulnerable to depression due to neurohormonal derangement and its psychological impact resulting in spiritual distress and possible demoralization, which may affect quality of life. HF patients with depression have been found to have more hospitalizations than those who are not depressed. This study addresses the need for more research and attention on these variables with the HF population.
Methods: A cross-sectional correlation design conducted at a large regional cardiomyopathy clinic in Southern California (N=115). Participants completed a survey containing demographic questions, the Duke University Religion Index (DUREL), Religious Coping Scale (Brief RCOPE), the Demoralization Scale (DS), the Beck Depression Inventory-II (BDI-II) and the Kansas City Cardiomyopathy Questionnaire (KCCQ). Data Analyses: Descriptive and multivariate statistics. Multiple linear regression was utilized to produce the best combination of predictors of HRQOL.
Results: T-tests revealed significant differences for positive religious/spiritual coping $t(113) = 2.72, 95, 84, p < .05$ and approaching significance with HRQOL scores $t(113) = -1.91, 74.99, p > .05$ by gender. Women reported lower mean HRQoL scores 58.86 (SD 26.59) than men 68.57 (SD 24.77); and used more positive religious coping 20.95 (SD 4.97) than men 18.05(SD 6.20) $p < .05$. Correlation analysis found depression and demoralization to be highly correlated (r = .801; $p < .05$). A significant negative relationship between depression and HRQoL (r = -.645, $p < .001$), demoralization (r = -507; $p < .001$) and spiritual distress (r = -.218; $p < .05$) was found. Non significance (-.008 $p > .05$) was found between the DUREL and KCCQ scales. Length of living with HF had no significant relationships with any of the scales. One-way ANOVA revealed no significant differences in KCCQ scores based upon the demographic variables. Age category 55-64 approached significant differences by demoralization $F(2, 112 = 3.02, p = .054)$. Also, positive religious/spiritual coping scores by race/ethnicity $F(2,112 = 3.0, p = .054)$ approached significance. Tukey post hoc test conducted found no change in group difference significance. There is a trend towards statistical significance with Hispanics 21.26 (SD 5.04) more likely to use positive religious/spiritual coping than non-Hispanic participants 17.96 (SD = 6.42, $p = 0.54$). Regression analysis indicate the overall model significantly predicted HRQOL $R_2 = 0.424$, $F(4,110) = 20.267$, $p < .001$. The model accounted for 42% of the variance in HRQOL. Depression was the only variable that significantly contributed to the model.
Implications: A holistic approach to managing HF patients that considers the varied human responses of stress and coping that is culturally sensitive and gender appropriate and beneficial.

A HEALTH IT INTERVENTION TO REDUCE TRANSITION-RELATED MEDICATION DISCREPANCIES

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Purpose: To test an information technology-assisted system's impact on home care nurses' abilities to efficiently detect and resolve medication discrepancies during the hospital to home transition.

Background Rationale/Conceptual Basis: The transition from hospital to home is an exceptionally risky time for medication errors. Home care patients are vulnerable to medication discrepancies following hospital discharge because of their high illness acuity, comorbid conditions, functional impairments, complex medication regimens, and frequent medication regimen changes during hospitalization. Regrettably, several barriers currently limit nurses' abilities to address patients' transition-related medication discrepancies, including: 1) inaccurate hospital post-discharge instructions; 2) access to hospital discharge summaries rather than actual medical record data; and 3) medication lists from several potentially conflicting sources. The Economic, Humanistic, and Clinical Outcomes (ECHO) Model provided a framework to evaluate the impact of the transitional care intervention tested in this study.

Methods: Based on power analysis, 259 patients were recruited from two acute care hospitals for this randomized clinical trial. Inclusion criteria were: age 50 and older, diagnosed with at least 1 of 6 chronic illnesses, and receipt of home care skilled nursing post-hospital discharge. Control participants received home care services per usual care procedures. Intervention participants had 1 of 2 protocol-trained nurse interventionist deliver home care. The protocol included receipt of an electronic discharge medication list from the hospital and use of an electronic version of the Medication Discrepancy Tool© (MDT) to facilitate identification of medication discrepancies and planning for medication discrepancy resolution. All participants received a visit from a pharmacist, blinded to group assignment, to document discrepancies. The blinded pharmacist also reviewed participants' medical records to ascertain whether documentation existed showing that medication discrepancies had been resolved in both the control and intervention groups. Chi-square, t-test, and ANOVA were used to evaluate group differences.

Results: Despite similar demographic and health-related characteristics of patient participants, nurses identified and resolved similar numbers of medication discrepancies in both the control and intervention groups. Nurses resolved over 90% of the identified medication discrepancies. The pharmacist identified approximately twice as many medication discrepancies for patient participants in both the control and intervention groups as compared to the nurses.

Implications: Electronic communication of medication information when used between only two settings (i.e., hospital to home care) does not impact nurses' medication reconciliation effectiveness as compared to usual care. It is likely that only a *totally paperless* system will significantly improve medication information transfer between settings. The study findings highlight the complexity of the medication reconciliation during transitional care and provide knowledge for further research to improve medication safety.

TECHNOLOGY TO PROMOTE EVIDENCE-BASED OBESITY CARE

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Purpose: The purpose of this presentation is to describe the translation of evidence-based childhood obesity guidelines into practice using web-based training and health information technology decision support. The AHRQ funded study uses technology decision support to guide evidence-based care, to facilitate provider use of motivational interviewing, and to provide tailored patient education materials.

Background: The prevalence of obesity in children rose dramatically over the past four decades, especially among ethnic minority populations. Significant health disparities exist with minority youth at risk for obesity and its related chronic health conditions. School-based health centers provide primary care for many underserved, minority youth, and provide the opportunity for addressing these health disparities with increased access, early identification, and culturally appropriate intervention.

Approach: The National Association of Pediatric Nurse Practitioners (NAPNAP) and the American Medical Association have published recommendations for the prevention and treatment of child and adolescent obesity. These publications provide a comprehensive synthesis of the current evidence on maintaining healthy weight in children that incorporates the use of family-centered approaches to care such as motivational interviewing and brief focused negotiation skills to collaborate with families on a plan of care acceptable to them. However, the identified gaps in evidence included the lack of evidence on how to effectively translate these guidelines into practice. Past research suggests that publication of guidelines rarely changes clinical practice.

The technology we developed addresses identified barriers in the dissemination and implementation of guidelines through the use of web-based instruction coupled with computerized decision support.

Outcomes: This presentation will focus on the web-based training on the guidelines that has been developed to increase providers' understanding of current recommendations, and the computer support for clinical decision-making to prompt providers in implementation of evidence-based care. The health disparities collaborative and chronic care models are guiding frameworks for the study. The web-based training for providers includes learning sessions and the use of rapid cycle improvement strategies to monitor practice changes.

Conclusions: Web-based instruction is a more economical and efficient method of disseminating guidelines to multiple and geographically separated sites. In addition, computer technology can facilitate/support provider integration of current evidence into practice.

USE OF PHOTO-ELICITATION IN EXPLORING ILLNESS EXPERIENCES WITH ALS PATIENTS IN KOREA

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Background: Amyotrophic Lateral Sclerosis (ALS) is a progressive and degenerative neuromuscular disease which results in muscle weakness and atrophy throughout the body. ALS presents significant challenges for both patients and their caregivers due to the devastating characteristics of ALS and the fact that there is no effective treatment available so far. There has been only minimal focus on the illness experiences in the body of knowledge on ALS.
Purpose: The overall aim of the research was to explore illness experiences of ALS patients and their family caregivers in South Korea (SK). Specific aims were to describe illness experiences and their meanings of having ALS from the perspectives of patients and family caregivers in the sociocultural context of SK. The purpose of this project is to describe the advantages and limitations of photo elicitation as a research method for studying illness experiences with vulnerable populations in non-western culture country.
Sample: Purposive convenience sample of 15 ALS patients and their 14 caregivers were recruited via Korean Amyotrophic Lateral Sclerosis Association (KALSA) website. Patients in diverse clinical stages of ALS and their family caregivers were involved. Only one caregiver was not able to attend the interview because of her work.
Method: A qualitative ethnographic approach, enriched by photo-elicitation, was used for this study. Participants are asked to take photographs that show their experiences with ALS, encouraging them to show the characteristics of "Living with ALS," and the photos would present their own experiences and perspectives. After the photographs were developed, photo interviews were scheduled. Of the 15, 9 patients and out of 14, 8 caregivers took part in the photo interviews, providing between 1 and 24 photographs.
Results: Photo interview elicited participants' viewpoints and their illness experiences by capturing specific and wide range of experiences that are personally meaningful. Participants became more voluntarily, self-directed, and active throughout photo interview with concrete examples and rich descriptions of a particular event or occasion. Photo-elicitation was an unobtrusive observation to access spaces and events that are difficult to do through participatory observation. Participants were able to selectively choose what to show and not to show to the researcher. Photographs themselves can increase the degree of intimacy between researchers and participants bridging the culturally distinct worlds. Several limitations of photo-elicitation were identified; (a) some participants were reluctant to take photos, (b) physically disabled participants experienced taking photos itself as a barrier since they had to ask others to take pictures, and (c) participants expressed difficulties in knowing what to take pictures of for the research.
Conclusions: In this research, photo-elicitation was a supplementary method to support the interview and participatory observation. It was confirmed that the photo interview enabled the interview data to be richer and more detailed, and provided more in-depth understanding via visual explanation. Photo-elicitation can be a very useful tool for ethnography researchers to explore illness experiences. Specific research strategies should be considered for the limitations discussed.

INTERVENTIONS TO PROMOTE HEALTH II

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THE FAMILY COMMUNITY KITCHEN PILOT PROJECT: IMPACTS & IMPLICATIONS

Kala A. Mayer, Leika Suzumura

THE EFFICACY OF A MULTICOMPONENT INTERVENTION FOR ADHERENCE TO ART IN HIV+ INDIVIDUALS

Young Ran Yang

AUDIO RELAXATION PROGRAMS: INTERVENTION FREQUENCY AND DURATION REQUIREMENT

Hsin-Yi (Jean) Tang, Verna Harms, Toni Vezeau, Sarah M. Speck, Jill T. Jesurum, Barbara J. Riegel

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DIABETES CARE IN A COMMUNITY HEALTH SYSTEM: PATIENT AND PROVIDER PERSPECTIVES

Wanda J. Borges, Terry Keller

THE FAMILY COMMUNITY KITCHEN PILOT PROJECT: IMPACTS & IMPLICATIONS

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Rationale/Purpose: Disproportionate rates of obesity and chronic disease in underserved U.S. populations highlight the increasing importance of health outreach. Healthy eating serves as a protective factor against many diseases and promotes health and well being. But "healthful" fresh foods are perishable and more expensive to prepare and consume than processed foods. The challenge is to develop community health approaches that support food insecure communities in incorporating dietary changes that reduce the incidence & prevalence of nutrition-related chronic diseases. One approach to promote healthy eating is through community kitchens. Community kitchens are places where community members pool knowledge, resources, and labor to prepare, cook and consume food. Unlike most food programs to date, the community kitchen approach incorporates community food culture and preparation skills into decisions regarding food access and knowledge provision. The purpose of the Family Community Kitchen Project is to address food insecurity and diet related chronic diseases in a low-income community of color through community involvement and food knowledge and skill development.

Undertakings: The kitchen began in October 2009 under the guidance of a community kitchen leader who took the initiative to create collaborations with the local public health center WIC clinic, local community center, and academia. Since inception, the three hour sessions have been held monthly in a community center. Four to six main dishes/sides are made per session. Meal selection is based on the needs and preferences of participants and their families. The kitchen utilizes volunteer nutrition and culinary students from area universities as recipe leaders and nutrition and culinary skill educators. Food is obtained through local food partnerships including: *PCC Natural Markets, Clean Greens,* and the *Tonnemaker's Farm*.

Aims/Outcomes Achieved: Goals to increase access to healthy foods, increase consumption of healthy foods, enrich cooking and meal planning capacities, foster social networks, and bring people of different backgrounds together were evaluated from October 2009 to June 2010 through pre-post surveys, pre-post focus groups and observations. Positive changes were noted in fruit and vegetable consumption as well as in meal planning skills. Focus group comments such as, "We came together and had fun … I kept coming and coming and I learned new things and I tasted new things and it is kind of now alright," indicate that the program is a success. Goals are being accomplished through sharing cultural food ways, peer education, kid-desired participation, increasing access to quality foods, and creating a supportive and motivating food environment for families.

Conclusions: Since community cultural identities are complex, dynamic, socially constructed labels that have diverse meanings and outcomes over time, it is important that nursing scholars continue to evaluate the impact of cultural care practices on health outcomes. Project evaluation helped tailor the kitchen to changing participant needs over time, assisted the coordinator in program improvement, and helped describe the value of the family community kitchen model for the community. Results highlight the importance of research in practice and provide nurses with the knowledge and skills to improve care and achieve dietary-related health impacts.

THE EFFICACY OF A MULTICOMPONENT INTERVENTION FOR ADHERENCE TO ART IN HIV+ INDIVIDUALS

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Background: Antiretroviral therapy (ART) has had dramatic effects in reducing the viral load of persons with HIV, improving their immunologic status, physical health, and often their quality of life. However, incorrect or inconsistent adherence to ART compromises the effectiveness of medications to achieve viral suppression, and near perfect (>95%) compliance is required for both immediate and long-term clinical success. Unfortunately, mean adherence rates to ART generally range from 50 to 80%, and only a minority (20–40%) of patients typically achieves 90% or greater adherence.
Objectives: The objective of this paper is to review the state of science of a multicomponent intervention for adherence to ART and to explore whether this intervention, compared with standard care, resulted in improved adherence to ART.
Methods: Determining the state of the science of multicomponent intervention was undertaken by searching computerized databases Medline, CINAHL, Cochrane CENTRAL, PsycInfo, EMBASE, National Guideline Clearing House with the key words of "adherence," "intervention," "HIV or AIDS" and "Randomized controlled trials", "antiretroviral* or ART". Manual searching for studies relevant to the intervention was also used. Education intervention studies combining with other additional interventions were preferred. Studies using motivational interviewing or cognitive behavioral intervention alone, and children targeted studies were excluded. Only randomized controlled trials (RCTs) were included. 11 RCT studies out of 224 were chosen for review and they were published between 1999 and 2008.
Theoretical Framework: The information-motivation-behavioral skills (IMB) model of adherence to ART was used to understand, predict, and promote adherence to ART regimens. This model based on an analysis and integration of theory in social and health psychology asserts that information, motivation, and behavioral skills are fundamental determinants of a wide range of health-related behaviors.
Results: Evidence from nine studies of eleven to support the efficacy of multicomponent intervention which incorporates individual education and additional interventions in improving adherence to antiretroviral therapy were found. Interventions that targeted the improvement of patients' medication management skills were successful. Logistic regression analysis indicated that individuals in the self-management group were significantly more likely to take 80% or more of their doses each week than individuals in the control group (OR 7:8, 95% CI 2:2–28.1). However, studies were not able to determine whether improved adherence extended to improved viral or immunologic outcomes. Five studies included virological outcomes only and seven studies included both virological and immunological outcomes.
Conclusion and Discussion: Evidence to support the efficacy of multicomponent intervention to improve adherence to ART was found. Nine RCTs of eleven demonstrated a beneficial effect of the multicomponent intervention in improving adherence to antiretroviral therapy. However, it has not been determined whether improved adherence extended to improved viral or immunologic outcomes due to incongruent results across studies. There is a need for standardization and increased methodological rigour in the conduct of adherence trials.

AUDIO RELAXATION PROGRAMS: INTERVENTION FREQUENCY AND DURATION REQUIREMENT

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Purpose: The primary purpose of this study was to explore the minimum frequency and duration requirement of two audio relaxation programs for blood pressure reduction. The secondary objective was to compare the trend of efficacy between the two programs.
Rationale/Conceptual Basis/Background: Audio relaxation interventions have been shown to effectively modulate parasympathetic activities; however the intervention frequency and duration that is needed to achieve the effect remains unclear. The intervention operational definition was either highly variable or simply not reported in the literature.
Methods: This was a prospective study using non-probability sampling with two intervention groups, and without a control group. The inclusion criteria included older adults greater than 65 years old, with the systolic blood pressure between 140 and 160 mmHg if not on medication or over 130 mmHg if on an antihypertensive medication, English speaking, normal hearing with or without the hearing aids, Mini Mental Status Examination (MMSE) score 20 or above. Forty-one hypertensive elderly, with mean age of 85 years old (range 74-97 years), were randomly assigned to an audio program of either Mozart (Andante from Symphony #13 in F Major, K 112 and Serenade in D Major, K 250) or Revitalizer II (an audio guided-relaxation program) aimed to stimulate parasympathetic responses through brainwave regulation. The intervention consisted of 12 sessions of supervised 12-minute training over four weeks. Blood pressures were measured before and after each session.
Results: Both audio programs effectively reduced systolic and diastolic blood pressures ($p<0.01$). There was no significant baseline or trend difference between the groups. In the combined group analysis, the systolic blood pressure reduction over the 12 sessions ranged from 2 mmHg to 11 mmHg. This is congruent with the clinical significance of 5 mmHg reduction, as it has been suggested that a 5 mmHg reduction in systolic blood pressure would result in a 9-14% reduction in cardiovascular-related mortality. In this study, the blood pressure reduction peaked at the 2nd (8.2 mmHg reduction) and the 3rd (9.7 mmHg reduction) sessions followed by a period of oscillation (mean reduction 6.7 mmHg). The efficacy trend reached its stable state from the 9th to the 11th sessions (mean reduction 9.8 mmHg). The blood pressure reduction at the 12th session was sustained, however with signs of possible deterioration (7.6 mmHg). Similar patterns were noted in both intervention groups.
Implications/Conclusions: The findings suggest an effective self-regulation model for two audio relaxation programs for blood pressure reduction. The results show a training process of 1) exploring and acquainting stage, followed by 2) re-adjusting and fatigue stage, and 3) stabilization and sustaining stage. The slight deterioration at the 12th session may be caused by the termination of a therapeutic relationship. The findings indicated that, to be sustainably effective, the minimum frequency and duration for both audio relaxation programs was nine sessions over four weeks, 12-minutes per session, and a minimum of three sessions each week. These results provide a foundation for future studies that involve similar intervention promoting autonomic nervous system balance.

DIABETES CARE IN A COMMUNITY HEALTH SYSTEM: PATIENT AND PROVIDER PERSPECTIVES

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Purpose/Aims: The purpose of the study was to describe provider and patient perspectives of the impact of the Chronic Care Model on diabetes care in a community health system along the US-Mexico border.
Rationale/Conceptual Basis/Background: Diabetes self-management accounts for > 90% of the management of diabetes. In spite of published guidelines for diabetes self-management education (Funnell, et al., 2010), Diabetes education programs are poorly attended with several studies demonstrating attendance rates of <50%. Framing diabetes education as a health service, the Behavioral Model of Health Services Utilization has been adapted for this research project (Aday & Andersen, 1997). The model considers individual and system determinants of the use of health care resources.
Methods: The study was conducted in a community health center providing services at multiple sites along the US-Mexico border area that had adopted the Chronic Care Model (CCM) as a service delivery model that incorporates decision support and patient involvement in goal-setting. The study focused on a unique aspect of a component of the disease management process, specifically diabetes education delivery. Patient perceptions of diabetes education resources and care delivery were identified using structured interviews conducted with patients with diabetes using the Patient Assessment of Chronic Illness Care© (ACIC) survey instrument. Structural determinants of the use of diabetes education were assessed through structured interviews of individuals responsible for diabetes education at each site using the Assessment of Chronic Illness Care© (ACIC) survey instrument.
Results: The study was conducted at four community health center sites along the US-Mexico border. Patient perceptions of chronic illness care were significantly different between sites for activation of services, goal setting and decision support (F = 4.8, 5.5, 5.8, p< .05, < .01 and < .01, respectively). Community health center sites using promotoras had higher scores in activation of services, decision support and goal setting compared to sites not using promotoras. Community health center sites using promotoras (community health workers) had greater congruence between provider perception and patient perception of chronic illness care.
Implications: The promotoras are the system's interface with the community. As such, they are both members of the community and the organization. They are often the most trusted members of the system as well as the ones patients see the most. The CCM does not appear to support these workers as well as it does the clinical providers and diabetes educators, which could be a system constraint that hinders the full potential of the CCM. Developing innovative ways to extend decision-support and specialized expertise to promotoras as they work with these populations is necessary.

ISSUES IN MATERNAL CHILD HEALTH

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MOTHER'S SOCIOECONOMIC STATUS, MEDICAID, AND BIRTH OUTCOMES IN ARIZONA

Barbara L. Wilson, Matthew J. Butler

HOME VISITING IN MONTANA: EFFECTS ON LBW AND PREMATURE BIRTHS AND MEDICAID COSTS

Jo Ann Walsh Dotson

SHORTENING THE LENGTH OF LABOR WITH THE USE OF A PEANUT BALL WITH AN EPIDURAL

Christina Tussey, Emily Botsios, Richard Gerkin, Juany Gamez

CULTURALLY SAFE MATERNAL AND CHILD CARE: AN INNOVATIVE CLINIC MODEL

Kathy Reavy, Kim Crosby, Mary Hereford

SALIVARY CORTISOL PATTERNS OF MOTHERS AND THEIR PRETERM INFANTS DURING HOLDING

Madalynn Neu, Mark Laudenslager

MOTHER'S SOCIOECONOMIC STATUS, MEDICAID, AND BIRTH OUTCOMES IN ARIZONA

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Purpose/Aims: The purpose of this study was to determine whether the implementation of Medicaid in Arizona influenced newborn outcomes (birthweight, gestational age, newborn Apgar scores, and number of prenatal visits) for vulnerable, at-risk women using a combination of educational status and marital status as a proxy for socioeconomic status (SES).
Rationale/Background: Early and adequate prenatal care (PNC) has long been considered the foundation for improved pregnancy outcomes, particularly for women deemed to be at risk or those with preexisting health conditions, such as diabetes or hypertension. While some have argued that the impact of PNC on birth outcomes remains inconclusive, it is acknowledged that PNC provides an entry into the health care system for women in need, particularly those of lower socioeconomic status (SES), and therefore serves an important purpose. To help provide health services for the indigent, the social security amendments authorizing the Medicaid program was passed in 1965. For a variety of reasons, Arizona did not adopt Medicaid until 1982, 15 years after most other states had implemented Medicaid for indigent populations, notably childbearing women. This provided a unique opportunity to compare the impact of Arizona's Medicaid program on birth outcomes by providing a robust comparison group (all other states) with fully implemented Medicaid programs, and an extended pre-Medicaid baseline.
Methods: The start date of Arizona's Medicaid program (AHCCCS) was October 1, 1982. To measure the impact of AHCCCS on PNC and subsequent outcomes, we approximated SES by using a combination of educational attainment and marital status. In addition to a summary of maternal socio-demographic variables comparing the mean of Arizona with other states, we measured the effect of Medicaid implementation on birth outcomes by comparing what happened before and after the implementation of AHCCCS (using the U.S. Natality Data from the National Center for Health Statistics to analyze birth outcomes from 1981 to 1984) while controlling for these sociodemographic differences.
Results: We determined that the Arizona Medicaid program improved birth outcomes for unmarried women with less than 12 years of education by increasing the likelihood of initiating PNC in the first trimester and increasing newborn birth weights by 26.6 grams.
Implications: Because the implementation of Arizona's Medicaid program in 1982 resulted in earlier initiation of PNC and a slight improvement in birthweight for mothers with low SES, this study has health policy implications for nurses and other healthcare professionals working with women at risk. Even though the newborn weight gain is only minimal, the early initiation of PNC suggests Medicaid provides some positive effect for childbearing women of low SES.

HOME VISITING IN MONTANA: EFFECTS ON LBW AND PREMATURE BIRTHS AND MEDICAID COSTS

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Purpose and Aims: The purpose of this study was to examine public health home visiting services in Montana; specifically, the study examined the predictive capacity of demographic factors to identify premature and low birth weight births and to assess the impact of home visiting during pregnancy on birth outcomes and Medicaid costs.
Rationale/Conceptual Basis/Background: Home visiting is "ingrained" in maternal child health services nationwide, yet is an expensive service that is historically difficult to evaluate. Policy makers continue to support home visiting, as evidenced by the inclusion of large increases in home visiting funding in recent health reform legislation. Public health nurses are the primary providers of home visiting services in Montana, and arguably, in the U.S. and as such, have a responsibility to evaluate the service delivery method in order to improve what is undoubtedly, and will continue to be, an imperfect but valuable service.
Methods: The study was quasi-experimental, using a retrospective case control design. Low birth weight and premature birth rates and infant Medicaid costs of high risk women who received home visiting services were compared to rates and Medicaid costs of similarly at risk women and their infants. Demographic factors studied included maternal age, race, education, residence location, marital status and medical service payer. Risk status was also assessed based on medical indicators identifiable prior to or early in pregnancy, including history of previous low birth weight or premature birth and chronic hypertension.
Results: Birth outcomes and Medicaid costs for over 620 home visited high risk pregnant women were compared to outcomes for approximately 6000 similarly at risk women who did not received home visiting services. The study found that demographic factors alone did not accurately predict poor birth outcomes (low birth weight and premature birth); inclusion of medical risk factors identifiable prior to or early in pregnancy increased predictive capacity. The study did not find significant differences in the incidence of premature or low birth weight birth based on receipt of home visiting services; however, the low birth weight rate was lower in home visited clients. Home visiting services did not significantly affect Medicaid costs for infants born to women who received the services in the prenatal period.
Implications: Home visiting programs should work collaboratively with medical providers to assure that clients with medical and behavioral risks are referred early in pregnancy. Home visited clients had significantly more medical prenatal visits than similarly at risk women who did not receive home visits; considering the association between adequate number of medical prenatal visits and improved birth outcomes, home visiting may contribute to improved outcomes by assuring attendance at medical prenatal care appointments. Birth certificates, Medicaid and public health program data are readily available and increasingly rich in factors that can be used as program evaluation tools.

SHORTENING THE LENGTH OF LABOR WITH THE USE OF A PEANUT BALL WITH AN EPIDURAL

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Purposes/Aims: It has been hypothesized that a laboring patient after receiving an epidural and using the exercise ball (peanut ball) placed between a laboring patient legs, as compared to standard nursing care, may provide a shorter first and second stage labor and result in fewer operative deliveries.

Rationale/Conceptual Basis/Background: The birthing ball (or "peanut ball") has been used in labor and delivery units, but there is little research to support its effectiveness in shortening the length of labor. Pelvic outlet diameters will be increased to allow more room for the fetus to descend. Positions in which patients sit upright or lie on their side have been found to lead to more progress in labor than sitting or supine positions (Adachi, Shimada, Usui, 2003). The peanut ball helps the fetus to become better aligned for the passage through the pelvis. Opening of the mother's legs is thought to facilitate fetal rotation or descent, which could in turn mitigate the pain associate with abnormal positions and prolonged labor (Simkin 2004). Epidural analgesia, like many medical interventions, has been associated with certain unintended effects. Epidural anesthesia can result in increased mal-presentation of the fetus, more operative deliveries, use of oxytocin to augment labor, and prolonged labors. Epidural anesthesia prolongs the active phase compared to the Friedman curve criteria (Alexander, 2002, Cesario 2004, Rinehart).

Methods: The randomization assigned 198 laboring women to either the peanut ball (106) or no peanut ball being utilized (92). The consented singleton laboring women that received an epidural for labor received a position changed every 1-2 hours from side to side or semi-fowler. The peanut ball was applied between the patient's legs after the epidural. The control would utilize the time the epidural was placed as the start of monitoring the patient participating in the study.

Results: The primary outcome was the PB had a first stage labor time of 258.8 minutes and the control had 341.9 minutes, difference of 83 minutes ($p<0.008$). The PB group had a 21.3 minute second stage and the control had a 43.5 minute a difference of 22.3 minutes ($p<0.001$). The use of the vacuum assisted delivery was PB 6.7 and 9.7 in the control. The use of the forceps was PB 1.9 and 2.2 in the control. The cesarean section was PB 10.3 and 23.7 in the control ($p< 0.011$). The secondary outcomes included maternal age, gestational age of fetus, weight of newborn, augmentation of labor with oxytocin and did not differ significantly between the two groups. With one exception the PB group had a cervical dilation that was 4.7 cm versus the control of 4.2 cm at the start of the study. Every one hour oxytocin used increased pushing time by 1.2 minutes. Length of pushing was variable with the use of oxytocin or parity.

Implications: The use of the PB during labor for a patient with an epidural, as compared with standard nursing intervention, did significantly reduce the length of labor, without adverse neonatal outcomes. There needs to be more discussion on using the Friedman curve criteria to determine failure to progress when taking into consideration a patient receiving an epidural anesthesia can have a prolonged active phase of labor.

CULTURALLY SAFE MATERNAL AND CHILD CARE: AN INNOVATIVE CLINIC MODEL

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Purposes/Aims: The aims of this presentation are to: 1) describe the role of peer health adviser; 2) increase understanding of the importance of the new role; c) differentiate the roles of interpreter and peer health adviser.

Rationale/Background: More than 50 ethnic groups speaking nearly 70 languages or dialects are represented in this northwest city due to its designation as a destination for refugees with no family or personal contact with a refugee group in any location. More than 50% of the relocating refugee women are of child-bearing age. An innovative clinic entitled CARE (Culturally Appropriate Resources and Education) Clinic for maternal and pediatric health care is a unique, new clinical model to reduce healthcare barriers and provide essential services such as health care, health advising and parenting education. To meet the needs of both this vulnerable population and the health care team to reach best outcomes, a new role of peer health adviser was created.

Brief Description of the Undertaking/Best Practice, Including the Approach, Methods, or Process Used: This unique approach to perinatal and pediatric care for vulnerable non-English speaking refugee patients is rooted in cultural competence, cultural awareness and cultural safety theories. The role of peer health adviser was visualized through adaptation of overlapping ecological models representing the refugees' and healthcare providers' environments and the peer health adviser's movement between the two. The best practice description of the role of interpreter is a voice for the provider and the patient, repeating what each of them states without adding additional information. A peer health adviser is identified as a leader within her ethnic community. She speaks both English and her people's language. She assists pregnant refugee women in coordinating access to maternal-child health and family services; assists providers' understanding of cultural practices and needs; assists nurse educators in preparation and delivery of culturally appropriate and safe parenting education; moves comfortably and safely between the culture of refugee and the culture of western health care.

Outcomes Achieved/Documented: Including the role of peer health adviser in the CARE clinic model provided a safe, supportive health care environment as evidenced by consistency, knowing what to expect, female only pre-natal environment, strengths based approach to care, restoration of dignity and respect. There is a shared sense of community and trust. One refugee stated the clinic "feels like home." Examples of other outcomes include childhood immunizations are 99% current, no-shows for appointments are reduced to $\leq$ 3%, provider satisfaction with interpreter services at 99%. (Note: All evaluations are research based and IRB approved.)

Conclusions: A tool kit is being created for program replication in other U.S. areas. Effectiveness of the new role of peer health adviser is evident throughout the program. Continuing research partnerships between the medical center and the university make possible the expansion of culturally safe, affordable health care for our refugee communities and new knowledge and opportunities for our nursing students and faculty.

SALIVARY CORTISOL PATTERNS OF MOTHERS AND THEIR PRETERM INFANTS DURING HOLDING

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Purpose: This study compared mother-infant co-regulation in salivary cortisol in dyads who had experienced one hour of kangaroo holding daily for 8 weeks to dyads who experienced traditional blanket holding and a control group.

Background: Co-regulation has been described as an important quality of interaction during which the dyad functions as an integrated entity to regulate each other's behavior. Quality mother-infant behavioral interaction is associated with infant development of self-regulation. Physiologic co-regulation has been less studied, especially in regard to stress reduction and the HPA axis, and during the infant's earliest experiences of holding.

Methods: Mother-infant dyads (n = 79) participated in an 8-week home intervention encouraging holding. Infants were born at 32 to 35 weeks gestational age. Dyads were recruited when infants were 2 to 4 weeks of age and randomly assigned to 3 groups: kangaroo holding (skin-to-skin contact at least 1 hour a day); blanket holding (baby in mother's arms at least 1 hour a day); and control (no restrictions on holding time or style). Kangaroo and blanket holding groups received 60-minute weekly visits from an RN who encouraged holding. The control group received 15 minute social visits. Salivary cortisol was collected from dyads at the beginning, and after 30 and 60 minutes of holding at weeks 1, 2, and 8 of the study. At each time period the absolute differences in levels between mother and infant were determined. Coregulation was operationalized as less difference between maternal-infant cortisol levels after 30 minutes and 60 minutes of holding as compared to immediately before holding. Area under the Curve (AUC) of cortisol levels of mother and infant during each holding session also was calculated. Infant emotional regulation was assessed with the Bayley Developmental Scales at 12 months of age.

Results: Repeated measures analysis showed no differences among groups in cortisol coregulation. Less difference between maternal and infant cortisol after 60 minutes of holding in week 8 was correlated with infant orientation (p = .046) and infant regulation (p = .058) at 12 months of age. Infant AUC showed significant differences among groups (p = .-015). AUC of infants in the blanket holding and control groups remained similar in each holding session. Infants in the kangaroo group dropped significantly from baseline to week 2 (p = .000) and increased from week 2 to 8 (p = .002).

Implications: With the amount of maternal attention and holding time controlled, type of holding or a home visiting intervention may not influence physiologic co-regulation of the HPA system during holding in the early weeks after birth. Co-regulation of the HPA axis may benefit infant development of emotion regulation. Future research investigating explanations for dyad co-regulation may be helpful to mothers in facilitating their preterm infant to develop emotion regulation. Kangaroo holding may assist infants in reducing stress levels in the early few weeks of life, but this benefit seems to decrease with increasing infant age. Future research examining optimal duration of kangaroo holding and association with measures of infant emotional regulation is needed.

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ISSUES IN NURSING EDUCATION

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INCREASING QUALITY IN PEDIATRIC NURSING CLINICAL EDUCATION

Sharifa Al-Qaaydeh, Melissa Black, Madeline L. Lassche

THE BENEFITS OF INCORPORATING HOLISTIC COMFORT AS AN APPROACH TO NURSING EDUCATION

Miki Goodwin, Lori L. Candela

GENERATIONAL DIFFERENCES IN THE ORGANIZATIONAL COMMITMENT OF NURSING FACULTY

Lara Carver, Lori L. Candela, Antonio Gutierrez

A PROJECT THAT RETAINED DISADVANTAGED AND MINORITY NURSING STUDENTS

Vaneta M. Condon, Earline W. Miller

INCREASING QUALITY IN PEDIATRIC NURSING CLINICAL EDUCATION

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Purpose: The purpose of this pilot project was to examine sources of anxiety in nursing students before and after pediatric clinical rotations. This project sought to identify core anxiety provoking elements in an effort to evaluate quality education and improve student performance.

Rationale: Pediatric clinical is often stressful to nursing students. This anxiety leads to fear, thus hindering students' discovery. Novice nurses fear performing procedures, making errors, and the unknown. In pediatric rotations, students fear making a mistake, working with sick children, understanding how to interact with families, and administering medications. Few studies examine change in fears before and after a pediatric clinical experience. In this study change in perception was assessed through the use of the "Pediatric Student Assessment Tool" (PSAT), an instrument that specifically targets sources of fear and anxiety among pediatric nursing students. The results of this instrument can be utilized by educators to increase quality pediatric experiences by reducing perceived student anxiety.

Methods: A descriptive, quantitative design was used to explore nursing student perceptions of pediatric clinical experiences through the use of the PSAT. This tool assesses student experience with children and evaluates common fears associated with the pediatric clinical rotation. The sample consisted of 144 nursing students. The mean age was 28.5 years, mean GPA upon entering was 3.49, and the percentage of males and females was 26% and 74% respectively. Questions were formulated based on literature that identified areas of fear and anxiety. Since this data was originally collected for educational purposes and used as pilot data, this tool was not tested for validity and reliability. IRB exempt approval was obtained.

Outcomes Achieved: Differences in pre and post scores were measured to evaluate changes in perceptions related to the pediatric experience. Topics that changed the least were causing a child pain, causing emotional harm, and helping children and families cope during painful procedures. Performing a pediatric assessment changed the most. "Fear of causing pain" closely correlates with previous literature and demonstrates a core area for educational improvement. Similar to previous studies, the fear of potentially inflicting pain on a child was found to be a significant source of anxiety and concern for participants in this project. The frequency and similarity in these results suggest a significant lack in student preparation for the pediatric experience.

Conclusion: Pediatric clinical nursing rotations have often been viewed as a source of stress among nursing students. Students fear working with sick children, administering medications, interacting with patients and families as well as making mistakes. Fears and anxieties can often become a roadblock for students and performance can suffer. Using a survey instrument to gauge fear and anxiety in students within the pediatric nursing clinical rotation can direct faculty to the areas of most concern to students. Faculty can then work on decreasing these fears to improve the performance and increase the quality of pediatric clinical educating.

THE BENEFITS OF INCORPORATING HOLISTIC COMFORT AS AN APPROACH TO NURSING EDUCATION

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Purpose: The purpose of this study was to explore how concepts of holistic comfort theory taught in nursing school can sustain nurses transitioning to practice. Nurses who experienced learning about holistic comfort in their educational program were followed to determine how they applied it as a philosophical approach early in their careers.
Background: Nurses entering the healthcare arena are likely to encounter a gap in preparation from school to practice. Despite well-intentioned transition programs, nurses struggle to keep up with the reality of demanding schedules, stressful work environments and management of non-nursing tasks, such as their own comfort. Holistic comfort, a concept usually associated with patient care, offers an innovative approach to nursing education as a way to uphold new nurses transitioning into practice.
Methods: A phenomenological process, using van Manen's qualitative methodology in education, guided research into the lived experience of new nurses and their use of holistic comfort measures. A convenience sample of nine newly practicing nurses was recruited. All were graduates of a second-degree, accelerated baccalaureate nursing program which embraces holistic comfort as a learner-centered philosophy and teaches its concepts across the curriculum. Through semi-structured interviews the nurses recalled what holistic comfort meant to them in school, and described the lived experience of assimilating holistic comfort into their attitudes and behaviors in practice. Themes were established and a conceptual framework was developed to better understand their lived experiences.
Results: Holistic comfort was experienced as a beneficial approach to transcend unavoidable difficulties for nurses transitioning from school to practice. Participants described how, in school, holistic comfort facilitated meaningful learning and the acquisition of self-strengthening behaviors. They described how this helped ease them into the realities of the profession. The nurses used holistic comfort strategies attained in school to overcome anxiety, manage complex skills and tasks, find appropriate resources and advocate for the best outcomes in applied situations. Patient safety, pride in patient care and feeling well prepared for the role, were attributed to nurses using aspects of holistic comfort on a daily basis personally, and when interacting with others.
Implications: Results suggest holistic comfort is experienced on a continuum from nursing education through practice, and is an important factor for new nurses in transition. The study of holistic comfort is important to nursing since it offers new insights about how nurses internalize a highly demanding career. The consequence of enhanced quality and safety in patient care provides compelling indications that holistic comfort not only prepares nurses for the realities of practice, but also positively affects their patients' outcomes. The functional conceptual model created for this study can be used to develop quantitative metrics to help transitioning nurses in the future. Holistic comfort incorporated into education and transition programs may narrow the preparation gap and strengthen the individual for the enormity of a nursing career. Moreover, patient safety and satisfaction are likely to benefit from this approach to preparing nurses for practice.

GENERATIONAL DIFFERENCES IN THE ORGANIZATIONAL COMMITMENT OF NURSING FACULTY

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Purpose: To describe organizational commitment and generational differences in nursing faculty.

Background: The protracted RN shortage is well documented. Less known is the national nursing faculty shortage that directly impacts that shortage. In 2009, the AACN reported that nearly two-thirds of schools responding to a survey were not able to admit qualified students due to insufficient numbers of faculty. The problem is expected to worsen as two-thirds of the current nursing faculty workforce is expected to leave their positions in the next twenty years. Currently, many faculty are delaying retirements even as younger nurses are moving from clinical to academic practice. For the first time, the span of nursing faculty covers four distinct generations. Academic administrators are looking to not only recruit but to retain their generationally diverse faculty. Yet little is known about what different generations of faculty want or need in order to increase their commitment to an academic organization.

Methods: A cross sectional, descriptive design was used with random stratified sampling procedures. Surveys measuring organizational commitment and related constructs were electronically sent to 4,886 faculty yielding a 31% response rate.

Results: To answer the three research questions we posed, data were submitted to descriptive statistics, correlations, a one-way MANOVA, a stepwise linear regression analysis (for predictive purposes), and a discriminant function analysis (DFA). Results of the MANOVA show that generational cohort (Veterans, Baby Boomers, and Generation X) had the strongest influence on Affective Commitment (AC), Perceived Organizational Support (POS), Perceived Person-Organization Fit (PPOF), Developmental Experiences (DE), and Global Job Satisfaction (GJS), although results were statistically significant on the other three outcome measures as well: Work Values (WV), Normative Commitment (NC), and Continuance Commitment (CC). The stepwise results indicate that POS, PPOF, GJS, and DE were good predictors of AC whereas POS, PPOF, GJS, and WV significantly predicted NC. In terms of CC, POS, GJS, and WV were significant predictors. It is noteworthy that the predictors for CC explained a low amount of variance (5%), which supports the larger body of literature on organizational commitment. Finally, the DFA demonstrated that the eight indicators (i.e., AC, NC, CC, POS, PPOF, WV, DE, and GJS) were adequate discriminators of generational (group) membership; both discriminant functions explained approximately 12% of between-group (i.e., generational cohort) variability.

Implications: The data from the study supports the notion that the concepts of organizational commitment and generational differences are related and that each generational cohort has its own unique profile of organizational commitment. The study found that Veterans differed significantly from Baby Boomers and Generation X faculty on more than one measure. This information may be helpful to employers designing strategic efforts to increase commitment to the academic organization based on individual generational needs.

A PROJECT THAT RETAINED DISADVANTAGED AND MINORITY NURSING STUDENTS

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Purposes/Aims: Opportunities for disadvantaged and minority students to be recruited, retained, and graduated in a nursing education program.
Rationale/Background: Problems confronting improved health care outcomes for the American population include nursing shortages and health disparities among minorities. One possible solution which addresses both problems is giving opportunities and providing support for disadvantaged and underrepresented minority students to become registered nurses.
Description of the Project: A model was developed and a proposal for a project to increase nursing workforce diversity was accepted and federally funded for a three year period. Because the disadvantaged and ethnic groups underrepresented in nursing are educationally disadvantaged, the program implemented included pre-entrance preparation as well as academic, social, and financial, and social support.
Seventy-seven students who did not meet the usual admission standards were accepted to the program under somewhat altered admission requirements. The one quarter pre-entrance program focused on increasing knowledge and skills related to: critical thinking and study skills, professional nursing, math, medical terminology, writing and reading for nursing. In addition, academic, social and financial support activities were implemented in both the pre-entrance and clinical nursing programs.
Outcomes Achieved/Documented: Ninety-one percent of the 77 students graduated with either a BS (75%) or an AS (16%) degree in nursing. Up to the present time 90% have passed NCLEX-RN and are currently practicing RNs. Three percent are currently completing nursing graduation requirements. Less than eight percent have failed or dropped out of nursing.
Conclusion/Recommendations: Provided the opportunities and support needed, disadvantaged and minority students can be successful in nursing education. Altering entrance requirements for this group may be necessary. Providing a pre-entrance program, academic, social, and financial support were related as very important/important to their success by program participants. Projects replicating use of this model and reporting the results in nursing journals and conferences is recommended.

Funding: Federally funded grant (HRSA #D19HR02634).

ISSUES IN PSYCHIATRIC/MENTAL HEALTH

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SMOKING BEHAVIOR CHANGE READINESS IN PSYCHIATRIC INPATIENTS

Victoria L. Morrison, Jeannine Loucks, Dana Rutledge

PERCEPTIONS OF POSTPARTUM WOMEN EXPERIENCING DEPRESSION AND THEIR MEDICAL MANAGEMENT

Shalise R. Pollock

SUFFERING: DEPRESSION ON THE STREETS

Rebecca Cross, Sally L. Maliski, Aaron Strehlow, Lynn V. Doering

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BIOLOGICAL LINK BETWEEN MATERNAL OBESITY AND THE DEVELOPMENT OF POSTPARTUM DEPRESSION

Elizabeth J. Corwin

DEPRESSIVE SYMPTOMS, SELF-EFFICACY AND ADHERENCE IN PATIENTS WITH TYPE 2 DM

Jamie E. Adam

SMOKING BEHAVIOR CHANGE READINESS IN PSYCHIATRIC INPATIENTS

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Purpose: To describe clinical smoking behaviors, severity of tobacco addiction, and readiness to quit in smokers discharged from a Behavioral Health Services (BHS) inpatient unit.

Rationale/Conceptual Basis/Background: Tobacco dependence contributes to multiple chronic illnesses and deaths. Addiction to nicotine is especially problematic among persons with mental illness with smoking rates twice those of persons with no mental illness (41% v. 23%). Smoking prevalence rates in bipolar patients have been reported as high as 68.8 %. Nicotine binds to several neurotransmitters related to mental illness including dopamine, norepinephrine, acetylcholine, glutamate, serotonin, B-endorphin, and GABA. Researchers have also hypothesized a relationship between depression and nicotine dependence due to genetic vulnerability. Smoking cessation interventions have been found effective in persons with mental illness. However, the process of smoking cessation is not well studied in this vulnerable population. To understand smoking addiction and readiness to quit the trans-theoretical model of smoking cessation (Prochaska, et al., 2004) posits that smoking behavior change can be predicted based upon readiness to quit. It is important to know more about the level of nicotine addiction and readiness to change of persons with psychiatric illnesses before interventions can be developed in this population.

Methods: Upon discharge and following consent, inpatients from the BHS unit (n=50) completed the 6-item Fagerstrom Test for Nicotine Dependence and 11-item Readiness to Quit Smoking Survey. Both tools have good psychometrics and have been successfully used in psychiatric patients. Data analysis included descriptive and nonparametric statistics.

Results: Of the sample, 44% were bipolar and 42% had major depression. Other diagnoses included psychosis, schizoaffective disorder, and drug/alcohol abuse. Most patients were Caucasian (88%) and female (60%). Almost 60% identified a willingness to quit with 44% determined to quit. Sample identified 48% with increased nicotine dependence (high to very high). Exactly 50% of the sample contemplated quitting with 26% in the preparation phase. The relationship between nicotine dependence and stage of readiness indicated no differences in addiction among persons in the readiness phases EXCEPT for “precontemplation with no plan to quit” (n=10). In this group, it appeared that persons with middle levels of addiction were most likely to be at this stage (p=.018).

Implications: This study demonstrates that a substantial proportion of smokers hospitalized with mental illness (depression/bipolar) have high to very high nicotine dependence and another proportion of smokers contemplate smoking cessation. Persons with psychiatric illnesses may benefit from a smoking cessation intervention. Further research is needed in the area of smoking cessation in persons with mental illness.

PERCEPTIONS OF POSTPARTUM WOMEN EXPERIENCING DEPRESSION AND THEIR MEDICAL MANAGEMENT

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Background: The American Psychiatric Association (APA) reports that Postpartum Depression (PPD) is experienced by approximately 10-20% of postpartum women (2010). Up to 800,000 new cases of postpartum depression are reported in the United States each year (APA, 2010). The APA contends this is a widespread problem and research on the causes and treatment are inadequate to date (2010). Between 14-23% of women have depression during pregnancy and up to 25% will have PPD (American Congress of Obstetricians and Gynecologists, 2010).
Purpose: The purpose of this study was to explore the perceptions and experiences of women with PPD and their medical management.
Methodology: This was a qualitative, phenomenological study informed by van Manen (1990). Semi-structured audio taped interviews were conducted with six postpartum women who experienced depression, were diagnosed with depression by a medical provider or self-identified as having postpartum depression. A researcher created guide with open-ended questions was used in each of the interviews. Audio-taped interviews were conducted in person. The transcripts from these interviews were transcribed by the researcher and read and reread until themes surfaced. Participants were enrolled until data saturation (redundancy of themes) occurred. Constant comparative analysis and coding of the transcripts revealed individual, shared, and contrasting themes. Trustworthiness was assured by bracketing, verbatim transcription, immersion, member checking and external validation of themes.
Results: The encircling theme that emerged was "Where does my help come from?" Seven underlying themes were revealed; however two of the seven most significantly affect nursing practice: (1) Misconceptions including: miscommunication; confusion; lack of knowledge in the depressed woman, support persons and health care providers; limited resources; and lack of acceptance by health care providers and (2) Help versus Obstruction including: Help: Family/Friend Support and interventions; Medications; Counseling; Time for self; a Grief Support Group; and Obstruction: Type of birth experience; Impact on family and relationships; Treatment never timely – longsuffering; Finances; Lack of family support; No support group specific to PPD; Counselor unprepared for PPD; and Patient not prepared prenatally by provider.
Nursing Implications: An awareness of PPD is extremely important for all healthcare providers (Strayer & Caple, 2010). Strayer and Caple state that PPD is significantly underdiagnosed and women who experience PPD often do not seek help in fear of being stigmatized or may lose their child to protective custody (2010). Robertson reports that it is imperative that the diagnosis of depression is clearly differentiated from other more severe forms such as postpartum psychosis and that they are treated appropriately (2010). Women who are depressed during pregnancy or have had PPD before are more likely to experience depression in subsequent pregnancies and may be a more severe form (Robertson, 2010). Nurses are in an ideal position to identify women prenatally and postpartum with depression due to their frequent contact with the women and their families (Robertson, 2010). Screening for PPD is recommended before, during and after pregnancy. There is decreased incidence of PPD in cultures that nurture stronger maternal-infant bonds through comprehensive support systems (Strayer & Caple, 2010).

SUFFERING: DEPRESSION ON THE STREETS

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Background: In the U.S., homelessness is a growing problem, which affects 1% of the population annually. It is associated with high rates of mental illness, particularly depression. Twenty to 75% of homeless persons experience significant depressive symptoms, compared to 5-10% of the general U.S. population. Despite the increased incidence of depression among the homeless, little is known about the experience of depression in this vulnerable population.
Purpose: The purpose of this paper was to explore the lived experience of depression in homeless individuals residing in a major metropolitan city.
Methods: Thirty-five (11.4% female) subjects who were ≥ 18 years of age, English speaking, currently or formerly homeless, with a current or previous experience of depression were enrolled and participated in one of four focus groups. In each 1-hour focus group, participants discussed open-ended questions asked by two trained investigators. Typical questions included "What is your experience with depression?" and "What does it mean to be depressed and homeless?" Sessions were audio-taped and transcribed verbatim. Thematic analysis was used to determine the themes and patterns expressed by participants.
Results: Suffering emerged as the over-arching construct linking depression and homelessness. Three dimensions of suffering were identified: self inflicted punishment (*"You feel wrong, like you don't belong anywhere in society."*); external devastation (*"With all the problems you have, you staying in one place, your clothes are over here, you have to shower over there and your life sucks as it is."*); and feelings of immobility (*"This place is a war zone, I feel defeated"*).
Clinical Implications: In homeless individuals in urban settings, the experience of depression and homelessness converge to elicit profound suffering, which has distinct characteristics. To treat depression in this population, clinicians should evaluate not only common depressive symptoms, but also the broad range of suffering which may mediate and inform treatment outcomes.

Funding: This research was funded via an intramural grant from the UCLA School of Nursing.

BIOLOGICAL LINK BETWEEN MATERNAL OBESITY AND THE DEVELOPMENT OF POSTPARTUM DEPRESSION

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Purpose: Postpartum depression (PPD) is a potentially debilitating disorder that develops in approximately 15% of women during the first year after giving birth. PPD carries serious consequences for a woman and her infant – consequences that may linger for generations. While various biological risk factors for PPD have been suggested, including exaggerated postpartum inflammation, the underlying etiology of PPD is unclear. Also unclear is why some women experience exaggerated postpartum inflammation. The purpose of this presentation is to investigate a biological contributor to PPD.

Rationale: One potential contributor to PPD and to postpartum inflammation that has not been well explored is the association between PPD and another problem of epidemic proportions in our country: obesity. Recent reports indicate that over 45% of women of reproductive age (20-44 years) in the United States are overweight (BMI 25-29.9) or obese (BMI ≥30) (Vahratian, 2009). In non-pregnant, non-postpartum populations, obesity is associated with increased levels of pro-inflammatory markers including the powerful pro-inflammatory cytokine interleukin-1beta (IL-1β), which itself has been linked to an increased risk of generalized depression (Wichers et al., 2007). By exploring this relationship, and proposing a biological mechanism for the development of PPD, efforts to prevent its occurrence will be advanced.

Methods: Biological, psycho-social, and demographic data, including pre-natal weight and height, were collected from women participating in a longitudinal study of postpartum depression beginning in the 3rd trimester of pregnancy and continuing for 6 months post-delivery. At each of 7 data collection points, women completed the Edinburgh Postnatal Depression Scale (EPDS), and provided blood and saliva for measurement of pro-inflammatory cytokines. Depressive symptoms between normal weight (BMI <25), overweight (BMI 25-29.9) and obese (BMI≥30) women were compared using analysis of variance (ANOVA); because less than half of the cytokine assays have been completed to date, IL-1β levels were compared via an independent t test between normal weight and combined overweight and obese women.

Results: Sixty-four women are currently enrolled in the study. Based on prenatal height and weight, 61% (N=39) are of normal weight, 17.2% (N=11) are overweight, and 21.9% (N=14) are obese. In normal weight women, EPDS depression scores (mean ± SE) at 2 months postpartum (1.81±.33) were significantly lower than scores of overweight women (4.13±.99; $p < .05$). At 3 and 6 months postpartum, normal weight women EPDS scores (1.95±.43 and 1.21 ±.422) were significantly less than those of obese women (7.8±3.0 and 6.33 ±.38; $p = .002$ and $p = .03$ respectively). Levels of IL-1β at 1 month were significantly higher in the overweight/obese women (1.02±.27 pg/ml) compared to normal weight women (0.6±.06 pg/ml) ($t=-2.162$, $df=17$, $p<.05$), indicating a potential linkage to depression.

Implications: Overweight and obese women are at increased risk of developing PPD, possibly via an associated elevation in pro-inflammatory cytokines. Maintenance of normal body weight may reduce inflammation and hence the development of PPD.

DEPRESSIVE SYMPTOMS, SELF-EFFICACY AND ADHERENCE IN PATIENTS WITH TYPE 2 DM

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Research shows that poor adherence to diabetes regimens can lead to costly and devastating complications. Depressive symptoms can be a major factor in treatment adherence for patients with diabetes. Studies also relate diabetes adherence to self-efficacy, but there is little known about the relationships among depressive symptoms, self-efficacy and adherence in patients with diabetes. The purpose of this study was to identify depressive symptoms in patients with diabetes and explore to what extent a relationship existed between depressive symptoms, self-efficacy and adherence and how that compared among males and females. Using Beck's Cognitive Theory of Depression, Bandura's Self-efficacy theory, and Pender's Health Promotion Model as the theoretical frameworks, the study addressed the following questions: 1) What is the average level of depressive symptoms, self-efficacy, and adherence in patients with type 2 diabetes mellitus? 2) What is the relationship among depressive symptoms, self-efficacy, and adherence in patients with type 2 diabetes mellitus? and 3) Do males and females differ in their levels of depressive symptoms, self-efficacy and adherence? A cross-sectional, descriptive, correlational design was used in this study. The study was conducted in a Tennessee primary care clinic and a Missouri endocrinology clinic. The sample was comprised of 55 adults with self-reported type 2 diabetes. Participants completed a demographic questionnaire, Beck's Depression Inventory 2nd Ed., Diabetes Self-efficacy questionnaire, and the Summary of Diabetes Self-Care Activities questionnaire. The mean level of depressive symptoms was 17 (SD = 13.71) indicating a rating of mild depression. The mean self-efficacy score was 6.6 (SD =2.3) on a 0 to 10 scale. The mean level of adherence signified by the number of days in the week where the recommended diabetes self-care activities were followed was 4.21 (SD = 1.45, n = 55) for diet, 2.39 (SD = 2.27, n = 55) for exercise, 5.21 (SD =2.22, n = 54) for blood sugar testing, 4.80 (SD = 2.77, n = 54) for foot care, and 6.31 (SD = 1.81, n = 54) for medications. A significant inverse relationship existed between depressive symptoms and diabetes self-efficacy (r = -.461, p = .000). A significant inverse relationship also existed between depressive symptoms and adherence concerning diet (r = -.313, p = .020) and exercise (r = -.287, p = .034). Further analyses determined that there was a significant relationship between self-efficacy and adherence to diet (r = .701, p = .000), exercise (r = .649, p = .000), and smoking (r = -.291, p =.031). There were no differences between group means among males and females in levels of depressive symptoms, self-efficacy or adherence. The findings of this study suggest several implications for nursing practice. Interventions that focus on enhancing self-efficacy may decrease depressive symptoms and improve adherence to diet, exercise and smoking cessation. The inverse may also be true; designing interventions that focus on decreasing depressive symptoms may increase self-efficacy and indirectly improve adherence in patients with diabetes. Interventions should be multifaceted to focus on various areas of the diabetes regimen. Effective interventions could lead to improved adherence, decreased diabetes complications, and lowered healthcare costs that would benefit individuals, families, and society at large.

METHODS: QUALITATIVE AND QUANTITATIVE

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CRITICAL ETHNOGRAPHY AND CBPR IN HEALTH CARE RESEARCH

Jennifer B. Averill

TREATMENT FIDELITY OF A CULTURALLY TARGETED, COMMUNITY-BASED INTERVENTION

Eunice E. Lee, Usha Menon

TELEMONITORING: VALIDATION OF REACTIONS TO MONITORED RISK INDICATORS

Kimberly Shea, Breanna Chamoff

THE LEE'S ORAL CONTRACEPTIVE USE SCALE: DEVELOPMENT AND PSYCHOMETRIC PROPERTIES

Jongwon Lee, Mauricio Carvallo

PSYCHOMETRIC VALIDATION OF THE PRE–PROFESSIONAL CLINICAL COMPETENCE SCALE

Felicitas A. dela Cruz, Marilyn Klakovich

RELIABILITY OF SELF-REPORTED SYMPTOMS IN OLDER ADULTS WITH ADVANCED HEART FAILURE

Lois L. Miller

CRITICAL ETHNOGRAPHY AND CBPR IN HEALTH CARE RESEARCH

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Purposes/Aims: The purpose of this submission is to briefly describe the course objectives, substantive content outline, rationale, and teaching methods for a new graduate elective in *critical ethnography and community-based participatory research (CBPR)*. The class is offered to (1) strengthen the research capacity of interdisciplinary, collaborative teams, including doctoral students, and (2) to deepen knowledge of advanced qualitative data analysis in the context of real-life community settings.
Rationale/Background: Health care research, especially involving studies in complex community-based environments, demands investigator flexibility, cultural knowledge and sensitivity, and capacity to integrate diverse perspectives in the process and outcome of scientific inquiry. This class builds on fundamental courses in qualitative inquiry, cultural health, social determinants of health, health disparities/inequities, and the trend towards community/participant engagement in all phases of research. Guiding principles are (1) that advances in knowledge, understanding and problem-solving facility depend on the *combined* resources, commitment, and determination of scientists, community participants, and other key stakeholders; and (2) that an outcome of critical ethnography is often a CBPR initiative.
Description: The course examines conceptual/philosophical foundations, specific applications, contexts, and methods for research involving critical ethnography and CBPR, with emphasis on diverse and multicultural populations. Specific course objectives address (1) these essential elements listed above; and (2) the requirement to conduct and write a secondary analysis of a community-based critical ethnographic study [since time is limited in a 14-week course]. The class is 100% web-based [WebCT], listed in NEXus, and involves online seminars, analytic discussions, presentations of individual work/analysis, a literature review of critical ethnographic and CBPR research in own focus area, and a finished manuscript of the secondary analysis.
Outcomes Achieved/Documented: To date the course has run once [Spring 2010], and will run in alternate spring terms. Seven students completed the course, stating that they "learned a lot," but that "It was a lot of work." Several of them have gone on to use these methods in part or sum for their own doctoral research. Two of the students are working towards publications based on the methods from this class, applied to their own focus areas. When asked whether they learned how to conduct studies using critical ethnography and CBPR, and could plan/implement a detailed analysis of qualitative data, the students responded affirmatively.
Conclusions and Implications: The course meets the needs of doctoral level scholars interested in participatory research and critical ethnographic analysis of complex groups. Knowledge, methods and actual experience with qualitative data analysis can enhance educational preparation for researchers, clinical scholars applying evidence to health outcomes, and future work across disciplines aimed at improving health status, eliminating disparities, and engaging the populations that we serve.

TREATMENT FIDELITY OF A CULTURALLY TARGETED, COMMUNITY-BASED INTERVENTION

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Purpose: The purpose of this study is to describe strategies to maintain fidelity of a culturally targeted, community-based intervention to improve breast cancer screening in Korean American (KA) women.

Background: KA women have suboptimal mammogram screening rates for reasons such as lack of preventive orientation and other cultural beliefs. Interventions designed to increase mammograms have been time-consuming, and there is no scientific evidence for a successful culturally targeted, standardized intervention for KA women.

Approach: KIM-CHI (Korean Immigrants & Mammography: Culture-Specific Health Intervention) was developed to promote mammography screening among married KA immigrant women. The KIM-CHI program leverages the dominant cultural beliefs and practices of the family by using spousal support and health education to motivate KA women to obtain mammograms. In this two-group, repeated-measures, controlled cluster randomized design, 434 KA women and their spouses were enrolled through 50 KA religious organizations in the Chicago area. Women were aged 40 years or older and non-adherent with screening. Two theoretical frameworks guided the intervention—the Health Belief Model and a cultural explanatory model that focused on changing (1) beliefs (susceptibility, seriousness, benefits, barriers, and self-efficacy) about breast cancer and screening, (2) knowledge of breast cancer and screening, and (3) perceived spousal support. The intervention components were watching a DVD in a group setting followed by group discussion and a homework discussion assignment for couples. Strategies used to measure the process and maintain fidelity included 3 aspects of training, delivery, and receipt. For training the health educators, we developed a protocol to standardize the training, provided an all-day orientation using the protocol, and had weekly meetings with the project team to discuss process. To maintain fidelity in delivering the intervention, we provided a script for health educators to follow before and after showing the educational DVD and used a PowerPoint presentation to lead the group discussion sessions. We also provided a script to church leaders to announce this education. To ensure fidelity of receipt of the intervention, we monitored participants' attendance during the DVD viewing, announced the homework activity prior to showing the DVD to alert the participants that they would be asked about the content of the DVD in the homework, and did a post-intervention survey. Participants' attention level while watching the DVD could affect receipt of the intervention. Different degrees of involvement during the homework discussion between the couple could also influence the receipt of the intervention. The challenges experienced will be described in detail along with some suggestions for solutions.

Outcomes: The protocol and scripts we developed showed utility in maintaining/monitoring fidelity of the intervention.

Implications/Significance of Study: Interventions conducted in community settings have increased potential for becoming non-standardized and thereby altering the effectiveness of the intervention for different groups. Strategies described can be applied to diverse research interventions in community settings as well as adapted to other community groups to maintain intervention fidelity.

Funding: This study has been supported in full by National Cancer Institute (1R01CA127650-04).

TELEMONITORING: VALIDATION OF REACTIONS TO MONITORED RISK INDICATORS

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Purpose: Home health nurses are remotely monitoring chronic conditions. Best practices for motivating behaviors using technology is unknown. Phase I and II of this study will examine and compare relationships among individual characteristics of heart failure (HF) patients, technology feedback, patient reactions and behavioral outcomes. Phase I results are presented in this paper. The purpose is to validate that patient reactions to receiving health risk indicators via telemonitoring technology are consistent with reactions when the indicators are received via face-to-face (f2f) interaction.
Rationale: Over 300,000 Medicare patients utilize home health for HF. Home health nurse visits provide f2f services to patients in their homes to promote, maintain, or restore health and maximize an individual's level of independence while minimizing the effects of disability or illness. Through the monitoring of physiologic indicators, nurses can determine if a patient is at risk for illness exacerbation and intervene. Home health nurses currently monitor remotely using telemonitoring technology.

Telemonitoring is defined as the use of information technology to monitor patients at a distance. The most prevalent monitoring method is the transmission of physiologic indicators (blood pressure (BP), pulse, weight, blood sugar levels and/or O_2 content) from a home to a remotely stationed nurse. Telemonitoring is one of the fastest growing methods of healthcare in the US. Analysts have projected that there will be seven million people and 2.5 billion dollars engaged in telemonitoring by 2012. Studies about physiologic monitoring demonstrate that when patients receive monitored physiologic values that are indicators of risks to their health that there are four reactions: 1) worry due to implications for the future, 2) accept, 3) evaluate that more information is needed or 4) make plans for a lifestyle choice. Reactions are effected by expectations, feedback valence and experiential consistency.
Method: Phase I is a qualitative task analysis to examine five diverse HF home-based patients' reactions to monitoring. Results from Phase I will validate evidence-based patient reactions that will be used to inform the focus of data collection in Phase II. Phase I telemonitored participants were observed, interviewed, given case scenarios and photographed. A thematic evaluation of the data was performed by experts to determine if the four f2f reactions were consistent with reactions to the telemonitored blood pressure, weight, O_2 and pulse risk indicators.
Results: Structured interviews and case scenarios provided validation that f2f reactions were consistent with technology-delivered reactions. Primary and secondary reactions were displayed. BP and weight were identified as most important, even though BP was remembered only if unexpected. Weight was remembered even if not expected. Length of time with illness correlated with value expectations. Participants with primary reactions of making plans for lifestyle choices also evaluated risk-free indicators in the case scenarios.
Conclusions: Phase I provides the basis for using worry, accept, evaluate and actuate as reaction themes in Phase II to explore the influence of expectations, consistency and feedback. Informed telemonitored technology design can be used to support best nursing practices that motivate HF patients to make adventitious behavioral and lifestyle choices.

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THE LEE'S ORAL CONTRACEPTIVE USE SCALE: DEVELOPMENT AND PSYCHOMETRIC PROPERTIES

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Background and Significance: Oral contraceptives are one of the most popular methods of contraception among women of reproductive age in the United States and much of the rest of the world. However, their popularity in Korea has remained extremely low. Several studies have explored general contraceptive use patterns among Korean women, but little has been studied on attitudes and beliefs underlying personal preference for oral contraceptives among Korean women, especially those living in the United States. Importantly, no instruments are available for the measurement of their attitudes, beliefs, and social norms related to oral contraceptive use.
Purpose: The purpose of this study was to develop and test the psychometric properties of an instrument for assessing attitudes, beliefs, and social norms toward oral contraceptive use in a sample of 329 Korean immigrant women living in the City of New York: the Lee's Oral Contraceptive Use Scale (LOCUS).
Method: The items in the LOCUS were constructed based on the Theory of Reasoned Action model and consists of three subscales measuring attitudes, beliefs, and social norms. The content validity was evaluated by a panel of experts and the reliability was estimated using Cronbach's alphas. Two types of analyses were performed to evaluate the construct validity of the LOCUS: (a) an exploratory factor analysis (EFA) to determine the underlying structure of the measure, and (b) a confirmatory factor analysis (CFA) to validate the factor models derived from the EFA. A split-half cross-validation procedure was used in which the total sample of 329 was randomly divided into two separate independent subsamples. The first half of the sample (n=165) was used to test the EFA; whereas, the second half (n=164) was used to test the CFA.
Results: The internal consistency of the LOCUS ranged from .82 to .90. A series of principal component factor analyses revealed a two factor model for the attitudes subscale; a three factor model for the beliefs subscale, and a one factor model for social norms subscale, explaining 51 to 64% of the variance. Model fit indices from the CFA showed reasonable model fits of these three subscales ($\chi 2$ [38] = 121.06, GFI = .88, AGFI = .79, CFI = .90; $\chi 2$ [114] = 202.54, GFI = .87, AGFI = .83, CFI = .88; $\chi 2$ [9] = 24.11, GFI = .95, AGFI = .88, CFI = .96, respectively).
Implication: The LOCUS is a reliable and valid measure that can be used to assess attitudes, beliefs, and social norms related to oral contraceptive use among Korean American women. Future research needs to be conducted to establish the cross-cultural applicability of the LOCUS to other Asian American women holding similar cultural values and norms.

PSYCHOMETRIC VALIDATION OF THE PRE-PROFESSIONAL CLINICAL COMPETENCE SCALE

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Purposes/Aims: This paper reports on the psychometric validation of the Pre-Professional Clinical Competency Scale (PPCCS), a measure designed to assess the clinical competence of students completing the prelicensure phase of an accelerated entry level master's (ELM) nursing program for non-nursing college graduates.
Rationale/Conceptual Basis/Background: In spite of the dramatic increase in the numbers of accelerated nursing programs, sparse literature exists on the measurement of the clinical competence of non-traditional students enrolled in these contemporary programs. This study uses Lenburg's Competency Outcomes and Performance Assessment (COPA) Model as its organizing framework.
Methods: After establishing its item clarity and content validity index (CVI=1.0) using seven clinical faculty from a variety of clinical specialties, we pilot tested (N=14) the original 57-item Likert-type PPCCS as well as assessed its concurrent validity. Initial validation resulted in a 57-item, six-factor scale (assessment, planning, nursing interventions, evaluation, psychomotor skill performance, and professional behaviors) that demonstrated concurrent validity (r=.715, p=.02) with the Nursing Students' Self-Efficacy for Professional Nursing Competencies Questionnaire (NSSEPNCQ), a measure designed to appraise the competencies of entry-level registered nurses. Using a retrospective pre/post survey design, the 57-item PPCCS was administered to the students (N= 276) completing the prelicensure phase of the ELM program.
Results: Exploratory factor analysis resulted in a two-factor solution labeled nursing process and professional behaviors. Items that loaded .60 or higher were retained, resulting in a 38-item scale. These factors accounted for 59% and 71.7% of the variance for the retrospective pre/post competency ratings, respectively. For the retrospective pre-rating, reliabilities for the PPCCS subscales ranged from .973-.974 and the total scale reliability was .97; corrected item correlation ranged from .56-.79. For the post-internship rating, the subscale reliabilities ranged from .98-.99 and the total scale reliability was .99; corrected item-correlation ranged from .54-.88. Comparison of the results revealed a significant increase in the subscale scores from pre to post test (nursing process subscale [t-test=13.1, df=170, p<.001; professional behaviors subscale [t=6.3, df=168, p<.001]; and total scale [t=10.9, df=170, p<.001].
Implications: Results show evidence of the construct validity and reliability of the PPCCS, suggesting its potential as a formative and summative measure to assess the clinical competencies of second degree nursing students who are educated in non-traditional and accelerated programs. Further psychometric testing is recommended with larger student samples.

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RELIABILITY OF SELF-REPORTED SYMPTOMS IN OLDER ADULTS WITH ADVANCED HEART FAILURE

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Purpose: The purpose of this paper is to describe issues related to reliability of self-reported symptoms in older adults with advanced heart failure.
Background: Reliable reporting of symptoms in advanced heart failure is essential for both clinical management and for research purposes. In the course of conducting a study on symptoms in advanced heart failure with older adults, we began to see what we thought was under-reporting of symptom severity and distress, as well as over-reporting of physical function abilities.
Method: The study was a cross-sectional study conducted with 120 patients with advanced heart failure and recruited from a tertiary-care-based heart failure clinic, a heart failure case management program and two hospices to obtain data for a symptom-cluster analysis. Participants were interviewed in their homes, using the Memorial Symptom Assessment Scale–Heart Failure. This scale measures symptom presence, frequency, severity, and distress for 32 symptoms. The interview also included measures of functioning using items from the Kansas City Cardiomyopathy Questionnaire and co-morbidity using the Charlson Index. The instruments were administered via interview to participants in their homes or other locations of their choosing. Field notes written by study interviewers during the interview process were analyzed using qualitative description methods for themes and patterns associated with the reporting of symptoms, functional ability and co-morbidities.
Findings: Themes and patterns in the reporting of symptoms include the following: 1) being resigned to symptoms; 2) response bias avoiding high level of severity or distress; 3) getting used to symptoms; 4) modifying activities to reduce or avoid symptoms; 5) minimization of symptom severity and distress. Other qualitative findings included limited knowledge of heart failure and its duration, denial of heart failure, over-estimating of functional abilities.
Implications: These findings and those from other studies suggest important reporting bias by older adults and call into question the validity of research to date with this group. Actual functioning would provide more reliable data than self-perception of functioning. From a clinical perspective, better education is needed to help older adults in symptom interpretation.

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PROFESSIONAL PRACTICE ENVIRONMENTS

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NURSES' PERCEPTIONS REGARDING CAPNOGRAPHY IN THE EMERGENCY DEPARTMENT

Catherine E. Payne, Jennifer Lillibridge, Irene Morgan

PERCEPTIONS OF CARE BETWEEN HOSPICE AND SKILLED NURSING FACILITY STAFF

Abigail Gerding, Kim Martz

NURSE MANAGER LEADERSHIP, PRACTICE ENVIRONMENT, SAFETY CLIMATE AND PATIENT OUTCOMES

Katreena Collette-Merrill

PREDICTORS OF NURSE MANAGER WORKPLACE STRESS

Jaynelle F. Stichler, Lisa Kath, Mark Ehrhart, Michael G. Gates

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USE OF EVIDENCE TO DEVELOP AN EVIDENCE-BASED PRACTICE PROGRAM IN A HEALTHCARE SYSTEM

Nicolette Estrada, Shella Stovall, Lisa Jensen, Karey A. Johnson

NURSES' PERCEPTIONS REGARDING CAPNOGRAPHY IN THE EMERGENCY DEPARTMENT

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Purposes/Aims: The purpose of this completed study was to determine the effectiveness of capnography monitoring in providing safe and effective nursing care in the emergency department (ED). Study participants were surveyed regarding both the ease of use of capnography as well as the effectiveness of capnography as a nursing assessment instrument in the ED.

Rationale/Conceptual Basis/Background: Care of patients in the ED is challenging in the immediate resuscitation period. Vital signs and patients' symptoms may change quickly requiring ED nurses to rapidly identify patient needs and intervene to reduce risks to patients' stability. Early in resuscitation, aggressive interventions have been found to improve outcomes; monitoring is critical in this effort. Intubated patients pose an increased challenge to ED nurses because of the array of potential or actual complications associated with mechanical ventilation. Artificial airways pose a risk for obstruction, displacement or dislodgment; requiring nurses to rapidly identify life-threatening situations that require immediate interventions. One adjunct recommended for use in the ED, though not widely available or consistently used, is capnography. Capnography offers information about clinical status that other monitoring devices cannot evaluate. Capnography is new to the ED and requires nurses to become comfortable with using it to interpret values and waveforms to provide safe and effective care. ED nurses must meet the demands of intubated patients and capnography provides one source of information to proficiently manage this vulnerable population. Orem's Self Care Deficit Theory was the framework that guided this research.

Methods: A quantitative, descriptive design was chosen to explore nurses' perceptions on the use and effectiveness of capnography. The research setting was a 613 bed Level I Adult and Pediatric Trauma Hospital and Research Center treating approximately 53,000 patients each year in their ED. This Northern California ED was chosen because it had implemented a standard of care in which all intubated patients are required to have capnography. A survey was distributed to all ED nurses who frequently provided nursing care to critically ill and/or injured intubated patients.

Results: One hundred and six surveys were distributed to ED nurses. Ninety-four (90%) completed the survey. Eighty-nine nurses (95%) agreed capnography contributes to improving the safety of patient care. Ninety-five percent confirmed capnography contributes to quality patient care. The majority of nurses were aware of capnography limitations (83%) and clinical rationale for its use (98%). Survey results demonstrated capnography was viewed as assisting in patient assessment and recommended for use in other EDs.

Implications: This study provides evidence that suggests capnography is an effective assessment instrument that is well received by the ED nurses participating in this study. Further studies are indicated to clearly define the role of capnography during nursing assessment in the ED.

PERCEPTIONS OF CARE BETWEEN HOSPICE AND SKILLED NURSING FACILITY STAFF

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Purpose: Examine the perceptions of hospice staff and skilled nursing facility (SNF) staff around end of life care.
Background: Differences in regulations and philosophies between hospice care and skilled nursing care can hinder continuity of care, communication and coordinated efforts directed at the dying resident. Collaboration between SNFs and hospice agencies requires alignment of clinical goals and effective communication around residents' changing care needs. The Institute of Medicine's landmark report, *Approaching Death*, acknowledged the need for institutional accountability when applying methods of continuous quality improvement to the care of the dying. By identifying the behaviors that enhance or hinder collaborative care, both the SNFs and the hospice agencies can begin to accomplish better ways of communicating, implementing and standardizing the care of their dying patients.
Methods: A Likert scale tool was used to explore the perceptions of end of life nursing care between hospice and SNF staff (Crohnbach alpha = 0.858). Data were analyzed using descriptive statistics, frequencies, chi square, and t-test to determine similarities and differences related to designated teams, collaboration, care for hospice clients in skilled nursing facilities, and barriers and benefits to end of life care.
Results: Both hospice and SNF staff perceived they had effective knowledge and skills to care for the dying patient, provide effective pain management, and continuity of care. Findings indicated significant differences ($p \leq 0.002$) in SNF and hospice staff perceptions on coordination of care and the benefit of hospice to a SNF resident. Differences in regulations and communications were found to be the greatest barriers of collaboration. When examining differences and similarities between hospice and SNF staff with dedicated teams, differences in how those with dedicated teams perceived SNF staff were minimized. However, significant differences existed when examining collaboration between hospice staff and SNF staff with and without dedicated teams such as mechanisms for assessing partnerships ($\chi^2=0.027$), continuity of care ($\chi^2=0.006$), assessment of grief ($\chi^2=0.013$), family meetings occur in a timely manner ($\chi^2=0.003$), knowledge and sensitivity to diverse needs ($\chi^2=0.001$) and availability for pastoral care ($\chi^2=0.014$).
Implications: Development of dedicated teams to improve communication, coordination, alignment of clinical goals and continuity of care is a reasonable intervention that will expand care for the dying resident. Development of communication patterns focused on integrated assessment forms and coordinated care protocols is needed between hospice agencies and SNFs to meet the needs of the dying resident. Education for skilled nursing facility staff and hospice staff specifically related to regulations and philosophy of care is essential to assist with understanding how both facilities can meet the needs of the dying resident.

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NURSE MANAGER LEADERSHIP, PRACTICE ENVIRONMENT, SAFETY CLIMATE AND PATIENT OUTCOMES

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Purposes/Aims: The aims of this study were to describe nurses' ratings of their hospital-unit safety climate and to explore relationships among safety climate, staffing, education level, nurse manager leadership styles, nursing practice environment and patient outcomes.
Rationale/Conceptual Basis/Background: Nurse managers are the leadership at the unit level and play a pivotal role in creating a positive safety climate. The manager is accountable for fostering this climate through participatory decision making, management style and encouraging a sense of the big picture. The significant influence that nurse managers have on the direct care nurse underscores the need for research on leadership and its influence on quality and patient safety. However, there is currently little empirical evidence to link nursing leadership with a decrease in medical errors and patient safety.
Methods: An exploratory descriptive correlational study was conducted in 51 adult inpatient nursing units across nine hospitals. The study examined the following unit level predictor variables: leadership style, practice environment, safety climate, nurse staffing and nursing education level. Four outcome variables were measured: patient falls, healthcare acquired pressure injuries, catheter associated urinary tract infections and medication errors. The instruments, Hospital Unit Safety Climate Survey, Practice Environment Scale of the Nursing Work Index, Multifactorial Leadership Questionnaire, and a demographic survey, were distributed electronically to 1,579 acute care registered nurses. Questionnaires were received from 466 staff nurses (29.5% response rate) in 41 departments. The level analysis for this study was the nursing department. Pearson's correlation was computed on the predictor and outcome variables. A one-way analysis of variance was used to identify mean differences by unit type, education level, hospital size, experience and Magnet Recognition. Backwards stepwise regression was used to determine how well the predictor variables explained the outcome variables and multilevel analysis to analyze the nested data.
Results: The results of this study indicated that staff nurses reported a high unit safety climate (Mean scores 3.5-4.0 of a 5 point scale). Nurses' perception of their safety climate and nurse manager leadership styles did not predict patient outcomes. However, patient fall rates were significantly associated with nurse staffing variables (R^2 =.590, p=.007). Transformational and laissez faire leadership styles were found to be associated with specific safety climate subscales. Transformational and laissez faire leadership styles explained 62.3% of the variance in department manager support for patient safety (R^2 = .623) and 24.2% of the variance in pharmacists support for medication delivery (R^2 = .242). Laissez faire leadership style and department type (critical care/non critical care) explained 20.9% of the variance in the socialization/training subscale and 27.2% of the variance in blameless system.
Implications: This study provides insight into the role of the nurse manager in creating a positive patient safety climate. These findings identify that nurse manager leadership style has an impact on safety climate, in particular on the positive effect of transformational leadership and also the negative effects of laissez faire leadership. These results are important to service and academia as they prepare nursing leaders of the future.

Funding: Sponsored in part by Utah Organization of Nurse Leaders and Sigma Theta Tau International Gamma Rho Chapter.

PREDICTORS OF NURSE MANAGER WORKPLACE STRESS

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Introduction and Background: Nurse managers are the direct interface between upper management and the point of care nurse providers. The literature is replete with evidence about the importance of nurse managers in establishing a positive work environment, increasing or maintaining job satisfaction, and helping retain nurses. Unfortunately, many nurse managers feel the compression of competing priorities, such as organizational performance and budgetary targets, staff needs, physician demands and regulatory and compliance requirements. We expect this role to become more demanding, with nurse managers experiencing significant and increasing workplace stress, which may hamper the ability of the nurse managers to be successful in their roles.
Purpose: This study adopts an interdisciplinary approach to measuring the sources and outcomes of workplace stress experienced by nurse managers working in acute care healthcare settings. The relationships between stressors and outcomes, and the hospital characteristics (e.g., Magnet status, unionization, academic settings, specialty hospitals, hospital size, rural or urban setting) that buffer managers from stress-related outcomes will be reported.
Significance: This study is significant because of the influence that nurse managers have on their clinical nurses. It is also increasingly difficult to recruit and retain nurse managers because of the role stress they experience. Identifying the stressors and outcomes experienced by nurse managers will offer insight into potential interventions that can be developed to facilitate their success in the leadership role.
Conceptual Framework: This study was based on the General Stress Model and Role Stress Theory from organizational psychology. A conceptual model illustrates the relationships among the variables of: 1) workplace stressors, such as role conflict, role overload, role ambiguity, interpersonal conflict, and organization constraints; 2) outcomes, such as burnout, job satisfaction, organizational commitment, and turnover; and 3) hospital characteristics as moderators of stress, such as Magnet designation, unionization status, and affiliation/type/size.
Methods: The study used a cross-sectional, correlational design with a non-probability convenience sample drawn from a population of nurse managers (n = 486; 75% response rate) working in 34 hospitals in the southwest region of the US. The sample included nurse managers with 24/7 or 12/7 direct supervision of clinical nurses. Study variables (stressors, moderators, and outcomes) were measured using previously published scales with demonstrated psychometric properties.
Results: Managers reported moderately high levels of stress with younger managers experiencing more work stress. Managers in critical care units, in maternity units, or who have multiple unit assignments experience more work stress. Other factors that contributed to nurse manager work stress were role overload, role conflict, and interpersonal conflict. Work stress was related to negative consequences for managers, but autonomy, participation and predictability were significant buffers for stress outcomes.

Funding: This research was supported in part by the 2008 Sayre Memorial Fund from ANF.

USE OF EVIDENCE TO DEVELOP AN EVIDENCE-BASED PRACTICE PROGRAM IN A HEALTHCARE SYSTEM

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Purpose: (1) Conduct a survey of current evidence-based practice (EBP) beliefs, reported implementation, and perception of organizational readiness by registered nurses (RNs) in one health care organization. (2) Utilize results of the survey to provide guidance to develop a program to support RNs in providing nursing practice based on evidence.

Background: One health care organization recognized the importance to promote RN practice based on evidence but currently had no formal structure or process in place. Nursing leadership identified the need to conduct an assessment to determine the current status of RN EBP beliefs, implementation, and perception of organizational readiness before developing and implementing an EBP program. The Promoting Action on Research Implementation in Health Services (PARIHS) framework (Rycroft-Malone, 2004) suggests important elements in the three areas of context, evidence, and facilitation are required for successful implementation of evidence into practice. Three instruments were identified through literature review and previous experience with use by the nurse researcher.

Methods: SurveyMonkey, a web-based software program, was used to generate and conduct the survey electronically. Three established questionnaires were used with permission from the authors. The instruments included a 16 item EBP Beliefs Scale, an 18 item EBP Implementation, and an 18 item Organizational Readiness questionnaire. Demographic information requested included age, gender, highest RN degree, assigned work title and patient care area, and number of years employed as a nurse, in current patient care, and with the Department of Veteran Affairs. An open ended question was included to solicit additional feedback regarding EBP. After approval from the Institutional Review Board (IRB), the survey link and information was distributed via Outlook e-mail using previously established within facility nursing mail groups. Results were used to identify RN needs and develop a program to support nurses in the practice of nursing and nursing care based on evidence.

Results: Registered nurses responded from each area of patient care although with varying degree of interest demonstrated. A total of 102 RNs responded for a participation rate of 20%. Ninety percent of the respondents indicated a BS or MS degree. Although nurses indicated a positive belief in the importance of EBP, they noted limited implementation of evidence into practice. Consistent with the survey, overall, the group rated the organization as getting ready for EBP but not yet implementing. The results were presented at the Nurse Leadership Strategic Planning Retreat. From the evidence generated by the survey, the formal program consists of focused areas of education about EBP, enhancing support of the onsite medical library, and increase in mentors and facilitators to support nurses in implementing evidence into practice.

Implications: A method to assess RNs' perceptions of EBP within an organization is presented. Analyses, and subsequent results, provided evidence to plan and implement a program tailored to the needs of the registered nurses within the organization.

Reference: Rycroft-Malone, J. (2004). The PARIHS Framework–A framework for guiding the implementation of evidence-based practice. *Journal of Nursing Care Quality, 19*(4), 297-304.

RESEARCH IN PHYSIOLOGICAL CONDITIONS

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ANALYSIS OF SALIVA IN NURSING RESEARCH: METHODOLOGICAL CONSIDERATIONS

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COMPARISON OF TUMOR NECROSIS FACTOR LEVELS BETWEEN LUMINEX ASSAY AND ELISA

Nadia Deashinta, Barbara St. Pierre Schneider, Sara Vigil, Katherine Howard

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GLYCEMIC STATUS AND INFECTION RATES DURING THE FIRST 100 DAYS POST ALLOGENEIC HCT

Marilyn J. Hammer

ASSOCIATION OF LEUKOTRIENE RECEPTOR GENE VARIATION AND ATOPIC ASTHMA

Kenneth Wysocki, Leslie Ritter, Stefano Guerra

"SLEEP CHAOS" DURING CHEMO-IMMUNOTHERAPY IN ADVANCED MELANOMA PATIENTS

Ellyn E. Matthews, Eileen Thomas, Maude Becker, Jamie Poust, Susan Dollarhide, Rene Gonzalez

ANALYSIS OF SALIVA IN NURSING RESEARCH: METHODOLOGICAL CONSIDERATIONS

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Purpose and Aims: In this methodological paper the authors will discuss their experiences and suggestions for the use of saliva in research protocols with older adults.
Rationale/Conceptual Basis: Over the last ten years, interest in the analysis of saliva as a biomarker for a variety of systemic diseases or for potential disease has soared. There are numerous advantages to the use of saliva as a biological fluid of interest to nurse researchers especially for vulnerable populations; such as frail older adults, as it is noninvasive and easier to collect than serum or urine. Because the salivary glands are surrounded by many capillary beds which connect to the systemic circulation via the carotid arteries, the components of saliva contain most of the same substances found in the systemic circulation and are considered equivalent to serum in indicating the physiological state of the body.
Methods: This paper will use research studies that examined: 1) cortisol and behavioral symptoms of dementia, and 2) osmolality as an indicator of hydration status to highlight methodological issues in the use of saliva analysis in nursing research. Specifically, issues of research conceptualization, the timing of data collection and data analysis and interpretation will be discussed.
Results: Examples from several completed studies will be used to illustrate the issues inherent in using saliva in nursing research, with a special focus on use of multiple specimens and how to match data analytic techniques to best answer one's research questions.
Implications: There are many factors that are important to consider in the use of saliva in nursing research, including timing of collection, storage and laboratory analysis of the specimens. However, the most important consideration relates to data analysis and interpretation; it is not enough to detect levels or rely solely on summary statistics. In both cases of salivary cortisol and osmolality analysis, it is critical to characterize any rhythmicity inherent in the parameter of interest. Not accounting for rhythmicity in the analysis and interpretation of data can limit the interpretation of associations, thus impeding advances related to the contribution that an altered rhythm may make to individual vulnerability.

COMPARISON OF TUMOR NECROSIS FACTOR LEVELS BETWEEN LUMINEX ASSAY AND ELISA

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Purposes/Aims: The purpose of this pilot study was to compare tumor necrosis factor (TNF) levels in cell culture supernatants using two different methods, the multiplex bead assay, Luminex, and enzyme-linked immunosorbent assay (ELISA).
Rationale/Conceptual Basis/Background: Among all cytokines, TNF levels are commonly measured in nursing research. Although most studies use ELISA to measure TNF levels, more nurse researchers are starting to use the Luminex assay. Blood TNF levels as detected from Luminex assay and ELISA are strongly correlated (Pearson's $r^2>0.91$). However, the absolute blood TNF levels can differ. That is, the ELISA values can be higher than the Luminex assay values or vice versa. Because the majority of these comparisons have been conducted using blood at one collection time point, we compared the cell supernatant TNF levels at multiple time points and using these two methods.
Methods: After seeding, PU5-1R murine macrophages were treated with recombinant mouse macrophage colony stimulating factor (M-CSF; 60 ng/ml) for 5 days. On day 4, the cells were stimulated by lipopolysaccharides (LPS; 100 ng/ml). Other macrophages were cultured without M-CSF treatment and then stimulated by LPS 24 hours later after culturing. M-CSF pretreatment potentiates TNF production by LPS stimulation. From all cells, supernatant was collected at 0 hours (before LPS stimulation) and 6 and 24 hours post-LPS stimulation. TNF levels were analyzed in duplicate using the mouse TNF ELISA kit (BD Biosciences, San Diego, CA) and mouse cytokine Luminex 6-plex kit (Millipore, Billerica, MA).
Results: At 6 and 24 hours post-LPS stimulation, the absolute TNF levels detected with ELISA were 2-to-11-fold higher (without M-CSF) and 9-to-51-fold higher (with M-CSF) than the levels detected with the Luminex assay. However, with the M-CSF/LPS supernatant, a different TNF level pattern was observed. With ELISA, TNF levels increased from 0 to 6 hours and 6 hours to 24 hours. In contrast, with the Luminex assay, TNF levels increased from 0 to 6 hours, but decreased from 6 hours to 24 hours.
Implications: Three implications of this study's results are as follows: (a) (along with findings of previous studies) the same method must be used when measuring TNF levels in a study; (b) inter-study comparisons of absolute values cannot be performed if the studies differ in the detection method; and (c) additional studies are needed to confirm whether the two methods differ in their detection of acute cytokine production.

Funding: This study was supported in part by UNLV President's Research Award.

GLYCEMIC STATUS AND INFECTION RATES DURING THE FIRST 100 DAYS POST ALLOGENEIC HCT

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Purpose/Aims: The purpose of this study was to assess glycemic levels and associations between glycemic status and infection onset in adult and older adult (ages 18 and older) allogeneic hematopoietic cell transplantation (HCT) recipients. The specific aims were to 1) describe 5-day mean blood glucose levels and 2) evaluate associations between 5-day mean blood glucose levels and onset of infections throughout 100 days post allogeneic HCT.
Rationale/Conceptual Basis/Background: Infections are a major complication and contributor to the morbidity and mortality associated with allogeneic HCT. Evidence is beginning to emerge regarding the contribution of abnormal glycemic status, newly termed malglycemia (defined as hyperglycemia: blood glucose [BG] $\geq$ 126 mg/dL, hypoglycemia: BG < 70 mg/dL, or increased glycemic variability: standard deviation $\geq$ 29 mg/dL) to infections and related complications among HCT recipients. HCT recipients may be prone to malglycemic states due to a number of factors including older age; high body/mass index; history of diabetes; nutritional imbalances; low physical activity; stress; the use of certain medications, including glucocorticoids and immunosuppressants; and the presence of infections themselves. *Ultimately, glycemic control may contribute to infection prevention.*
Methods: A retrospective cohort study was conducted. Descriptive statistics were used to evaluate blood glucose status and fluctuations in blood glucose levels over the first 100 days post allogeneic HCT. Analyses also evaluated associations between 5-day mean blood glucose levels and infection onset during 5-day intervals throughout 100 days post allogeneic HCT.
Results: There were 1,175 patients and more than 66,000 blood glucose values in the sample size. Hyperglycemic states were predominant throughout the study period with a peak at 35 days post HCT. The greatest rate of infection onset was within the first two weeks post HCT.
Implications: Allogeneic HCT recipients are induced into states of malglycemia, particularly hyperglycemia, throughout the first 100 days post HCT. The hyperglycemic states appear to be associated with infection onset. Protocols for better glycemic control may be indicated as a means for improved infection control among allogeneic HCT recipients.

Funding: This research was supported by the University of Washington School of Nursing, Department of Biobehavioral Nursing and Health Systems, T32 Biobehavioral Nursing Research Training Program, NIH/NINR (NR007106).

ASSOCIATION OF LEUKOTRIENE RECEPTOR GENE VARIATION AND ATOPIC ASTHMA

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Purpose: Determine whether cysteinyl leukotriene receptor 1 and cysteinyl leukotriene receptor 2 (CYSLTR1 and CYSLTR2) genetic variations are associated with inflammatory markers of atopy, with atopic asthma, and with gender among participants in a longitudinal study of a homogenous Caucasian population from the Tucson Epidemiological Study of Airway Obstructive Disease (TESAOD). **Aim 1:** Determine the relationship of the CYSLTR1 and CYSLTR2 genetic variations to inflammatory markers of atopy including IgE level, blood eosinophil count, and skin test reactivity. **Aim 2:** Determine the relationship of CYSLTR1 and CYSLTR2 genetic variations to atopic asthma. **Aim 3:** Determine gene by gender interactions in association with CYSLTR2 genetic variation in affecting the risk for atopic asthma.
Background: Asthma has an enormous economic, social, and quality of life burden in the United States. Over 22 million Americans report having asthma; an even greater number have allergic reaction after environmental exposure to allergens contributing to the asthma phenotype known as atopic asthma. Evidence indicates that over 50% of all asthma cases are attributed to atopy and this percentage is higher in males than females. Leukotriene receptors CYSLTR1 and CYSLTR2 located in the lung activate cellular responses that result in the clinical manifestations of asthma, which include mucus secretion, edema, and eosinophilia. Evidence suggests that genetic variation in CYSLTR1 and CYSLTR2 play a role in the expression of inflammation in atopic disease, airway dysfunction and remodeling in asthma. However, these studies are limited to homogenous populations outside the United States.
Methods: Genetic (other than CYSLTR1 and CYSLTR2), atopic asthma status, gender, and biomarker data was previously collected from participants in a reactivated study of TESAOD, a prospective cohort study of a stratified cluster sample of 1,655 Anglo-white Tucson subjects initially enrolled between March 1972 and April 1973. For the present study, 900 of the TEASOD samples will be analyzed for CYSLTR1 and CYSLTR2 genes using a candidate gene association approach. A secondary analysis of previously collected IgE level, blood eosinophil count, skin test reactivity, atopy status, asthma status, and gender will also be performed.
Results: Preliminary demographic data reveals prevalence of asthma in this population at 20.6%, atopy status 50.1%, elevated eosinophil count 34%, and elevated IgE level 20.3%. Genetic analyses and secondary analyses will be available in November, 2010.
Implications: Understanding the pathology and genetic etiology of atopic asthma, may improve preventative strategies, diagnostic tools, therapies and aid in determining responsiveness to treatment. This research may lead to innovative tailored preventive strategies by identifying persons with higher risk of atopic asthma. This research may also have important pharmacogenetic implications in the future treatment of asthma. New approaches to assessment and treatment of asthma in different populations may reduce health disparity and increase quality of life for millions around the world.

Funding: The project described is supported by Award Number F31NR011265 from the National Institute of Nursing Research to Kenneth Wysocki.

"SLEEP CHAOS" DURING CHEMO-IMMUNOTHERAPY IN ADVANCED MELANOMA PATIENTS

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Purpose/Aims: To elicit an understanding of sleep disturbances during chemo-immunotherapy for advanced stage melanoma. As part of a larger study, a qualitative descriptive approach was chosen to allow for the discovery of concepts and themes that are not clearly identified in the literature or information that might not be revealed through quantitative methods. Qualitative descriptive approaches are useful in depicting the commonality across participants, in this case melanoma patients during treatment.

Rationale/Background: Sleep-wake patterns are unpredictable during melanoma treatment, and the consequences of disrupted sleep can be severe enough to result in failure to complete cancer treatment. Little is known about melanoma patients' unique sleep characteristics and how they adjust to disease and treatment-related impaired sleep. Consequently, sleep problems constitute a distinct cancer experience and this study is the first to describe this experience in the melanoma patients' own words.

Methods: The purposive sample, obtained from an outpatient cutaneous oncology clinic in Colorado, included 2 men and 7 women, ranging in age from 38 to 68, who were recently diagnosed with stage III and IV cutaneous melanoma and were receiving chemo-immunotherapy in the hospital. To the extent possible, patients from diverse cultural and socioeconomic backgrounds were included to provide different perspectives and avoid the possibility of elite bias in which only the most articulate are represented (Sandelowski, 1986). Participants shared audio recorded narratives pertaining to experiences concerning their sleep quality and quantity.

Results: Participants indicated some form of "sleep chaos" during hospitalization and at home between treatments. Sleep chaos is defined as the experience of great unpredictability in night time sleep quality, "off and on" nature of sleep, and uncertainly about when good sleep might return. Three aspects of sleep chaos were identified including facets (difficulty falling asleep and staying asleep), contributors to sleep chaos (physical and psychological; internal and external) and coping with sleep disturbance. The experience of life during treatment included concerns about relationships, distressing memory gaps, and anxiety about cancer and dying.

Discussion/Implications: Assessment and management of sleep-wake disturbance in advanced stage melanoma patients is needed during intensive chemo-immunotherapy administration in the hospital and in the weeks at home between treatment cycles. This study has implications for nursing in planning screening, and the implementation of educational, behavioral, and pharmacological interventions for impaired sleep.

WOMEN'S HEALTH: CERVICAL HEALTH

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VIETNAMESE IMMIGRANT WOMEN'S PAP TESTING BELIEFS AND INFLUENCING FACTORS

Connie Kim Yen Nguyen-Truong, Frances Lee-Lin, Michael Leo, Vivian Gedaly-Duff, Lillian Nail, Tri Tran, Nga-My Vuong, Ken Truong

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TRANSLATION TEAM APPROACH: PSYCHOMETRICS OF A VIETNAMESE PAP TESTING SURVEY

Connie Kim Yen Nguyen-Truong, Michael Leo, Frances Lee-Lin, Vivian Gedaly-Duff, Lillian Nail, Tuong Vy Le, Zora Le Tu, Tuyen Tran

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DO I REALLY WANT THIS? PATIENTS' VIEWS OF HPV VACCINATION

Margit B. Gerardi, Amanda Wilson

PREVALENCE AND INCIDENCE OF CERVICAL DYSPLASIAS AMONG OLDER, HOMELESS WOMEN

Benissa E. Salem, Dorothy J. Wiley, Emmanuel Masongsong, Tianne Larson, Janet Cheng

VIETNAMESE IMMIGRANT WOMEN'S PAP TESTING BELIEFS AND INFLUENCING FACTORS

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Rationale/Conceptual Basis/Background: Vietnamese American women are diagnosed with cervical cancer and die at rates twice that of non-Hispanic White women and the highest of all larger Asian subgroups. Cervical cancer screening rates are low compared to the Healthy People 2010 Objectives. What little is known about Vietnamese immigrant women's (VIW, non U.S.-born) cancer and Pap testing beliefs includes perceiving cancer as death, preferring not to know if it cannot be changed, and not wanting to look for problems. In addition, there is paucity in research about knowledge of the human papilloma virus (HPV) vaccine to Pap testing with VIW. The Ecological Model guided this research. **Purposes/Aims:** The aims of this descriptive cross-sectional community based participatory research are: (1) to examine the association between awareness, knowledge, confidentiality issues, and beliefs regarding cervical cancer and Pap testing, individual and external influencing factors, and quality of care from the health care system with Pap test receipt (receipt, ever) and adherence (past 3 years), (2) to describe knowledge of the HPV vaccine with receipt and adherence, and (3) to describe community resources.
Methods: Based on a power analysis, n = 211 VIW was determined. Data were collected using a self-administered questionnaire. Items included demographics, Pap testing beliefs, and other influencing factors and were translated using a team approach and pretested. Purposive sampling recruited VIW from twelve Asian community organizations in the Northwest metropolitan area. Descriptive statistics and logistic regression analyses ($p < 0.10$) were used.
Results: Sample characteristics were a mean age of 50 years (SD=14), 66% were married/living with a partner, 39% < high school, and 33% < $15,000 annual household income. VIW were a mean age of 35 years when immigrated to the U.S. (SD=15). Only 73% reported receipt and 70% reported adherence. Pap test awareness (OR=17.88), knowledge (OR=4.75), family, friends suggested testing (OR=3.16, 5.34), having heard of and would recommend the HPV vaccine to others (OR=2.78, 3.06) were positively associated to receipt. Having a regular provider, health insurance, and higher English proficiency were positively associated to receipt (OR=4.03, 4.00, 1.46) and adherence (OR=5.48, 6.65, 2.89). Higher perceived common barriers, use of eastern medicine, and modesty were negatively associated to receipt (OR=0.93, 0.78, 0.90) and adherence (OR=0.91, 0.73, 0.85). Older age immigrated to the U.S. was negatively associated to adherence (OR=0.95). Only 11% knew where to get free/low-cost Pap tests.
Implications: Advanced practice nurses are increasingly doing Pap testing and nurses can promote screening and education among VIW by recognizing these influencing factors. External explanations including access to having a regular provider, health insurance, family, friends suggested testing, visibility/availability of screening programs moves beyond explanations holding individuals solely responsible for not engaging in screening.
Credits: Community Consultant Tuong Vy Le, BS; Advisors Tuyen Tran MPA-HA, Zora Le Tu, BSN, RN; Experts Dr. Pei-ru Wang, Dr. Jessica Gregg; Coordinator Anthony My Truong, BS, RPh.

Funding: American Cancer Society DSCN-08-208-01, Beta Psi Chapter and Xi Mu Chapter Research Award/Scholarship of Sigma Theta Tau International, Dean's Award of OHSU, Graduate Nursing Senate Research Award of OHSU, OHSU Student Research Forum Fellowship, Graduate Assistance in Areas of National Need Fellowship, Health Resources & Services Administration Nurse Training Award/TG2, Bertha P. Singer Scholarship.

TRANSLATION TEAM APPROACH: PSYCHOMETRICS OF A VIETNAMESE PAP TESTING SURVEY

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Purposes/Aims: The aims of this study are to adapt and develop a culturally sensitive, linguistically appropriate, and meaningful Vietnamese translation of the *Revised Susceptibility, Benefits, and Barriers Scale* (SBBS) (18-items, Champion, 1999), *Cultural Barriers to Screening Inventory* (CBSI) (17-items, Tang et al. 2000), *Quality of Care from the Health Care System Scale* (QoC) (5-items, Nguyen et al., 2006), and *Confidentiality Issues Scale* (CIS) (2-items, Community Experts) using a community based participatory research approach (CBPR) and to describe the psychometric properties. **Rationale/Conceptual Basis/ Background:** Vietnamese American women (VAW) are diagnosed with later stage (regional) cervical cancer than non-Hispanic White women, Korean, and Japanese Asian subgroups. Across studies, only 68-81% VAW reported ever having a Pap test. The Ecological Model guided our understanding of influencing factors in obtaining a cervical Pap test. Vietnamese immigrant women (VIW, non U.S.-born) may hold different health beliefs about Pap testing than women with other backgrounds, may encounter cultural barriers to engaging in cancer screening, may not participate because of worry about confidentiality issues in obtaining a Pap test, and their view of the quality care of care delivered in the U.S may also influence participation.
Methods: Instrument development included: (1) modification, (2) using CBPR and the U.S. Census Bureau's team (e.g. Vietnamese community members) approach to translation, (3) pre-testing for face validity using cognitive interviewing, and (4) psychometric analyses. VIW (n=201) from twelve Asian community organizations in the Northwest metropolitan area took the Vietnamese translated self-administered survey. Data were analyzed using Cronbach's alpha for internal consistency reliability and confirmatory factor analysis for factor structure.
Results: The sample was middle aged (M=50 years; min/max=21/87 years), had lived in the U.S. an average of 15 years (SD=9), and 40% spoke English poorly or not at all. Internal consistency of the susceptibility, benefits, and common barriers subscales of the SBBS were moderate to high with alphas of 0.86, 0.69, and 0.86 respectively. The CBSI subscales, use of eastern medicine, modesty, crisis orientation, and lack of family support yielded alphas of 0.69, 0.83, 0.77, and 0.91; the CIS had an alpha of 0.89; and the alpha for the QoC was moderately low at 0.57. The three factor structure of the SBSS yielded an incremental fit index (IFI) = 0.83 and a root mean square error of approximation (RMSEA) = 0.094. The four factor structure of the CBSI yielded an IFI = 0.88 and RMSEA = 0.098. **Implications:** Using a combination of CBPR and the U.S. Census Bureau's team approach produced Vietnamese language instruments with moderate to strong subscale internal consistency. Using such approaches can advance cross cultural measurements in nursing science because cultural perspectives and values are discussed, and decisions are made as a team in resolving ambiguities and provide a way of capturing the team's decisions about what items mean rather than relying on back-translation. Further testing is needed to provide additional validity support for these measures.
Credits: Community Experts Dr. Jessica Gregg, Dr. Pei-ru Wang; Liaisons Tri Tran, BS, Nga-My Vuong, Ken Truong; Coordinator Anthony Truong BS, RPh.

Funding: American Cancer Society DSCN-08-208-01, Beta Psi Chapter and Xi Mu Chapter Research Award/Scholarship of Sigma Theta Tau International, Dean's Award of OHSU, Graduate Nursing Senate Research Award of OHSU, OHSU Student Research Forum Fellowship, Graduate Assistance in Areas of National Need Fellowship, Health Resources & Services Administration Nurse Training Award/TG2, Bertha P. Singer Scholarship.

DO I REALLY WANT THIS? PATIENTS' VIEWS OF HPV VACCINATION

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Purpose: To explore facilitators and barriers to HPV vaccination in college-aged women.

Background: Women will have approximately an 80% lifetime chance of becoming infected with HPV during their reproductive years. The CDC (2007) stressed in a recent report that the typical prevalence of HPV for women under the age of 25 is between 28% and 46% and between 5% and 30% of those infected have multiple types of HPV. Despite the potential positive health outcomes of the HPV vaccine, there is a growing body of literature to support that those who are at increased risk for HPV infection are less likely to receive the vaccine. Multiple studies have demonstrated that the public health benefits of a vaccine are dependent on its acceptability and use. The acceptability of the HPV vaccine includes consideration of the individual's beliefs, attitudes, and the individual's perceived susceptibility to HPV and cervical cancer.

Methods: A survey (75 demographic, attitudinal & instrument items) with descriptive methods approach was used to explore variables related to HPV vaccination in primary care settings in a large southwestern city in this study (n=100). The convenience sample was 100 young adult females who received services in a primary care clinic and was selected based on power analyses conducted for difference tests ranging from a one-sample *t* test through a one way analysis of variance (ANOVA) for demographic variables of interest (ethnicity, contraception, etc.). Participants were asked about facilitators and barriers to HPV vaccination by means of open-ended questions on a survey instrument. Content analysis was performed on their responses.

Results: Participants ranged in age from 18 to 35 years (M = 24.06, SD = 3.55) and self-identified African-American (9%), Anglo (not Hispanic) (59%), Asian-American (6%), Hispanic (24%), or other (5%) as their ethnic classification. Twenty three percent of participants completed the HPV vaccination series and from the remaining 77% who did not complete the series, data were collected from open-ended questions and evaluated to identify prominent themes and related theme patterns. Four major themes emerged from the content analysis for facilitators and barriers and are as follows: side effect fears, efficacy concerns, health care provider endorsement, and financial factors.

Implications: With the advent of a vaccine series that has a significant impact on the reduction of HPV related cervical dysplasia and oncogenic sequela, great strides in decreasing cervical cancer can potentially arise in this next decade. Despite the potential positive health outcomes of the vaccine, there is a growing body of literature to support that those who are at increased risk for HPV infection are less likely to receive the vaccine. Continued research regarding vaccination could inform nurse interventions toward significant health promotion and disease prevention strategies, especially targeting young women and their families in this country.

PREVALENCE AND INCIDENCE OF CERVICAL DYSPLASIAS AMONG OLDER, HOMELESS WOMEN

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Purpose: To describe the prevalence of cervical dysplasias in a sample of 50 older, homeless women who reside in a day/residential shelter in Center City East, Los Angeles.
Background: Cervical cancer incidence has decreased 70% since the 1930's and precipitously since the introduction of Papanicolaou (Pap) screening test in the mid-1950's. However, community-based settings continue to face cervical cancer screening challenges due to the relatively high cost of administering a test for which most women will test negative. Homeless women are disproportionately women of color, with poor education, chronic mental and physical illness and may be at high risk for cervical cancer. Some estimates suggest that the population of homeless adults may increase 13-fold over the next 30 years in Los Angeles County. Thus, understanding risk factors for cervical dysplasias in older homeless women is an important public health goal.
Method: Sexual and medical history data were collected at a single interview and cytology was collected using cytobrush into a ThinPrep preservative. Post-test counseling was provided at each subsequent visit. Descriptive and tabular statistics were used to evaluate the associations between demographic characteristics and cervical dysplasias.
Results: Most participants were peri-menopausal (μ=47), ranging from 22-63 years of age, and reportedly African American (52%, 26/50). Whites and Hispanics comprised 26% (13/50) and 10% (5/50) of the sample. High- and low-grade squamous intraepithelial lesions (SIL) were detected in 2% (1/50) and 4% (2/50), respectively; further, 4% (2/50) presented with benign endometrial cells (BEC). Pap test showing atypical squamous cells of unknown significance (ASCUS) together with a negative HPV test was detected in 6% (3/50) of females. More than half of women reported fatigue and exhaustion (52%, 26/50) that caused them significant distress. Most (90%, 45/50) reported daily walking and exercise; recent unintentional weight loss was reported by 40% (20/50).
Implications: Pilot data show homeless women may be at high risk for cervical cancer. High-grade-SIL is expected in 0.9% of the population, and risk for cervical cancer increases with age for African American and Hispanic females (U.S. Cancer Statistics Working Group, 2004). For example, invasive cervical cancer peaks at 80-84 years among African Americans where it is five times greater than all-race data. Also, 3% of Pap tests are expected to show BEC among females over 40, indicating need for follow-up to rule-out endometrial hyperplasia or adenocarcinoma (Thrall, Kjeldahl, Savik, Gulbahce, & Pambuccian, 2005). Developing cost-effective strategies for cervical cancer screening in older homeless women is essential to decreasing health disparities and preventing invasive cancer in high-risk women.

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CARE ISSUES OF ADOLESCENTS

EXPLORING SOCIAL CONNECTEDNESS AND THE ROLE OF NATURAL MENTORS AMONG HOMELESS YOUTH

Michelle T. Dang, Katherine J. Conger, Joshua Breslau, Elizabeth Miller

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NEUROIMAGING STUDY OF URIDINE: A NOVEL TREATMENT FOR ADOLESCENT BIPOLAR DEPRESSION

Tracy Hellem, Douglas Kondo, Perry Renshaw

EMAIL INTERVIEWING IN QUALITATIVE RESEARCH WITH LATE ADOLESCENTS

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Mary Rezk-Hanna, Aurelia Macabasco-O'Connell

COGNITIVE AND BEHAVIORAL SKILL USE FOR HEALTHY LIFESTYLES IN ADOLESCENTS
Stephanie Kelly, Bernadette Mazurek Melnyk, Diana Jacobson, Judith O'Haver

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DISCOURSES OF RECRUITMENT IN AFRICAN AMERICAN ADOLESCENTS
Robin A. Evans-Agnew

SALUD CON SABOR LATINO PARA LOS NIÑOS: A FEASIBILITY STUDY
Carol J. Stevens, Bonnie Gance-Cleveland

EXPLORING SOCIAL CONNECTEDNESS AND THE ROLE OF NATURAL MENTORS AMONG HOMELESS YOUTH

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Purpose of Study: The purpose of the present study is to examine whether relationships with natural mentors and levels of social connectedness in various contexts have protective effects on the health and psychosocial functioning of runaway and homeless youth (RHY). These protective mechanisms have not been explicitly examined with RHY. The study uses the resilience framework to test for specific mechanisms underlying positive adaptation (see Figure 1 for conceptual model).
Specific Aims: Aim #1. Examine the presence of natural mentoring relationships, the characteristics of mentoring relationships, and levels of social connectedness among RHY.
Aim #2. Determine the effects of natural mentoring relationship on health, psychological, and behavioral functioning among RHY. **Aim #3.** Examine the processes associated with resilience factors among RHY. The study will test three specific models of resilience: (a) compensatory model, (b) moderation model, and (c) mediation model.
Rationale/Background: In comparison with their housed peers, RHY report considerably higher rates of mental illness, drug and alcohol abuse, victimization, sexual exploitation, and risky sexual behaviors (Rew, 2008; Unger et al., 1998). Past research on RHY has primarily focused on the antecedents and consequences associated with homelessness and deviant peer networks. Few studies have explored protective factors within the social networks of RHY and how they may buffer against poor health and developmental outcomes (Kidd & Shahar, 2008; Rew & Horner, 2003; Rice, Stein, & Milburn, 2008). Enduring relationships with natural mentors have been associated with multiple positive developmental and behavioral outcomes and were found to be protective against consequences of childhood adversities and negative peer influences (Werner & Smith, 2001; Zimmerman, Bingenheimer, & Notaro, 2002). Even though natural mentors are commonly identified by adolescents, we currently have very limited understanding regarding the role of natural mentors and the nature of these relationships in the lives of RHY.
Methods: Participants (N = 300, 14-21 year-olds) are recruited from multiple entry points through a collaborative effort with community agencies that serve RHY and various street locations. From the 300 participants, fifty with natural mentors are recruited to participate in individual qualitative interviews about the characteristics of these relationships. Youth under 18 provide their own consents in order to avoid potential harm to youth with histories of parental abuse and/or neglect.
Results: Study is in progress. Preliminary data will be presented.
Implications of Study: The present study addresses a significant gap in the literature about the role of natural mentors and levels of social connectedness among RHY. Understanding the role of important adults in the lives of RHY could have important policy implications in recognizing the vital contributions of positive nonparental relationships, supporting the continuation of these relationships, and developing strategies to connect youth with known, caring adults.

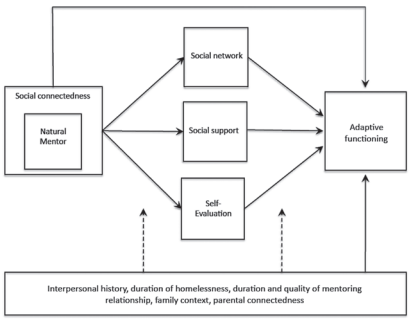

Figure 1. Conceptual model of study. Dotted arrows represent moderating effects.

Funding: This research project is supported by the University of California, Davis, Graduate Research Mentorship Fellowship.

NEUROIMAGING STUDY OF URIDINE: A NOVEL TREATMENT FOR ADOLESCENT BIPOLAR DEPRESSION

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Purposes/Aims: 1) To examine the efficacy of uridine as an intervention for depression in the context of pediatric bipolar disorder (BD); 2) To characterize *in vivo* changes in brain bioenergetic parameters associated with uridine pharmacotherapy.
Rationale/Conceptual Basis/Background: Pediatric BD is an illness for which new treatments are urgently needed. While there are several FDA approved medications for pediatric mania, there are currently no approved treatments for depressed youth with BD. Converging lines of evidence implicate bioenergetic, i.e. mitochondrial, dysfunction in BD. Pyrimidines, including cytidine, TAU and uridine, are a class of compounds with the potential to impact cerebral energy metabolism. Magnetic resonance spectroscopy (MRS) is a neuroimaging technique for performing *in vivo* measurement of neuronal metabolites. In clinical trials, MRS is used to determine the neurochemical changes associated with response to treatment, as well as the differences between ill subjects and healthy controls (HCs). As an initial step, we treated 9 adolescents with BD with open-label uridine and performed MRS brain scans. HCs were recruited and scanned for comparison.
Methods: The study received IRB approval, was monitored by a Data Safety Board, and conducted under FDA IND #74,122. Written parental consent and participant assent were obtained. Subjects had a primary diagnosis of BD I, II or NOS and a current depressive episode of >2 weeks with a CDRS raw score of >40. Exclusion criteria included active psychosis, high risk for suicidal behavior, and a YMRS score of >10. Diagnoses were established with the K-SADS-PL. Safety labs were obtained at baseline and at 6 weeks. Participants received fixed-dose uridine 500mg BID for 6 weeks. The CDRS, YMRS and the C-SSRS were administered at each visit; adverse events (AEs) were also recorded. A Siemens 3T MRI system and $^{31}P/^{1}H$ double-tuned volume head coils were used to acquire baseline and repeated measures MRS data from 4 participants and 10 HCs.
Results: Participants included 5 females and 4 males; all were Caucasian and 1 was Hispanic. Six of the 9 participants completed 6 weeks of uridine treatment. Three participants withdrew from the study, but each denied efficacy or AEs as the reason for withdrawal. The mean CDRS score was 60.3 at baseline and 27.6 after 6 weeks of uridine treatment. The mean reduction in CDRS scores was 46% for the 6 completers. No clinically significant laboratory abnormalities occurred and AEs were self-limited. At baseline, no ^{31}P-MRS neurochemical differences between the treatment group and HCs were observed. After 6 weeks of treatment with uridine, there were significant between-group differences in β-NTP (largely ATP) ($p=0.008$) and phosphocreatine ($p=0.02$).
Implications: In this open-label case series, uridine was efficacious and well tolerated by adolescents with BD. ^{31}P-MRS neuroimaging results suggested potential mediators of treatment response. Rapid onset of antidepressant action may be a distinguishing feature of uridine. While the small sample size mandates caution in interpreting these results, further study of uridine as a treatment for depressed adolescents with BD is warranted.

EMAIL INTERVIEWING IN QUALITATIVE RESEARCH WITH LATE ADOLESCENTS

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The purpose of this project was to develop methods for internet recruitment and electronic interviewing in qualitative research of late adolescents. Today, late adolescents exhibit a unique cultural, linguistic, and development pattern different from previous generations. Contemporary adolescents have an affinity for text based communication; maintaining customary face-to-face (F2F) interviews impact their ability to share (Heath, Brooks, Cleaver, & Ireland, 2009). Therefore, restructuring traditional research strategies to address and meet developmental and cultural needs of the participants being studied assists in capturing their true reality as well as elicitation of honest answers.

The research methodology for this project identified the developmental needs of late adolescents and used this information in the construction of a research webpage and designing the process for asynchronous electronic interviewing via email. The webpage design included developmentally appropriate language, pictures of multicultural youth, written text with supportive examples, quick links and hyperlinks to located information easily and quickly. Confidentiality, in both study participation and dissemination of results, was repeatedly stressed on the webpage because of its importance to late adolescents. Asynchronous email interviews were developed by providing an interview rubric describing the process and pattern the late adolescent could expect during the interview period. Questions were sent one-at-a-time and the "reply" button was used to create a running transcript of the conversation. Asynchronous interviewing allowed the participant time to reflect on the question and develop a response. Pauses in the electronic conversation were viewed in a similar manner as pauses in a F2F interviews; rapport increased with time and number of emails. At the end of the electronic interviewing, the written transcript created by the email messages was offered to the participant to review, clarify, modify, or confirm. The ability to revisit the interview in total at the end of the interview period and modify, if necessary, gave authenticity to the data collected.

Implications of this project address the necessity of researchers to adapt to the needs of the study population in order to elicit rich data. In this project, modifying the traditional qualitative research approach to the study population leveled power differentials between the researcher and participant, opened geographic boundaries common with F2F interviews, extended time limitations for participant reflection and answer formation, and assisted with participant disclosure in the research process by implementing a familiar environment for interaction.

HOOKAH: AN INSIGHT INTO NICOTINE EFFECTS

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Nicotine's addictive properties and their relationship to cigarette smoking is studied. However, this relationship is poorly understood for smoking tobacco in a hookah. Hookah, known as waterpipe or hubble bubble, is the second most popular form of tobacco use next to cigarettes. The use of hookah tobacco is widely spreading among young adults and college students. The use of hookah as a nicotine delivery system is becoming a public health concern because many hookah smokers are under the impression that use of a hookah is a safe alternative to cigarette smoking. We hypothesize that the use of a hookah to smoke tobacco may lead to acute periods of nicotine withdrawal and that, in the absence of a hookah, individuals may smoke cigarettes to alleviate the acute withdrawal. This in turn is hypothesized to promote regular cigarette smoking and nicotine dependence.

VALIDATING A MEASURE FOR OBESITY RISK KNOWLEDGE IN ADOLESCENTS

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Specific Aims of the Study: The purpose of this research is to revise a previously utilized tool for measuring obesity risk knowledge in adolescents. This investigator's previous research with the Obesity Risk Knowledge-10 (ORK10) did not demonstrate an acceptable Chronbach's alpha. Original design for this tool was completed in 2005 in Great Britain with adult participants (Swift et al, 2005). This investigator believes the reading level of the instrument and the inclusion of several questions that were not culturally sensitive must be examined and the instrument must be revised to be age appropriate as well as culturally sensitive in the population to be included in the study.
Background for the Study: Despite comprehensive campaigns geared toward the individual, family and community concerning the risks of obesity, the number of adolescents and adults who meet the criteria for obesity continues to rise. Knowledge of risks continues to be an area that is important to examine when studying health behaviors. Multiple studies found in the literature demonstrate that lack of knowledge concerning obesity risks does indeed exist even at a time when public campaigns dedicated to education on this topic are extensive and inclusive.
Research Methodology: The current study was initiated in January, 2010 and is anticipated to be completed by July, 2011. There are two phases to the study. Mixed methods will be included. Phase one: A focus group has been conducted with 20 adolescents as a means of "translating" the instrument (ORK-10) into language easily comprehended by 12-15 year olds. Phase two: (Pilot study) Data has been collected from students (N = 110) attending 2 southern California middle schools.
Results: Statistical analysis is being completed to determine reliability/validity level of this measure including stability among subjects. Data continues to be analyzed. Preliminary results demonstrate Chronbach's alpha approaching .7. The measure is being modified to strengthen its stability with the following configuration:
7-item questionnaire (#'s 1, 2, 4, 5, 6, 8, 10): Cronbach's alpha = .542 6-item questionnaire (#'s 1, 2, 4, 5, 8, 10): Cronbach's alpha = .556.
Implications to Nursing: Following establishment of validity/reliability, the plan is to place this tool in primary healthcare settings to be used by family nurse practitioners, pediatric nurse practitioners, family practice physicians, pediatricians, pediatric endocrinologists, etc. as a means of establishing a baseline of knowledge regarding the patient and the parent's level of obesity risk knowledge. This will, in turn, assist the practitioner in establishing a plan of care addressing the issues of overweight and obesity.

PATTERNS OF PARENT-CHILD RELATIONSHIP, MATERNAL DEPRESSION, AND ADOLESCENT OUTCOMES

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Purpose: The overarching purpose of this research is to build understanding of resilience processes through the investigation of the longitudinal influences of parent-child relationship quality (PCRQ) on positive developmental outcomes among adolescents. The goals are to characterize trajectories in PCRQ and to examine how variations in trajectories moderate the impact of risks such as maternal depression. To understanding resilience processes, the specific aims were to use state-of-the-science methods to 1) distinguish trajectories of PCRQ across time, and 2) characterize these trajectories by identifying risk and protective factors predictive of different trajectories.
Conceptual Basis: The conceptual underpinnings for this research derive from resilience theory that posits how protective factors (PCRQ) contribute to positive adolescent adaptation in situations with significant adversity (maternal depression). The resilience approach examines how protective factors moderate risks that adolescent experience, focusing away from the more limited deficit model of problem behaviors or impaired developmental outcomes. The approach heightens awareness of adolescent strengths, shifting conceptualizations for prevention efforts.
Methods: The study was conducted using data gathered from the larger PAYS (Parents And Youth with School) study. The PAYS study is a 3-group repeated measures, randomized controlled trial, with youth drawn from a sample pool of potential high school dropouts, with a final sample of 521 youth and 443 parents. Using well-established measures and a longitudinal design, adolescent perception of PCRQ was assessed five times, across a 2-year period. Growth mixture modeling is being used to identify classes of youth with similar trajectories of PCRQ defined in terms of closeness and conflict. Predictive relationships between identified risk (maternal depression) and protective factors (high closeness and low conflict) and membership in PCRQ trajectories will be examined.
Results: For the full sample, we observed that mean levels of PCRQ changes across assessments. The overall trajectory for closeness was U shaped, increasing slightly, then decreasing below the first assessment level, and increasing again. Parent-child *closeness* showed significant associations with most adolescent development outcomes, including risk behaviors ($r=-.11\sim -.10$, $p<.01$), drug involvement ($r=-.13$, $p<.01$), symptoms of depression ($r=-.28\sim -.20$, $p<.01$) and hopelessness ($r=-.30\sim-.25$, $p<.01$). Parent-child relationship *conflict*, declined slowly across time. Conflict was significantly associated with adolescent development outcomes across assessments. Low to moderate correlations were observed between conflict and risk behavior ($r=.16\sim.34$, $p<.01$), drug involvement ($r=.11\sim.23$, $p<.05$), depression ($r=.38\sim.45$, $p<.01$), and hopelessness ($r=.45\sim.52$, $p<.01$). Results from the ongoing analyses using growth mixture modeling and multinomial logistic regression will be reported, interpreted, and discussed.
Implications: The significant associations observed between PCRQ and developmental outcomes across time reflect the importance of relationship quality in promoting positive adolescent developmental outcomes. Based theory, research, and this descriptive evidence of change in PCRQ, we anticipate identification and characterization of several distinct trajectories of PCRQ, including a relatively stable normative pattern, a declining pattern, and a chronically low quality pattern. These trajectories will be tested for their impact on adolescent developmental outcomes and their influence on moderating the impact of maternal depression, yielding new information about PCRQ, and providing critical insight for expanding nursing approaches to preventive interventions.

INTERVENTIONS TO INCREASE HAPPINESS FOR YOUNG ADULTS WITH SCHIZOPHRENIA

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Purposes/Aims: This study has two aims: 1) adapting Appreciative Living Learning Circles (ALLCs) to needs of young adults (21-35) with schizophrenia and/or schizoaffective disorder (SCZ) and 2) testing feasibility of ALLCs and social networking groups (SNGs) to increase hope/relational happiness and decrease social fear/isolation.
Rationale/Conceptual Basis/Background: Young adults with schizophrenia experience social fear and isolation leading to diminished opportunities for relationships with peers, identified by them as critical to building happiness. Building upon Positive Psychology and Appreciative Inquiry (AI), ALLCs assist individuals with positive thinking and actions to get more of what they want in life. With SNGs, ALLCs provide opportunities for socialization with peers in a safe environment with fun, free activities.
Method: Convenience samples from urban mental health centers made up focus groups of 4 young adults with SCZ (age 21-35; 1 African American, 1 Asian, 2 Caucasian), 6 family members (1 African American, 2 Asian, 3 Caucasian) and 4 mental health professionals (4 Caucasian) to adapt the ALLC design. A two group experimental design (wait-list control; experimental group) will be conducted to compare intervention impact. The eight week experimental group will be co-facilitated by mental health professionals in an urban community or agency setting. Controls may participate in the intervention at study end.
Results: Aim 1: Focus groups identified the need for: 1. small numbers in the intervention (4-10), 2. easy accessibility by bus, free parking, no more than 30 minutes to get there, 3. an experience not involving written work, designed so activities build trust over time, 4. incentives for coming: good food, fun activities, gift cards, personal attention and reinforcement for the value the participants bring to the study, and 5. a location that is quiet, inviting, in a safe location (mental health center, community center), easily fits the number of people included, and accessible to a smoking area. **Aim 2:** To be conducted Fall 2010, Winter 2011. Results of hope, happiness, loneliness and social fear measures using pre, post and 2 months post intervention measures will be compared to control group.
Implications: Aim 1: Focus groups provide a useful way to engage young adults with SCZ, their family members and providers in the design of an intervention. Opportunities for collaborations when designing interventions could increase an intervention's success. **Aim 2:** Results of the study will inform further AI use with this population and other populations with chronic health conditions to determine the relationship of concepts measured to maintenance of recovery and well-being.

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DECREASING SUGAR-SWEETENED BEVERAGE CONSUMPTION IN THE RURAL ADOLESCENT POPULATION

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Background: Adolescent sugar-sweetened beverage (SSB) consumption has increased drastically with detrimental effects such as weight gain, weakened bones, dental caries and associated higher levels of Type II diabetes in this population.
Purpose: To assess and change SSB consumption of rural adolescents through technological intervention and water bottle.
Methods: Rural Family Nurse Practitioner (FNP) students in the preceptored-clinical setting, using Kellogg- funded Smart Phones, screened adolescents aged 13-17 years for SSB consumption in the past 24 hours. Parental/legal guardian and participant informed consent was acquired prior to tracking consumption with the Typhon Tracking system. Adolescents were initially provided a pamphlet and related oral teaching concerning SSB as well as a water bottle to encourage health fluid intake. Screening SSB information was inputted into Smart Phones which resulted in immediate access by the primary investigator sometimes hundreds of miles distant. After 30 days, FNP students completed follow-up phone interviews to again assess SSB consumption in the previous 24 hours.
Results: Results were positive with the younger 13-15 year old participants.
Implications: Attention to younger teens may assist in decreasing their SSB consumption. Additionally, Smart phones have a place in rural research, with both advantages and disadvantages in utilizing this evolving technology.

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PROMOTING SELF-CARE USING MOTIVATIONAL INTERVIEWING IN TEENS WITH IDDM

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Background: The management of the care of adolescents with type 1 diabetes is challenging as it requires the adolescents to collaborate with the diabetes team and involves self-care in the areas of blood glucose testing, insulin administration, diet and exercise. Recent investigations worldwide have shown that as few as one third of adolescents with diabetes have Hgb A1C levels less than 8% (Graue et al., 2005). The only factor found to be related to better metabolic control is parental involvement in selected aspects of an adolescent's diabetic treatment regimen. These factors are blood glucose monitoring (Buchbinder et al., 2005) and insulin administration (Hanna & Guthrie, 2003). It was also found when parental involvement is decreased, the frequency of blood glucose monitoring by the adolescent declined (Ott et al., 2000). A study by Holker (2008) showed that higher parental responsibility resulted in lower self-care scores of the adolescent. This in turn led to a higher Hgb A1C scores. Few studies have explored ways to help adolescents increase their self-care. This study proposes to examine the effectiveness of using Motivational Interviewing to promote self-care skills with an adolescent with diabetes. Motivational Interviewing is a counseling technique that aims to help patients identify and resolve conditions or behaviors related to disease as well as to encourage behavior change. Motivational Interviewing has been found to be effective in helping adolescents improve their glycemic control in previous research and promote effective self-care skills (Anderson, Svoren & Laffel, 2007).
Purpose: The purpose of this study is to test the feasibility and efficacy of using Motivational Interviewing in a group setting, with adolescents age 13-18 with T1DM and its impact on self care and glycemic control, compared with usual care.
Methods: A randomized control trial will be used to test the research questions. The instrument to be used is the Self-Care Inventory (LaGreca, 1988), as well as Hgb A1c levels. A total of 80 adolescents will be recruited from a Midwestern diabetes clinic. Data will be analyzed using a repeated measure ANCOVA. The findings from this study may enable diabetes educators to use a valuable and cost-effective intervention to increase self-care in adolescents with T1DM.
Results: Pending.
Implications: If better self-care skills can be obtained by the adolescent with TIDM, then they will be at a lower risk for complications in the future.

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HOOKAH SMOKING AMONG ADOLESCENTS AND YOUNG ADULTS

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Purpose: The purpose of this study is to assess hookah smokers' attitudes, beliefs, perceptions, and preferences towards hookah smoking. Information gained from this study will provide preliminary data for future intervention studies targeting the community health needs of adolescents and young adults.

Background: Hookah smoking (also known as waterpipe, gouza, narghile, or shisha) is a new trend in tobacco use that is directly associated with multiple health risk factors. Hookah has been used for many years for smoking tobacco in the Middle East and has spread throughout Europe and United States (U.S.). In recent years, the prevalence of hookah smoking has increased, especially among adolescents and young adults. However, limited data exists regarding the attitudes and beliefs, as well as the impact of hookah smoking, among U.S. adolescents and young adults in the community.

Methods: This descriptive, cross-sectional study recruited a convenience sample of participants between the ages of 18 to 30 years at three randomly selected hookah lounges in southern California. Data collection occurred during a four-week period in August, 2010. Participants completed a short survey including socio-demographic data such as gender, age, and race/ ethnicity, as well as initiation and frequency of hookah smoking. Attitudes and beliefs regarding its harmful effects compared to other tobacco products were asked and included one open-ended question regarding what makes hookah more attractive to them.

Results: Participants (N=91) had a mean age of 23±2.7 years, 65% males, 34.1% Middle-Eastern, 20.9% Caucasian, 17.6% Asian, 9.9% Latino, 7.7% African-American and 9.8% other ethnic groups. Twenty four percent reported that they started smoking hookah before the age of 18. Sample frequency of hookah smoking showed 73.6% of participants smoke more than once a week, 23% smoke monthly, and 3% smoke yearly. Thirty six percent reported performing hookah at least four times per week. More frequent users of hookah were more likely to believe that hookah is less harmful than cigarettes and/or do not smoke cigarettes. Fifty seven percent believed that hookah is not harmful to their health and 43% believe it is harmful. Participants reported several reasons why hookah is more attractive than other forms of tobacco, these include: aroma, sweet flavor, fun way of socializing among friends, no nicotine present, etc.

Implications for Practice: This study provided preliminary data on the knowledge and attitudes regarding hookah smoking. Data suggest that most hookah smokers lack knowledge regarding hookah's harmful and negative effects on health regardless of their gender, age, ethnicity and /or frequency of usage. Even though 43% of hookah smokers believed that it was harmful, they continue to smoke. These participants reported socializing with friends outweighed health concerns. A better understanding regarding the increased use of hookah smoking is crucial. Research should focus on identifying public health strategies for increasing awareness about hookah smoking, as well as the short and long-term health effects of hookah smoking to support future prevention trials, particularly in adolescents and young adults.

COGNITIVE AND BEHAVIORAL SKILL USE FOR HEALTHY LIFESTYLES IN ADOLESCENTS

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Purpose: The purpose of this descriptive study was to identify the use of cognitive and behavioral skill building techniques in adolescents to increase physical activity (PA) and fruit and vegetable (F&V) intake.

Background: Physical activity and F&V intake are important aspects of a healthy lifestyle. National data indicates that only 18.4% of youth in 9-12th grades were physically active at least 60 minutes per day. Additionally, only 22.3% of teens reported eating five fruits or vegetables a day. When adolescents do not meet recommendations for one health behavior, other health behavior recommendations are often not met as well. For example, in a study of 878 teens ages 11-15 years, 80% had several risk behaviors. Cognitive behavioral skills building (CBSB) is a method used to promote physical and mental health. Positive findings have been associated with teens in studies involving depression, anxiety and obesity. Cognitive behavioral skills building is a promising technique to enhance PA and F&V in teens.

Methods: Descriptive statistics were analyzed for two scales capturing cognitive behavioral skill use for PA and F&V intake. Each scale had responses ranging from 1 to 5 indicating: 1- never, 2- almost never, 3- sometimes, 4- often, and 5- many times. Sample items include: "I set goals to eat at least five servings of fruit and vegetables a day." and "I do things to make physical activity more enjoyable." Data were collected from a convenience sample of 404 high school students with students ranging in age from 13.5 to 18 years, with a mean of 15.1 years. The participants were sampled from required health/physical education classes in two high schools within the same school district located in the Southwest region of the United States.

Results: The mean score (SD) of the use of cognitive behavioral skills for the PA scale [42.1(11.4)] was higher than use for the F&V scale [36.6(12.4)]. The range of responses for each item on both scales was 1 to 5. The mean score ranged from a low of 2.2 on the F&V scale to a high of 3.1. The mean score ranged from a low of 2.2 on the PA scale to a high of 3.6. In general, students utilized cognitive behavioral skills almost never to sometimes. The scores on the PA and F&V scales were significantly correlated with the student's PA (.271, $p<.01$) and F&V intake (.193, $p<.01$).

Implications: Interventions including cognitive behavioral skills building are a promising component to encourage the enactment of healthy lifestyle behaviors in adolescents.

USING THE GENOGRAM TO INTERVENE WITH FAMILIES WITH AN ADOLESCENT WITH SCHIZOPHRENIA

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Purpose: The purpose of this presentation is to describe therapeutic nursing interventions generated from use of the family genogram with families caring for their adolescent with schizophrenia.

Background: The therapeutic nature of the genogram was noted from its use to obtain family data during an RCT with 40 families with an adolescent with schizophrenia. The genogram has become recognized as an important tool for tracking hereditary health conditions in families as well as for gaining knowledge about the family life style patterns, structure, dynamics, resources, support and communication patterns. In addition to the data gathered from the genogram, the process of constructing and completing the family genogram was found to be a useful and meaningful therapeutic activity for the family members.

Method: This study was a two group RCT with forty families who have an adolescent between 15-19 years of age with schizophrenia. The families were randomly selected to participate in the treatment group which extended through 14 months. The genogram was constructed during an initial interview with the designated family member and the research nurse. The genogram was used to collect family data at baseline and updated through interviews with the designated family member at each data collection time point for both the control groups and treatment groups. Re-evaluation of the genogram at each time point provided some means of establishing stability reliability. Data from multiple family members throughout the 14 months they participated in the study provided a means to estimate the validity of the data.

Outcomes: Examples of genograms illustrating variations in genetic patterns, life style patterns, family structure, dynamics, resources, support and communication patterns will be presented. The therapeutic interventions generated from these patterns with the families caring for their mentally ill adolescent will be presented and discussed.

Conclusions: Constructing one's family genogram can be therapeutic by assisting one to become more aware of important patterns, strengths or limitations of the family as a unit. Since the genogram provides a pictorial image of the family, the needs of the family may become more salient. Nursing interventions can then be planned to meet the needs of the family. For the families caring for their mentally ill adolescent, very often someone is needed to be available to provide care 24 hours a day every day of the week. For many families, there are no family members available to provide care 24/7. The genogram was a useful tool in highlighting the need for more resources to assist the family. The number of family members available to assist in the youth's care was noted to be an important factor requiring a nursing intervention for many of these families.

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DISCOURSES OF RECRUITMENT IN AFRICAN AMERICAN ADOLESCENTS

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Purpose: This paper explores the recruitment discourses of African American adolescents enrolling in a community-based asthma research study.
Rationale: There are significant ethical challenges in recruiting vulnerable ethnic populations for community-based research. The recognition of these difficulties has generated a variety of discursive practices, or socially conditioned ways of talking amongst researchers, practitioners, policy makers, and research subjects. These practices include discourses on trust, identity, and community responsibility. Discourses on trust relate to historical and present day racial exploitation; discourses on identity relate to the contested stereotypes of race, age, and disease-state; and discourses on community responsibility relate to cultural and community perspectives on the benefits of research. Little is understood about the discursive practices amongst African American adolescents with asthma who choose to participate in community-based research.
Conceptual Basis: A critical discourse analysis could reveal underlying power structures that introduce, undermine, or privilege areas of knowledge relating to recruitment of disadvantaged groups.
Methods: Utilizing critical race theory and a Foucauldian approach to discourse analysis, I will analyze texts to be collected during enrollment for 24 African American adolescents (15-18 years) from Seattle with asthma in a Photovoice project on asthma management disparities. The texts will include two perspectives. First, from the perspective of the enrolled adolescents in responding to the following question: "Why did you decide to participate in this research study?", and second, from the perspective of the principal investigator using reflective journal notes written during the recruitment phase of research.
Results: Findings will be analyzed with respect to how arguments and justifications for participation are introduced, undermined, or privileged within and alongside the dominant discursive practices of recruitment for African Americans. The findings will describe how recruitment strategies can discursively affect the voice of participants, future investigations, and policy development.
Implications: This analysis interrogates the assumptions in play amongst nurses and participants involved in community-based asthma research, education and practice. New strategies will be suggested for re-presenting recruitment in public health nursing practice and education and for re-covering adolescent discourses for exploration in nursing research. By exploring the structures of power assembled in the discourses of recruitment with African American adolescents with asthma, and describing the interplay between these forces and the voice of adolescents, this project can improve the accuracy and depth of further investigations.

SALUD CON SABOR LATINO PARA LOS NIÑOS: A FEASIBILITY STUDY

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Purpose: The purpose of the study is to evaluate the feasibility, acceptability and preliminary efficacy of a theory-based healthy eating and activity intervention for Hispanic adolescents. The relationships between self-efficacy, peer and parent social support and acculturation as key factors associated with eating and activity behaviors in Hispanic youth will be explored.

Background: Obesity in Hispanic youth has reached alarmingly high levels which have increased the number of Hispanic adolescents at risk for obesity-related diseases such as Type 2 diabetes, hyperlipidemia, hypertension, cardiovascular disease and cancer. Research suggests that multi-component interventions which include dietary education, physical activity (PA) and behavioral skills training have been effective in improving nutritional intake, increasing PA, and decreasing sedentary activity in youth, yet few studies have been conducted with Hispanic middle school-age children. While research suggests that factors such as social support, level of acculturation and the role of self efficacy may play a role in adolescent eating and activity choices, little is known about their influence in the Hispanic population.

Methods: The study design is a one-group pre- and post-test quasi-experimental design that uses community based participatory research (CBPR) methodology. The Sabor con Salud Latino para los Niños (SSLN) program builds on a theory-based behavioral intervention that has been efficacious in improving nutrition status and increasing activity in overweight youth at risk for type 2 diabetes. The CBPR method was used to enhance recruitment, strengthen the intervention by revising the curriculum to be more culturally acceptable, and achieve better community participation in delivering the curriculum. The 8-week, 16 session after-school program will be offered to middle school-age Hispanic adolescents at a local community center located in the southwest United States. Intervention components include teaching nutrition and PA knowledge and behavior skills appropriate to early adolescents. Cultural beliefs, values and traditions are addressed and integrated throughout the curriculum. The SSLN conceptual framework uses Social Cognitive Theory (SCT), a widely tested framework for obesity prevention intervention in early adolescents. SCT explains the complex interactions related to the obesity and reinforces the need to address personal, behavioral and environmental influences in eating and activity behaviors in Hispanic youth.

Results: Feasibility and acceptability of the SSLN program will be evaluated by the analysis of recruitment, retention and attrition; and the participant's satisfaction with the curriculum. Preliminary efficacy will be measured by conducting paired *t*-tests of study outcome variables using only cases where pre and post data are available. Cohen's *d* will be run to quantify the effect size of the intervention effect. Analysis will be completed using only cases where pre and post data are available. Bivariate correlations between predictor, mediating, moderating and outcome variables will be conducted to determine the direction and magnitude of the relationships among these variables.

Implications/Significance: Findings from this study will provide valuable information for interventional research on obesity prevention in Hispanic youth. Understanding the feasibility and acceptability of the intervention will allow for future testing in a large scale randomized control study.

SYMPOSIUM: CONDUCTING INTERVENTION STUDIES IN SCHOOL SETTINGS: KEY STRATEGIES FOR SUCCESS

OVERVIEW: IMPORTANT CONSIDERATIONS IN ACCESSING SCHOOLS FOR INTERVENTION RESEARCH

Bernadette Mazurek Melnyk, Judith O'Haver, Diana Jacobson, Stephanie Kelly

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MAPPING OUT RESEARCH SUCCESS BY UTILIZING STATE STANDARDS AS A GUIDELINE

Judith O'Haver, Bernadette Mazurek Melnyk, Diana Jacobson, Stephanie Kelly

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IMPLEMENTING INTERVENTIONS IN SCHOOLS: THE IMPORTANCE OF FIDELITY

Diana Jacobson, Stephanie Kelly, Bernadette Mazurek Melnyk

LESSONS LEARNED IN CONDUCTING INTERVENTION STUDIES IN SCHOOL SETTINGS

Kim Weberg, Alan Moreno

CONDUCTING INTERVENTION STUDIES IN SCHOOL SETTINGS: KEY STRATEGIES FOR SUCCESS

Overview: Important Considerations in Accessing Schools for Intervention Research

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Purposes/Aims: The purposes of this presentation will be to: (1) describe important considerations in gaining access to schools for intervention research, and (2) highlight key strategies for success.

Rationale/Background: Schools are an ideal site to promote the health of children and adolescents as implementing interventions in schools reduces barriers such as transportation or stigma regarding the use of community based mental health services. However, access to conducting research within schools is often limited.

Brief Description of the Best Practice: Best practices learned in gaining access to schools for the purpose of conducting research will be described. Important considerations that schools entertain when making decisions about whether to allow the conduct of research in their settings will be highlighted.

Outcomes Achieved: A concise description of the series of intervention studies successfully conducted and in process in high schools by this research team will be described.

Conclusions: Knowledge of key strategies in gaining access to schools to conduct research can benefit researchers who desire to conduct health promotion interventions in school settings.

CONDUCTING INTERVENTION STUDIES IN SCHOOL SETTINGS: KEY STRATEGIES FOR SUCCESS

Mapping out Research Success by Utilizing State Standards as a Guideline

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Purpose: The purpose of this presentation is to discuss the considerations for the process of using state academic standards when developing intervention research in high schools.
Background: Academic standards for children educated in high schools are developed at the state level to ensure that the students master the skills needed to be competitive in a global economy. Skills are defined according to requirements for college entrance, workforce training and life skills. At the time this protocol was developed, the goal of comprehensive health education was focused on attainment of health information and its relationship with physical, behavioral and social well being in addition to prevention of health problems. Additionally the goals included accepting responsibility for health decisions and practices, working with others to maintain healthy environments and to become informed consumers.
Approach: The academic standards from the Arizona Department of Education were obtained and reviewed. Standards included for consideration related to health education, physical activity, mental and emotional health, nutrition, health promotion concepts, personal health and substance abuse. Proficiency standards such as goal setting were included in the homework as part of the protocol. Additionally the health teachers in the schools were consulted and their curriculum reviewed to ensure that their course goals were included in the projects development. Standards addressed were identified in the facilitators' manual. The manuals of our current project were refined based on the results of the pilot work and the identified needs of the students.
Outcomes: The manual that was developed in the pilot work of our intervention study was congruent with the state identified standards and district policy. This ensured that the curriculum that was developed for both the intervention group and the healthy lifestyles group was an augment to what was being developed as standard curriculum.
Conclusions: Conducting research in schools requires a partnership in which the school's objectives are valued and the research is seen to be beneficial to the students' overall educational objectives. Developing protocols that address some of these identified goals promotes acceptance of the delivered protocols and enhances the students' success for achieving health related outcomes.

CONDUCTING INTERVENTION STUDIES IN SCHOOL SETTINGS: KEY STRATEGIES FOR SUCCESS

Implementing Interventions in Schools: The Importance of Fidelity

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Aims: The aims of this presentation are to discuss: 1) the importance of measuring treatment fidelity, 2) creation of a fidelity tool to assess implementation of an intervention, 3) protocols for implementation of the fidelity measure, and 4) lessons learned.

Rationale: Measuring treatment fidelity is essential in any clinical trial to identify if the intervention was implemented as proposed. Treatment fidelity is commonly measured by an observer using a preset questionnaire addressing how closely the interventionist is presenting the treatment and adhering to the prescribed protocol. A thorough, easy to complete measure is necessary to complete a fidelity assessment in the field. Creation of the fidelity tool is commonly an iterative process. Training of team members is vital to ensure inter-rater reliability among observers utilizing the measure. Additionally, it is helpful for several observers to assess each session in order to review similarities and differences in rating the fidelity of the interventionist.

Outcomes Achieved: The iterative process in the development of a fidelity measure was important to create the most comprehensive and usable measure. Research team members created the fidelity tool and then tested it in during early stages of the intervention. After several observers had the opportunity to use the tool, it was revised. Training to utilize the measure was completed by observers monitoring three sessions together and then discussing their ratings after session completion.

Conclusions: It is important that all interventions have fidelity measures to assess if the interventions were delivered as prescribed. Fidelity to the protocol can have a significant impact on the measured outcomes of the intervention.

CONDUCTING INTERVENTION STUDIES IN SCHOOL SETTINGS: KEY STRATEGIES FOR SUCCESS

Lessons Learned in Conducting Intervention Studies in School Settings

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Purposes/Aims: To establish procedures to implement a cluster randomized controlled trial in multiple high schools.
Rationale/Background: Previous pilot work suggested the need to establish procedures for working in multiple high schools in the implementation of an intervention study with youth 14-16 years old. During the implementation of the pilot studies, multiple lessons were learned related to effective practices in working with school personnel and students.
Process: The Research team worked directly with multiple High Schools in an urban southwestern city including school district personnel, principals, administrative staff, teachers, students and parents. These relationships brought forth feedback that allowed the research team to revise its processes to better meet the needs of the participants. This feedback provided valuable "lessons learned" that informs future school based research work.
Outcomes Achieved/Documented: The development of processes for working with multiple schools allowed the research team to look at project goals and to determine the best possible method to achieve the outcome desired. This method, allowed the team to identify multiple themes for the lessons that were learned. These themes include: Establishing connections with the schools, communication, organization, follow up and flexibility. In establishing connections with the schools, it is imperative build rapport with key personnel in the schools. Based on this relationship a researcher has the opportunity to better learn the school's individual processes in the individual which is essential to the success of the project. Communication is imperative for implementation. The keys to communication lie in preparing the information and defining needs ahead of time, setting clear and realistic deadlines with participants and utilizing multiple methods of communicating with multiple audiences. Organization with school based projects is key especially when coordinating multiple sites. Priorities include streamlining processes to decrease participant burden and unnecessary duplication. Follow-up is vital to time-management when working with schools and include scheduling issues, team availability, and procedures for the dissemination and collection of research materials. Lastly, flexibility has proven to be a key element in working with multiple schools and conducting school based intervention research due the varying needs of the populations and settings involved in the research.
Conclusions: With every new group of participants and each setting additional lessons are learned and utilized to improve processes to achieve the overall objectives of the research. These Effective school based research depends strongly on relationships with the schools, and responding appropriately to the needs of each school and their students. Examples of how this was achieved with our current R01 and former pilot work will be discussed as an example of how to best facilitate this process.

SYMPOSIUM: CTSAs IN THE WEST: NURSING'S LEADERSHIP IN TRANSLATIONAL, INTERDISCIPLINARY SCIENCE

OVERVIEW: CTSAs IN THE WEST: NURSING'S LEADERSHIP IN TRANSLATIONAL, INTERDISCIPLINARY SCIENCE

Anne Rosenfeld

TRANSLATIONAL RESEARCH: WHAT IT MEANS AND WHY IT MATTERS

Beth Tigges, Melinda Tinkle

COMMUNITY ENGAGEMENT: AN ESSENTIAL COMPONENT OF CTSAs

Elizabeth Reifsnider

ADVANCING NURSING SCIENCE THROUGH CLINICAL TRANSLATIONAL SCIENCE CENTERS

Ellen Olshansky, Heather M. Young

CTSAs IN THE WEST: NURSING'S LEADERSHIP IN TRANSLATIONAL, INTERDISCIPLINARY SCIENCE

Overview: CTSAs in the West: Nursing's Leadership in Translational, Interdisciplinary Science

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Purpose: The National Institutes of Health's goal for creating the Clinical and Translational Science Award (CTSA) program is "to transform the local, regional and national environment for clinical and translational science, thereby increasing the efficiency and speed of clinical and translational research." Twelve of the 55 CTSAs in the U.S. are located in the West, and nurse scientists play key roles in their leadership. The purpose of this symposium is to describe the challenges, opportunities and successes related to nurses' involvement in CTSAs' efforts in translational, interdisciplinary science.

Description: The Overview will describe the CTSAs in the West, their goals and organization, and nursing roles within them. Key to understanding the work of CTSAs is defining what translational research means. Definitions and models of translational research will be presented, along with issues related to measuring outcomes for CTSA programs. In other words, do CTSA activities have an effect on translational research? One major goal of CTSAs is training of the next generation of translational clinical investigators. Mechanisms of training will be presented, along with opportunities for funding of research projects that support collaborative translational and clinical research. CTSAs include community engagement cores to provide a forum for researchers and community residents to mutually share research ideas and benefits. Strategies and examples of building such partnerships will be included. Finally, the advantages to nurse scientists and nursing science of involvement in CTSAs will be discussed.

Conclusions: Nurse scientists play key roles in the leadership of CTSAs in the West. Opportunities for other nurse scientists to collaborate, learn, and benefit from engagement in CTSA activities will be highlighted.

CTSAs IN THE WEST: NURSING'S LEADERSHIP IN TRANSLATIONAL, INTERDISCIPLINARY SCIENCE

Translational Research: What It Means and Why It Matters

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Purpose: Translational research became an explicit national priority in 2006 when the National Institutes of Health (NIH) launched the Clinical and Translational Science Award (CTSA) Program. Each of the 55 CTSA-funded institutions is required to have a detailed tracking and evaluation plan focused on measuring the success of increasing translational research. But what is translational research? This paper will describe definitions and models of translational research and some of the issues associated with measuring outcomes for CTSA programs.

Background: Individuals from multiple disciplines, including nursing, medicine, and the social sciences, have proposed conceptual models of translational research. These models range from simple two stage models (T1: Basic science to human studies; T2: Human studies to general clinical practice) to more complex four and five stage models that include implementation and dissemination research. The models have similarities and differences. Different models suggest different metrics for measuring success, both in the process and outcomes of CTSAs. Individual CTSA-funded institutions, as well as the National CTSA Evaluation Key Function Group, are working to develop both unique and shared metrics to evaluate the effect of their activities on translational research.

Best Practices: As part of their evaluation efforts, leaders and scientists of CTSA-funded institutions should identify their chosen definitions and conceptual models of translational research. Interdisciplinary leadership, including nursing, is important for prioritizing research beyond the T1 (basic science to human studies) level and for identifying metrics that measure success in translational research and the processes that facilitate it.

Outcomes/Conclusions: Explicit definitions and models of translational research are necessary for a CTSA-funded institution to best implement initiatives to foster such research and to evaluate whether or not the initiatives are successful. Nurse scientists are in a unique position to contribute to these discussions and the transformation of CTSA-funded institutions.

CTSAs IN THE WEST: NURSING'S LEADERSHIP IN TRANSLATIONAL, INTERDISCIPLINARY SCIENCE

Community Engagement: An Essential Component of CTSAs

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Purpose: Clinical and Translational Science Awards (CTSA) are transforming the conduct of research at health science centers and health science center universities. By broadening the scope of research to include clinical research as well as translating research into practice, health science is now including the voice of the populations that are sought as subjects in research. A required, key component of all CTSA applications and awards is a Community Engagement (CE) Core. This paper will describe how a CE Core was planned and implanted in a funded CTSA, and in what types of research it has been engaged.

Rationale: Community engagement is the process by which the community has input into the research that is conducted at a health science center. Too often in the past, researchers have conducted clinical trials with community populations and have not provided any feedback to the participating community on the research outcomes, or assisted the community residents with maintaining the study outcomes once the study is over. This has become known as "helicopter research" where the investigator drops into a community, collects data without providing benefit to the community, and leaves without any plans to help the community maintain any improvement seen in health as a result of the research. Community Engagement Cores are designed to provide a forum for researchers and community residents to mutually share research ideas and benefits from research to prevent such outcomes.

Best Practice: When a CTSA is planned, it is important to involve faculty researchers who have a track record in community-based research and have conducted community based participatory research (CBPR) if possible, as well as identified community partners. A community partner has generally been involved in working with researchers with identifying community problems that would benefit from clinical and/or translational research. A community partner can be a government organization such as a health department or school district, or it can be a grass-roots advocacy organization, or a non-profit such as food bank or free clinic. The community partner contributes ideas for clinical research and participates in grant-writing as a sign of their commitment to the process of research collaboration while the university researchers are committed to including the contributions of the community partners in the collaborative process of grant writing.

Outcomes: Robust inclusion of a collaboratively planned Community Engagement Core will increase an application's chance of a positive review, and will allow for true adaptation of translational research at an institution. It will also lay a foundation for carrying out collaborative projects when the grant receives funding.

Conclusions: This paper will provide concrete examples of collaborative projects that were planned with our community partner, and how we have established our community engagement core to interact with our community and university research stakeholders.

CTSAs IN THE WEST: NURSING'S LEADERSHIP IN TRANSLATIONAL, INTERDISCIPLINARY SCIENCE

Advancing Nursing Science through Clinical Translational Science Centers

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Purpose: The funded Clinical Translational Science Centers (CTSCs) across the country provide an excellent opportunity for nurse researchers to showcase the strength of nursing science and to develop new partnerships in interdisciplinary research, consistent with the NIH roadmap.
Description: The CTSC Nursing Science Special Interest Group (SIG) was formed to promote collaboration across nursing schools with CTSCs, providing an opportunity for leaders in nursing science to network nationally and form coalitions that enhance the work of individual schools. The CTSC program offers new opportunities for nursing involvement and leadership in interdisciplinary research focusing on translation. Currently, several nurse scientists serve on the leadership teams of the CTSC, the Community Engagement Unit, the Biostatistics/Methods Unit, the Education and Training Unit, among others. Regional activity is occurring, as exemplified by this symposium at the Western Institute for Nursing, promoting cross-university collaboration in nursing science. During the initial funding for the CTSCs, the emphasis was on launching these programs as resources to clinical research. Now that these programs have been established, there is greater interest in expanding the range of collaborators.
Conclusions: This is a timely opportunity for nursing to become more involved in shaping the research agenda, contributing content and methods, and participating as members of these teams. This presentation will discuss the advantages to nurse scientists for being involved in CTSCs as well as put forth various specific strategies for making these advantages a reality.

SYMPOSIUM: DISPARITIES RESEARCH: ACCESS, RECRUITMENT, MEASUREMENT, AND TRANSLATION

OVERVIEW: DISPARITIES RESEARCH: ACCESS, RECRUITMENT, MEASUREMENT, AND TRANSLATION

Anne R. Rentfro

SOCIAL AND HUMAN CAPITAL: DECREASING BARRIERS TO RECRUITMENT AT THE ARIZONA BORDER

Marylyn Morris McEwen, John Bowles

RECRUITING AND ENROLLING DOUBLY VULNERABLE POPULATIONS

Peter Andrew Guarnero, Anne R. Rentfro

CULTURALLY INFORMED THEORY: CONCEPT EQUIVALENCY, INSTRUMENTS, AND TRANSLATION

Lyda C. Arévalo-Flechas, Sharon L. Lewis, Michael Sierra

CODE SWITCHING: FORM AND FUNCTION

Socorro Escandón

DISPARITIES RESEARCH: ACCESS, RECRUITMENT, MEASUREMENT, AND TRANSLATION

Overview: Disparities Research: Access, Recruitment, Measurement, and Translation

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By the end of this symposium, participants will recognize how regional, developmental, cultural, and ethnic differences contribute to barriers in conducting nursing research within vulnerable populations. Assessing quality of care and the ability to measure disparities in health status require increased attention to the methods employed to collect and analyze these data. Results from these methods shape health policy and program decision-making. Data will be presented to illustrate mechanisms for accessing both monolingual and bilingual populations for research recruitment, retention, and data collection. Conceptualization and measurement in multiple languages will be considered including translation/interpretation issues, code-switching, concept equivalency, and culturally informed research models.

DISPARITIES RESEARCH: ACCESS, RECRUITMENT, MEASUREMENT, AND TRANSLATION

Social and Human Capital: Decreasing Barriers to Recruitment at the Arizona Border

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Purpose: This paper applies social and human capital as a framework for recruiting Mexican Americans into research studies in the Arizona-Sonora, Mexico border region. Two studies will be used to illustrate application of the framework; the first step in a comprehensive plan to reduce recruitment barriers. The first study recruited Mexican Americans with Type 2 diabetes (T2DM) (N = 21) for a pilot intervention study. The second study, preparatory fieldwork for dissertation, recruited obese Mexican American women (N = 3) to explore their explanatory model of acute myocardial infarction (AMI).
Background: The relative absence of racial/ethnic minorities among health research participants resulted in government mandates for their inclusion in all human subject research. However, recruitment can be a challenging aspect of research conducted with Mexican Americans who experience an unequal burden of health disparities related to diabetes and cardiovascular disease. Social capital is derived from networks formed from groups that come together for collective purposes and are characterized by reciprocity and mutual trust. Social capital has been strongly correlated with diabetes and moderately correlated with obesity. Human capital consists of people who have the training, education and skills to produce commodities and services. Both types of capital can help researchers identify and maximize factors that influence recruitment of racial/ethnic minorities.
Methods: Participant observations and key informant interviews were used to assess social and human capital and identify recruitment barriers in two border studies. Social capital was assessed through the components of bonding, bridging, and linking. Bonding targets relationships between individuals with similar interests and background, bridging addresses mechanisms that bring people together to accomplish specific goals, and linking extends the network beyond the group. Human capital was assessed by identifying community members with the training, education and skills to reduce recruitment barriers.
Results: In the first study Mexican Americans with T2DM demonstrated a strong community network for supporting T2DM management. Mechanisms that brought these individuals together to accomplish diabetes-related goals included *coffeecitos* and a walking school bus. An extension of the network was evidenced by participation in the AZ diabetes program. Assessment of human capital identified *promotoras* and parish nurses with expertise in T2DM. In the second study, an established network was identified between Mexican American women diagnosed with AMI and community members employed by a local clinic and/or who served as clinic board members. Mechanisms that brought these women together included clinic-sponsored health and social programs and job opportunities. However, these mechanisms were not specific to AMI. Assessment of human capital identified clinic board members, *promotoras*, and health professionals.
Implications: Strategies to reduce barriers to recruitment of Mexican Americans in the border region require a comprehensive recruitment plan. The social and human capital framework can be used to identify network and community-level barriers and facilitators for recruiting racial/ethnic minorities into research studies and, the framework is congruent with Mexican cultural norms and values in the Arizona-Mexico border region.

Funding: Supported by grants from NIH Center on Minority Health and Health Disparities 5P60 MD000155-04 and Yuma Friends.

DISPARITIES RESEARCH: ACCESS, RECRUITMENT, MEASUREMENT, AND TRANSLATION

Recruiting and Enrolling Doubly Vulnerable Populations

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Purpose: This paper examines three exemplars to demonstrate strategies to recruit and retain research participants from doubly vulnerable populations (accumulation of more than one characteristic of a vulnerable population). Impoverished and undocumented Mexican American adults, overweight adolescents living at the Texas (TX) Mexico border, and young Latino men in New Mexico (NM) were recruited/retained in three different studies that explored health promotion, obesity prevalence, and diabetes prevention.
Background: Vulnerable populations are underrepresented in research with multiple barriers to recruiting/retaining these individuals for studies. Undocumented individuals, adolescents, communities of color in general, and men of color in particular have historically been wary of participating in research because of 1) fears of exploitation, 2) not knowing how information will be used, and 3) possible detrimental consequences to livelihoods. New paradigms are needed that acknowledge past injustices and express willingness to engage vulnerable populations, such as men of color equitably.
Methods: In the first study exemplar, recruitment strategies to target potential participants with low literacy levels included prolonged presence in the community with radio/television advertisements. In addition, *promotoras* who share the language and are members of the same community were recruited and trained as members of the research team. *Promotoras* were involved in technical data collection such as mapping neighborhoods, phlebotomy, and anthropometric measures. In the second study the adolescent social network was engaged in recruitment through the use of text messaging. In the third study strategies for recruiting young Latino men included contacting a campus Latino organization that provided academic and social support services. Key stakeholders were identified and collaborated in research question development. Engagement included participating in organizations' events, consistent contact with key stakeholders and sharing findings.
Results: In the first study, over 2000 adult Mexican American participants in the TX-Mexico border region were recruited (66% participation rate; 100% retention rate in the first serial sub study). Obesity and diabetes prevalence rates were extremely high among residents in this impoverished region (84% obesity/overweight; 19% diabetes; 23% impaired fasting glucose). In the second study, over 300 adolescents were recruited from this same region through collaborating with a local high school and including the adolescents themselves in planning. Successful recruitment strategies included text messaging friends and maintaining presence at the school and youth groups. In the third study, consistent community engagement resulted in the recruitment and retention of 16 young Latino men from NM.
Implications: Findings from these studies provided impetus for developing multiple community activities and a young Latino men's health promotion program. These study results were shared with their stakeholders (e.g., participants and organization administration and staff). To assure participation, it is crucial to maintain a consistent presence and genuine interest in the target community by involving participants in all aspects of the research endeavor from recruitment strategies to dissemination of results. Furthermore, shaping decision-making/policy for doubly vulnerable populations requires inclusion of these individuals in research.

Funding: The TX projects were supported by Award Numbers P20MD001091 and MD000170 P20 from the National Center on Minority Health & Health Disparities.

DISPARITIES RESEARCH: ACCESS, RECRUITMENT, MEASUREMENT, AND TRANSLATION

Culturally Informed Theory: Concept Equivalency, Instruments, and Translation

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Purpose: To offer a culturally informed conceptual orientation of caregiving as an example of a research product that reflects methodologies that have taken into consideration differences in the meaning of concepts across cultures, the challenge of using translated instruments that may lack cross-cultural validation, and the use of widely accepted translation methodologies.

Description: Conducting research with culturally and linguistically diverse populations presents challenges that when overcome can lead to the formulation of culturally informed theory. This theory in turn provides the basis to guide further disparities research and program development. Caregiving research with Latino/Hispanic caregivers is an exemplar of an area of research where concepts lack conceptual equivalency and do not have a one word translation to the Spanish language. English words such as caregiving, caregiver, coping, stress, and burden, represent Euro-American concepts formulated within cultural parameters where individualism and personal achievement are valued. When the expressions used by bilingual (Spanish/English) and monolingual (Spanish) caregivers to describe their experience are compared, differences in the meaning of these concepts arise. Measurement of concepts that are non-equivalent in meaning is further complicated when the instruments used to do so have been developed and normed with Euro-American populations. Burden scales illustrate the challenge of measuring a concept not central to Hispanic/Latino values. The use of the English and Spanish versions of the Screen for Caregiver Burden (SCB) in a group of bilingual caregivers has pointed out differences in the amount of subjective burden reported by the caregivers. In addition, the use of code-switching during bilingual caregiver interviews showed that caregivers distanced themselves emotionally from a situation or a question by using their second language.

Outcomes: Discrepancies in the meaning of concepts and differences in subjective burden scores according to the language in which a question was asked, led to an ethnographic exploration of the experience of caring for a relative with Alzheimer's disease. Hispanic/Latino caregivers (Mexican- American, Peruvian, Puerto Rican, Mexican, and Colombian) were part of several studies that led to the development of a culturally informed conceptual orientation of caregiving. Translation methodology that addressed the heterogeneity of Hispanics/Latinos in their use of the Spanish language was used.

The resulting conceptual orientation of caregiving incorporates the concepts of duty fulfillment and caregiver satisfaction as central to Hispanic/Latino values, and departs from the idea of using burden as a major indicator of the negative impact of caregiving.

Conclusion: The incorporation of language and culture as moderators of the perception of the overall caregiving experience, and the addition of concepts such as caregiver duty fulfillment and caregiver satisfaction, are offered as an exemplar of research conducted taking into consideration differences in conceptual meaning, translated instruments, and translation methodologies.

DISPARITIES RESEARCH: ACCESS, RECRUITMENT, MEASUREMENT, AND TRANSLATION

Code Switching: Form and Function

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Purposes/Aims: Developing an instrument version that is clearly understood by participants who speak different levels of Spanish and English can be challenging. Understanding how the target population will interpret each question will provide valid information. Consideration of cultural characteristics such as form and function of code switching, in addition to age and educational level, is an essential consideration towards achieving functional equivalence.

Rationale/Background: Cross-cultural investigations require conceptually appropriate research instruments. Instrument translation addresses cultural equivalence by 1) determining the relevance and function of the phenomena in the population being studied; 2) translation of the instruments; 3) back-translation; 4) testing the translated instruments; and 5) re-evaluation of the process and outcomes. Functional equivalence is the degree to which a concept performs the same way or elicits similar responses from individuals in two or more cultures. Speakers of more than one language (e.g. bilinguals) are known for their ability to code-switch (CS) or mix their languages during communication. This occurs when bilinguals substitute a word or phrase from one language with a phrase or word from another language. Use of Spanish by 2nd and 3rd generation speakers to address members of the 1st generation is a sign of respect; conversely the use of English is seen as a sign of defiance. Speakers may opt for the heritage language to identify themselves as members of an ethnic community. The Spanish language is seen as a solidarity marker and has an affective value in its use. Situational CS is seen in different situations, it is symbolic and used on the basis of its pragmatic and social motivation. CS is meaningful, and can be interpreted by participants, as indexing (contextualizing) either some aspects of the situation or some feature of the code-switching speaker.

Description: Visual presentation of an instrument's items is pivotal to the process of testing a translated instrument. Optimal presentation would be best achieved by a design that presents the English item and the Spanish translation of said item one right after the other. For example: #1 English then #1 Spanish. This will allow the participant to decide to use one or both and respond comfortably and confidently regarding the subject matter.

Outcomes: Having both versions side by side allows the reader to strategically insert a word or phrase to perceive emphasis. CS has been viewed as a speaker's strategy to compensate because neither language is known completely. Although true in some cases, psycholinguistic research notes that CS is a natural product of the interaction of the bilingual's two languages; while bilinguals whose first language is Spanish are more likely to CS to Spanish, when they communicate in English; to better understand and enhance comprehension. Language choice is said to reflect ethnicity, rights and obligations while meaning is brought about by the act itself.

Conclusions: Oral competence may be retained especially when a community remains intact. Generational dynamics are important elements in the context of heritage language. It is one of the available strategies used by bilinguals to convey meaning. Future research will benefit from maximizing instrument presentation design in efforts to achieve functional equivalence.

EDUCATION CULTURE AND RESEARCH

CULTURAL COMPETENCY OF SOPHOMORE AND SENIOR BSN STUDENTS

Heather M. Bosma, Kathleen L. Gilchrist

FACULTY WORKLOAD FOR SUPERVISION OF CLINICAL AND RESEARCH NURSING GRADUATE STUDENTS

Marie L. Lobo

TEACHING SOCIAL JUSTICE USING COMMUNITY-BASED PARTICIPATORY RESEARCH

Linda A. Robinson, Diane C. Hatton, Dorothy Zirkle

DEVELOPING CULTURAL COMPETENCE IN NURSING STUDENTS THROUGH SERVICE-LEARNING

Hsiu-Chin Chen, Dianne McAdams-Jones

INTERVENTIONS IMPROVED NURSING RESEARCH READINESS IN UNDERGRADUATE STUDENTS

Emily Seidel, M. Danet Lapiz-Bluhm

TEACHING STRATEGIES TO UNDERSTANDING CULTURAL HUMILITY IN NURSING EDUCATION

Phyllis Graham-Dickerson

CULTURAL COMPETENCY OF SOPHOMORE AND SENIOR BSN STUDENTS

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Background: In October 2008, the American Association of Colleges of Nursing (AACN) revised the "Essentials" guidelines for undergraduate nursing education. Five of the nine essentials made reference to the importance of cultural competence in nursing and made recommendations to integrate culture into nursing curricula. Incorporating cultural competency is now required by both AACN and state licensing bodies.
Purpose: To evaluate the level of cultural competence in BSN students and demonstrate whether baccalaureate nursing students (BSN) learned cultural competence.
Methodology: This was an exploratory, quantitative outcome analysis research study. Thirty-three sophomore and 57 senior BSN students, comprised the 90 subjects. The researcher gained IRB approval and approval from the Nursing Department chair. BSNs were recruited from senior and sophomore students' nursing theory courses. The research was explained to the subjects and those wanting to participate were asked to sign an informed consent form, complete a demographic questionnaire, and Transcultural Self-Efficacy Tool ([TSET]; Jeffreys, 2000). The TSET (2000) contains three subscales and nine factors including 83 items; 25 cognitive, 30 practical, and 28 affective. Answers were chosen by subjects using a ten point Lickert scale: (1) = not confident and (10) = totally confident. Data were entered into a Microsoft Excel 2007 program and analyzed.
Results: Majority (87%) of subjects were female and 13% male. When asked about previous cultural competence training, seminars, or classes, 52 subjects (59%) noted they had not and 36 (41%) had taken some kind of cultural competence course. Senior BSN students had a TSET (2000) total mean score of 686.33, a median of 685, and mode of 682. Sophomore BSN students had a TSET total mean score of 607.45, a median of 630, and mode of 552. The Mann-Whitney *U* Test determined there was a statistically significant difference between the two subgroups, $p = 0.0001$. Senior BSN students had a cognitive SEST mean score of 7.96 and a SD of 1.05. Sophomore BSN students' cognitive subscale SEST mean score was 6.37 with a SD of 1.80. Seniors consistently scored higher than sophomores, but when compared within their own subgroup, the majority of senior BSN subjects had average self-perceived cultural competence. The researcher surveyed the BSN program's integration of cultural content within each required course and "culture" was referenced in 81% of the courses; therefore, culture content was appropriately integrated into the undergraduate BSN program.
Nursing Implications: Senior BSN students were more culturally competent when compared to their sophomore BSN counterparts. However, there is a lack of research to evaluate the effectiveness of AACN's cultural competency standards. Emphasis should be directed at teaching strategies providing culturally competent care early in the BSN program to allow BSN students to incorporate these competencies as the program progresses.

FACULTY WORKLOAD FOR SUPERVISION OF CLINICAL AND RESEARCH NURSING GRADUATE STUDENTS

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Purpose: The purpose of this study was to describe workload assignments for graduate faculty supervising both research and advanced clinical students.
Rationale: A review of the literature revealed no publications on how workload is determined for graduate faculty. Several papers were found explaining a single school's workload guidelines. Changes in the delivery of education (i.e. web or distance technologies) and the changes in graduate clinical and research education from master's degrees to PhD and DNP degrees necessitate a clearer understanding of how workload is determined for faculty teaching in these programs.
Methods: A descriptive survey was developed and reviewed by 5 individuals who assign faculty graduate teaching responsibilities. The study was reviewed and approved as exempt by the IRB. An e-mail was sent to the administrators of the 617 schools on the American Association of Colleges of Nursing membership list. The e-mail explained the study and contained a link to *Survey Monkey*™. A reminder e-mail was sent one week later, thanking those who had responded and reminding those who had not responded to complete the questionnaire.
Results: 160 (25.99%) of the schools completed the survey, 25 (15.6%) schools responded via e-mail that they did not have a graduate program. 8 of the original e-mails were not valid. Of the respondents, 84 (52.5%) were publicly supported universities and 76 (47.5%) were private. 33 (20.6%) were part of academic health science centers. The majority, 133 (83%) were on semesters, with 14 (8.8%) on quarters, 6 (3.8%) on trimesters, and 6 (3.8%) on "other" academic rotations. Respondents were asked to convert the number of credit hours faculty were expected to teach to a percentage of workload to standardize between the different terms. Faculty workloads vary between tenure/tenure track faculty and clinical faculty with research and tenured faculty teaching 25% less than clinical faculty, but also having higher expectations for scholarly productivity. Forty schools had PhD programs, of 31 answering the question, 20 (64.5%) gave workload credit for supervising dissertation and 11 (35.5%) did not give workload credit, 8 (25.8%) gave workload credit for serving on a dissertation committee and 23 (75.2%) did not. 36 schools answered the question for DNP project supervision with 22 (61.2%) giving workload credit while 14 (38.9%) do not.
Implications: There is great variability in how graduate programs allocate faculty workload. Some schools have very explicit workload formulas while others are negotiated by faculty with their supervisor each year. There are increasing demands on faculty to supervise both clinical and research projects at the graduate level and the burden is not always defined in the faculty member's workload. 106 (66%) of the schools responding requested preliminary results, indicating the timeliness of this issue. There is a need for more research to help nursing college administrators better understand the impact of graduate teaching activities on faculty members actual workload.

TEACHING SOCIAL JUSTICE USING COMMUNITY-BASED PARTICIPATORY RESEARCH

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Purpose: Describe an alternative approach to teaching a community health clinical practicum utilizing community-based participatory research.

Rationale: One of the newly identified Essentials of Community/Public Health Nursing by the Association of Community Health Nurse Educators (ACHNE) includes core knowledge of and basic competency surrounding social justice. While social justice has long been a theoretical foundation of public health practice, specific clinical activities designed to teach nursing students how to advocate for populations with health disparities are needed. Community-based participatory research provides a means to engage students in active learning while addressing real-time community needs.

Description: Community health nursing students were placed at an inner city school-based health clinic for their required practicum experience. At the request of community stakeholders overseeing operation of the clinic students became engaged in participatory action-based research projects over the past three semesters. During the first semester students conducted focus groups with parents of elementary school children to determine their concerns about the adequacy of the clinic. In the second semester students utilized the focus group findings to develop a survey, translated the survey into Spanish and Vietnamese and administered the survey to parents. Currently students are gathering data on school absenteeism to lay the foundation for developing an intervention to improve school attendance among a subgroup of chronically absent students. All of the projects have built on the work of the previous semester and have been mutually agreed upon by the students, clinical faculty, and school based health clinic stakeholders.

Outcomes: The first and second semester students presented their findings to the school Principal, School Nurses and a community philanthropist who underwrites part of the clinic's operational costs. The students who conducted the focus groups presented their findings in a poster session at the SDSU Student Research Symposium and at WIN last year. Data from the graduate student survey were used to demonstrate need for a second school-based health clinic currently opening at another elementary school in the same zip code.

Conclusions: Teaching students to minimize health disparities is a 21st Century imperative. Participatory action research provides a mechanism for students to learn about community problems that are relevant to the underserved. The projects described here demonstrate that small research projects can be completed within a semester, engage multiple students and can yield useful data to support the population served.

DEVELOPING CULTURAL COMPETENCE IN NURSING STUDENTS THROUGH SERVICE-LEARNING

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Purposes: To integrate service-learning into the course "*community health nursing"* for an Associate Degree in Nursing (ADN) program to help students induce positive change in practicing culturally appropriate nursing care in a community's clinic. Outcome measurements were conducted to evaluate the effectiveness of service-learning in enhancing students' cultural competence. The major research questions were: (1) What is the difference in the level of cultural competence between before and after the service-learning project? (2) What is the difference in the level of cultural competence between students who participate in the service-learning project and who do not?

Background: To meet the diverse healthcare needs in the U.S., nursing faculty have responded to the increasing awareness that nursing students need to be sensitized to the concept of diversity. A variety of innovative approaches to develop students' cultural competence have been addressed in the literature such as role play, journaling, and clinical exchange; yet, many faculty are still struggling with the best way to teach cultural competence and to integrate the concept of diversity into the curriculum. Service-learning is a teaching strategy that combines community engagement with specific learning objectives, preparation, and structured reflection; and specifically can enhance culture competence in nursing.

Methods: This was a quasi-experimental study using pretest-posttest control group design, and the data were collected by both quantitative and qualitative measures. A 10-hour, four-week service-learning project of community engagement was conducted to evaluate the development of the students' cultural competence. Twenty-six nursing students volunteered either in the control or experimental group. Each group had 13 nursing students. The setting was a volunteer clinic in a community. Four major activities used as interventions to develop the students' cultural competence in the project were undertaken by the experimental group. The IAPCC-SV developed by Campinha-Bacote (2007) is used to measure the level of cultural competence among students in the health professions. The Mann-Whitney test and effect size were used to analyze the data.

Results: The results indicated that the experimental group improved their cultural competence from cultural awareness to being culturally competent. Upon completion of the project, the experimental group of students demonstrated a higher level of cultural desire ($M = 3.52 \pm .39$) and a lower level of cultural knowledge ($M = 2.95 \pm .39$). The experimental group of students significantly increased their cultural knowledge from the mean of 2.45 to 2.95 ($Z = -2.51$, $p = .01$) and the total score from 2.97 to 3.24 ($Z = -2.07$, $p = .04$). Regarding the degree of association between before and after the project on cultural competence, Cohn's d shows large effect sizes on cultural knowledge ($d = 1.22$) and the total scale ($d = .98$).

Implications: The service-learning project can be used as a teaching strategy and be integrated into curricula for developing students' cultural competence. Other nursing schools can replicate the collaborative model between a community university and a community volunteer clinic for uninsured and underinsured recipients of care in order to increase cultural encounter for students.

INTERVENTIONS IMPROVED NURSING RESEARCH READINESS IN UNDERGRADUATE STUDENTS

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Purpose: This study determined the effects of incorporating MESA (Mechanisms for Enhancing Scholarly Achievements)-based interventions on UG students enrolled in a nursing research course.

Rationale and Background: The 2008 AACN *Essentials of Baccalaureate Education for Professional Nursing Practice* recognizes that "professional nursing practice is grounded on the translation of current evidence into practice." Baccalaureate education is expected to provide undergraduate (UG) nursing students a basic understanding how evidence is developed, including the research process, clinical judgment, and interprofessional perspectives. The UG nursing research course incorporates these tenets. However, studies showed that student nurses have negative attitudes to research. This project determined the effects of MESA-based interventions on UG students enrolled in a nursing research course. The MESA interventions included faculty mentor pool, individual and team building strategies, and participation in team-based EBP research projects identified from the clinical sites, poster presentation and in making EBP-based recommendations in the clinical setting. Students submitted journal entries on their experience. Exposure to research may help students realize the importance of research as a powerful tool for discovering knowledge and use evidence to improve patient care.

Methods: Students (N=289) enrolled in the UG nursing research course in 2009–2010 were conveniently sampled. They voluntarily and anonymously completed the Nursing Research Readiness Self-Assessment (NRRSA) survey, which asked previous research experience, and knowledge test on tenets of research, ethics, research designs and analyses, EBP, internet and data searches. Students enrolled in the traditional curriculum had the MESA interventions, while the comparison group consisted of students enrolled in the flex curriculum who received the course online. Data were subjected to quantitative and qualitative data analyses.

Results: A significant number of students had previous research knowledge and experience and had online experience. At pre-test, research and EBP knowledge were not significantly different between the two groups. However, the intervention group scored significantly higher ($p<0.05$) than the comparison group at post-test. They also indicated appreciation of research experience, teamwork and the importance of research towards patient care.

Implications: The data strongly supported the effectiveness of MESA interventions to an undergraduate nursing research course. Students were actively engaged in research on discrepant clinical practices in their clinical sites. Active application of research and quality improvement processes improved their appreciation of research, and as a tool to improve patient care. Recommendations from student-initiated research will help translate current evidence into practice. Future studies on the research career trajectories of these students are recommended.

TEACHING STRATEGIES TO UNDERSTANDING CULTURAL HUMILITY IN NURSING EDUCATION

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Background and Significance: As professional nurses we are constantly serving others from a diverse background with varied perspectives on health and illness as it relates to their culture. These traditions grounded within one's culture makes it imperative to provide the appropriate preparation for student nurses and continued in-services to keep the profession abreast of how to ensure quality health care for the population being served. Trevalon (2003) states that this means we must **"… incorporate a lifelong commitment to self-evaluation and critique, to redressing the power imbalances in "our society"-inter personal dynamics, and to developing mutually beneficial and non-paternalistic partnerships with communities on behalf of individuals and defined populations**." The core of the education needed is founded in understanding cultural humility as defined by Trevalon and others in the literature (Racher & Annis, 2007). Teaching strategies that integrate experimental learning is one way as well as encouraging the learner to become self aware of his/her own being and how that awareness affects the care delivered. The purpose of this project is to provide a variety of strategies for nurse educators to implement in a course(s) that will increase the understanding and meaning of cultural humility within the health care arena.

Learner Comptetencies: By utilizing the proposed strategies, the learner will be able to: analyze philosophical, historical, and cultural trends and issues influencing the development and evolution of the field of trans-cultural health care and its impact on many areas of nursing; analyze different emic (language and/or behavior) and etic cultural beliefs, values, and practices of Western and non-Western cultures using anthropological, clinical, and specific trans-cultural health care concepts, theories, and research relevant to different cultures; discuss the use of major trans-cultural health care concepts, principles, theories, and research findings to advance and improve nursing care throughout the lifespan; consider "How ought we to live?" based on the professional nursing values and the Jesuit philosophy in service to others who represent diverse peoples.

Teaching Strategies: Using cultural panel presentations and experiential learning (literature and other art forms, storytelling, videos, music, reflective journaling, community based activities, cross cultural interviews, and self assessment), the learner will gain an enhanced understanding of the true meaning of cultural humility and its place in health care delivery. The ultimate outcome being the key to attaining quality health care for all as we progress through the 21st Century.

EDUCATIONAL TEACHING STRATEGIES

TEACHING DELEGATION ONLINE: A MULTI-MODAL INSTRUCTIONAL STRATEGY

Jayne M. Josephsen

COMPUTER LITERACY: A SEVEN YEAR STUDY TO IDENTIFY GAPS IN STUDENT SKILLS

George F. Shuster, Mona P. Ternus

PROMOTING PEDAGOGICAL EXPERIMENTATION

Carolyn T. Martin

FIELD TRIPS: EXPERIENTIAL LEARNING TO UNDERSTAND CORE FUNCTIONS OF PUBLIC HEALTH

Diane Katsma, Renee Jakosa, Ashley Worley

COMMUNITY OF INQUIRY MODEL: VALIDATING EVIDENCE IN INTERPROFESSIONAL ONLINE LEARNING

Karen LeDuc, Barbara Berg, Lisa Zenoni, Traci Snedden

THE IMPACT OF DIGITAL TEXTBOOK USE ON STUDENTS' EYE HEALTH

Gyeongae Seomun, Jung-Ah Lee, Eun Young Kim

USING STUDENT WRITING ASSIGNMENTS TO ENHANCE CRITICAL THINKING SKILLS

Allen J. Orsi, Pam Howard, Shirley Girouard, Meg Gorzycki

COLLABORATIVE NURSING IN STUDENT NURSE DYADS: STUDENT AND PATIENT PERCEPTIONS

Mary Jean Austria, Katie M. Baraki, Alexa K. Doig

REPLICATION OF AN ACADEMIC-CLINICAL PARTNERSHIP MODEL: FROM URBAN TO RURAL SETTING

Juliana Cartwright, Joanne Noone, Shari Brandsness, Tiffany Allen, Diana White, Sue Naumes, Anna Lewis, Toni Bromley

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PORTFOLIO DEVELOPMENT WITHIN THE NLN CORE COMPETENCIES FOR NURSE EDUCATORS

Virginia Turner, Barbara Plovie

TEACHING DELEGATION ONLINE: A MULTI-MODAL INSTRUCTIONAL STRATEGY

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Purpose: An increasing number of courses are being delivered online. This can create difficulty in communicating the fundamental concepts of delegation, which is a key function of the professional nursing role and essential for safe nursing practice. It is imperative that nursing educators design their online instructional strategies to meet the multiple learning styles of their students, as well as for easy implementation in an online format. The purpose of this study was to ascertain if a multi-modal instructional strategy could successfully deliver foundational delegation concepts in an online professional concepts course delivered in the last semester of an Associates of Nursing program.

Rationale: This course previously had used the NCSBN "Delegating Effectively" online module to teach delegation concepts. Some students stated that they still did not understand delegation after module completion. Based upon constructivism, four strategies were created to facilitate the teaching of delegation concepts online. The strategies implemented in the spring of 2010 were the online module, a case study based upon the ANA delegation standards, a process model (concept map), and group discussion.

Methods/Outcomes: The first instructional strategies implemented were the online module and the case study. Next, the process model and discussion based upon this case study were implemented. Students were asked to complete a voluntary and anonymous survey at the end of the course, in an effort to evaluate if they felt they had mastered essential delegation content, as well as soliciting which instructional strategy was felt to be most effective. IRB approval was granted via the University and the survey was launched using the Blackboard online learning platform. Survey results were downloaded and interpreted by the author. There was a 52% return rate with 11 out of 21 students responding. Students responded between 81% and 100% in agreement that they had learned the identified delegation concepts in the course. The students determined that the delegation case study and the online NCSBN module were the most useful instructional strategies.

Conclusion: This project is significant to nursing education development and provides support for the use of multiple instructional strategies to teach delegation concepts in online courses. The project also raises implications for further research endeavors, such as online knowledge construction and formative instructional evaluation. The results of this project can be implemented in other online courses that address the content area of delegation and support the use of student feedback for formative course evaluation and instructional best practice development.

COMPUTER LITERACY: A SEVEN YEAR STUDY TO IDENTIFY GAPS IN STUDENT SKILLS

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Background: Computer literacy is crucial to nursing undergraduate student success in higher education today, whether the program is completely on-ground or completely online, but especially if it is an online program. Assessment of student knowledge related to specific computer competencies can provide faculty with important information about the strengths and weaknesses of their students' computer literacy skills.

Purpose: The purpose of this study was to identify the literacy level of two groups of nursing students (RN [n = 236] and traditional nursing students [n = 407]). The two specific aims of the study were to first determine how computer competencies among four areas of computer literacy (general computer knowledge, documents and documentation, data inquiry, communications and surfing) varied with successive groups of students and to specifically identify areas of strength or weakness among both groups of students over a seven-year period. And the second specific aim of the study was to identify which specific skills within these four computer competencies need the most support and development for generic and RN-BSN nursing students.

Method: A convenience sample of undergraduate nursing students was given an assessment of computer literacy at the beginning of their nursing program. Cronbach's alpha results for the subscales measuring the four competency dimensions ranged between .89 and .64. Results indicated that the literacy of students increased with each successive group of students.

Results: Results also indicated there were significant differences in computer literacy levels between the RN and traditional student groups, with traditional students consistently scoring higher in each competency. Literacy varied across technological functions, with both the generic and RN-BSN groups of students having the highest literacy levels in general computer knowledge and the lowest literacy levels in the data inquiry skill set. Also, students who owned computers were more computer literate than those who did not.

Implications: During a period of decreasing educational resources both undergraduate nursing programs and individual faculty need to concentrate scarce teaching resources where they will have the most impact. Screening incoming students to identify strengths and weaknesses among their computer literacy skills can indicate if students lack computer literacy skills that faculty assume they already had coming into their nursing program. If an undergraduate program already has a current remediation effort in place, then screening can identify if the remediation effort is still needed at all.

PROMOTING PEDAGOGICAL EXPERIMENTATION

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Purposes/Aims: To use a simple, accessible, collaborative, private, and free on-line tool, a wiki, for digitally naive and resistant graduate nursing students to create and share web pages.

Rationale/Background: Today's students are considered "digital natives". Technologically savvy students want new strategies for learning. The question is how to get resistant graduate nursing students, soon to be future nurse educators, to buy into this process. A wiki can be an effective tool for educators. It encourages writing collaboration among students by allowing them to co-create, review, and edit each other's material as it is created.

Project Description: Students are introduced to the on-line wiki site the first week of the course. An Office of Information Technology (OIT) representative created a short wiki introduction for students to preview prior to the first class and was invited to visit the classroom for two 30 minutes sessions. The students were persistently resistant and OIT returned nine additional times. Students brought their computers and OIT worked with students individually and as a group. All students participated in making decisions related to the overall character of the site such as title placement and color schemes. The graduate students created chapters on topics related to their clinical practicum placement. Prior to the due date each student chapter was peer and content expert reviewed for accuracy and comprehensiveness. The content expert was a graduate nurse with experience and knowledge of the content area. Open editing and comments were tracked. Students included pictures, You-Tube links, attachments, crossword puzzles, videos, maps, and website links into their chapters. Evidenced-based content included pharmacology, diagnostic criteria, pathophysiology, history, genetics, and references. Student chapters were made public the last week of the course. Students were also encouraged to publish the chapter in a printed journal. Legal issues were discussed and resolved with the assistance of OIT.

Outcomes Achieved: Students presented their chapters to the faculty and students at the end of the semester. Student feedback forms are collected at the end of each semester. The material in the wiki chapter is used by the students in their education practicum the following semester.

Conclusions: The wiki writing assignment introduces students, faculty, and the community to graduate student projects while exposing students to new technology. The project benefits the discipline of nursing by making evidenced-based nursing material available to the general public via an on-line source. Research is needed to test the efficacy and effectiveness of pedagogical innovation, such as wiki, in nursing education.

FIELD TRIPS: EXPERIENTIAL LEARNING TO UNDERSTAND CORE FUNCTIONS OF PUBLIC HEALTH

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Purpose/Aim: The purpose of including four field trips to different cities as part of a community health clinical was to create an experiential learning environment as a way for students to gain insight into the core public health functions—assessment, policy development, access—met by health departments, non-profit, and faith based organizations.

Rationale/Background: Although one field trip in the community where students case manage has been standard educational practice, this innovative endeavor expanded the role of the field trip from just learning about local resources utilized during case management to a broader understanding of the uniqueness of each city, the relationship of politics/policy to public health programs, and a connection with the populations these agencies serve. Community health nursing sees populations as "patients", and field trips can engage students intimately in the challenges and struggles of a variety of populations from drug addicted clients receiving services from the needle exchange program in the San Francisco Tenderloin district to Berkeley middle school students participating in the edible schoolyard program started by Alice Waters as an attempt to encourage healthy eating habits in children.

Description of Best Practice: During a 15-week community health clinical, field trips were planned to four different cities, each in a separate county representing both rural and urban communities. Between four and six agencies were visited on any given field trip and included a diverse range of agencies/services. Field trips started in the community most local to the University, then a contiguous county and finished in very urban communities 90 miles away. For the last two most distant trips, students determined which agencies to visit, made the appointments for the day, and planned the itinerary, including use of public transportation. For all four field trips, the agencies were carefully chosen to represent a variety of services and populations taking into account the unique populace of each setting. In addition to exploring the agencies and meeting those served, students had discussions with the energetic and passionate individuals who created, developed and currently run the programs.

Outcomes: A content analysis of the field trip evaluation completed by the seven students in the community health clinical revealed five themes related to the learning experience: 1) increased understanding of the number and type of agencies/programs from which to make referrals; 2) increased understanding of the role and scope of community health nurses and improved attitude towards community health nursing; 3) better understanding of how communities work together to serve populations; 4) increased understanding of population-based nursing and increased comfort level working with groups different than oneself; and 5) increased understanding of funding streams and role of policy for agencies.

Conclusions: Field trips in community health nursing are an effective teaching/learning strategy for students to experience the core functions of public health. Implications for faculty suggest that field trips become a regular part of the clinical experience. Future field trip endeavors could consider best practices for spacing of field trips and comparison of services.

COMMUNITY OF INQUIRY MODEL: VALIDATING EVIDENCE IN INTERPROFESSIONAL ONLINE LEARNING

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Purpose/Aims: This study explored the learning environment of health care programs and evaluated the CoI model. Faculty from multiple health care disciplines participated in the investigation. Project aims included: 1) Determining overall perception of teaching, social, and cognitive presence for health care disciplines, 2) Replicating the investigation of Shea and Bidjerano (2009) using a cohort of students in health care programs to establish construct validity, 3) Obtaining a demographic profile to identify differences between online health care students and students in other disciplines.
Rationale/Conceptual Basis/Background: Evidence-based education contributes to effectiveness of online learning and has yielded a number of potential models for online learning. The Community of Inquiry (CoI) model first proposed by Garrison, Anderson, and Archer (2000) described the components of an ideal online educational experience. The model consists of three core elements: cognitive presence, social presence, teaching presence. The CoI framework is a constructivist process model, assuming effective online learning requires the development of community. Shea and Bidjerano (2009) used the CoI instrument in a multi-institutional study for the purpose of further validating the instrument, determining relationships among the three presences, and identifying specific responses that are most likely predictive within the constructs. Learning occurs as a function of the interaction of these three elements within a community of students and instructors. Limited studies in the area of online delivery for health care programs have tested this CoI framework across disciplines.
Methods: All students enrolled in an online course in the fall semester in the College of Healthcare Professions were invited to participate. This included students from 35 online courses. *N*= 337. Two surveys were delivered online including the CoI instrument (34-item survey scored using a six point scale providing an evaluation of the learning environment) and a brief demographic survey. Statistical analysis included factor analysis to verify the contextual framework and descriptive statistics.
Results: Health care students confirmed the three factors of the CoI model with 85% agreement on the constructs within the model. Three areas of disagreement included the value of online communication as an excellent medium for social interaction (62%), the level of comfort in disagreeing with others (58%), and the ability of the instructor to engage students, keep them on task, and develop a sense of community (65%). These constructs accounted for 68% of the variance similar to the replicated study. Demographic characteristics varied greatly from previously published studies.
Implications: Faculty and staff development specialists are challenged to use evidence-based teaching methods to facilitate learning. Study outcomes support the utilization of the CoI framework contributing to evidence- based education in nursing and other health care disciplines. The CoI framework has established validity within academic settings and may be utilized within the practice environment. The CoI framework may be applied to program development and evaluation of online offerings such as continuing education and professional development activities. Nursing representation on interprofessional research teams reinforced the importance of creating partnerships in evidence-based practice, education and research.

THE IMPACT OF DIGITAL TEXTBOOK USE ON STUDENTS' EYE HEALTH

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Background: Since 2007, the Ministry of Education, Science and Technology (MEST) in South Korea has provided digital textbooks (DTs) to public elementary schools in South Korea aiming to change from paper-based textbooks (PTs) to DTs in public education. However, the use of DTs has led to concerns about the health of students and teachers. A comprehensive study was conducted to determine the influence of DT use on students' physical (eyes, brain and neuromuscular systems) and mental health as well as classroom environment.

Purpose: The purpose of this study, a part of the patent study, was to examine dry eye levels in students who used DTs compared to those of students using PTs.

Methods: The subjects in this study were 6th grade students from an elementary school in Seoul, South Korea. The school was designated by the Korean Ministry of Education for the DT initiative project. Information about the study was sent to the parents of the 6th grade students to recruit individuals to participate in the study. Students whose parents consented to the study had eye exams at an academic medical center. Students who had existing eye diseases such as diagnosed dry eye, had a history of eye surgery, used eye drops or wore contact lenses were excluded from this study. Twenty-one students were selected for the DT group and 18 students were selected as subjects for the PT group. The participating students in the DT group used digital textbooks for a year during 5th grade. Levels of dry eye were measured in four areas: (1) Ocular Surface Disease Index (OSDI), (2) frequency of eye blinking per minute, (3) breakup time (BUT) of tear membrane and (4) cornea dye to measure ulcer status.

Results: There were no statistically significant differences in general characteristics (e.g., gender, height, weight, GPA, family gathering time, hours of time using internet home) between the two groups. The mean OSDI score was 19.35 (±15.73) in the DT group and 15.28 (±12.66) in the PT group (p=0.385). There was no difference in the eye blinking frequency per minute between the two groups (DT group 7.53 (±6.61) vs PT group 7.06 (± 3.79), p=0.794). There was no difference in the tear membrane BUT between the two groups (Right eye- DT group 8.48 (±3.64) vs PT group 8.06 (±3.00), p=0.659; Left eye- DT group 8.24 (±3.83) vs PT group 7.72 (±3.08), p=0.644). Lastly, there was no difference in the cornea ulcer status between the two groups (Right eye- DT group 0.67 (±2.39) vs PT group 0.22 (±0.43), p=0.413; Left eye- DT group 0.19 (±0.4) vs PT group 0.39 (±0.5), p=0.179).

Conclusions/Implications: Based on the results from the study, recommendations for eye health were provided to students and teachers using DTs. Although no significant differences in students' eye health were found in this study, the effect of long-term DT use on eye health should continue to be evaluated.

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USING STUDENT WRITING ASSIGNMENTS TO ENHANCE CRITICAL THINKING SKILLS

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Problem: Critical thinking is a fundamental component for nursing practice therefore encouraging and fostering critical thinking is an essential component in nursing education. The literature is replete with evidence that reading and writing can foster critical thinking. Reading and writing assignments are cited as effective in promoting critical thinking. Although writing has been shown in the nursing literature to promote critical thinking, there has not been data to support that writing will increase performance in critical thinking. Nurses must be critical thinkers due to the dramatic changes in health care related to information technology, fiscal cutbacks, human resources limitations, and the acuity of patients.

Purpose: The purposes of this study were to explore the effects of a writing intensive intervention on promoting critical thinking and to understand nursing students' learning experience and perceptions related to the course.

Conceptual Basis: Critical thinking is thinking with rational, reflective, inquisitive, and autonomous character. Currently there is consensus that cognitive skills and affective disposition are two major dimensions of critical thinking. The writing process and critical thinking are considered to be mutually dependent. Writing helps students make sense of information and learn new concepts; it encourages students to think in abstraction, to conceptualize, elaborate, substantiate, analyze, generalize, and interpret; and provides opportunity for students to reflect on their own thoughts, and organize their thoughts logically and conclusively.

Methods: Purposive sampling and a quasi-experimental posttest design was used to conduct this study with 101 first semester nursing students. The change in critical thinking was evaluated based on performance on a standardized nursing exam. The intervention group received five short writing assignments as well as a major paper. Each assignment was graded and feedback was given on all assignments. At the end of the intervention all students were required by the current curriculum standards to take a standardized assessment test to measure critical thinking skills.

Results: Students in the intervention group scored significantly higher on the critical thinking exam than those students who did not have the writing intensive intervention. There were no significant differences between the control and intervention group on demographic variables.

Implications: These results indicate that intensive writing can improve critical thinking skills in nursing. The findings of this study illuminate the issues associated with improving critical thinking and ways to improve this skill. Implications for future nursing research, focused interventions and implications for education will be outlined.

COLLABORATIVE NURSING IN STUDENT NURSE DYADS: STUDENT AND PATIENT PERCEPTIONS

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Aim: To explore student and patient experiences and perspectives of collaborative learning when student peer dyads are used in clinical teaching.

Background: There is incongruence between current nursing practice and the education provided for that practice. Despite the changes in our health care system over the past few decades, the pedagogical approach to clinical education has remained relatively static. Recent efforts toward education reform were centered on shifting content rather than transforming nursing education paradigms.

By 2020, the gap between supply and demand for registered nurses will exceed one million. In response, nursing institutions attempt to increase their admissions to meet the forecasted health care needs. However, insufficient numbers of nursing faculty and the scarcity of clinical placements impact the quality of clinical nursing education. When student dyads are assigned to one patient assignment, this reduces the need for clinical placements by half and allows the students to be concentrated on a single unit rather than dispersed throughout the institution thereby allowing direct faculty oversight and frequent group debriefings.

Methods: This interpretive design pilot study will take place on an inpatient surgical oncology unit where first semester baccalaureate nursing students will be assigned in pairs to provide care for one to two patients. On each day one student leads the patient assessment while the other acts as a resource. Together they collaboratively proceed through the nursing process. The following day the roles are reversed. Upon obtaining IRB approval, ten students and ten patients will be recruited and semi-structured interviews will be conducted using informed questioning. The data will be analyzed using reflective critical examination, in order to gain an understanding of student and patient perceptions of using collaborative learning in student nurse dyads. These meanings are a product of perceptions of the subject and interpretation of the investigator. Interview transcripts will be individually coded by two researchers to create broad categories. Coded results will be combined to reveal prevalent themes and re-examined, compared, conceptualized and categorized so that broad categories are merged, subcategories are created and the emergence of new themes is identified.

Outcomes: Data collection will begin in November 2010. We are interested to see if study outcomes align with previous literature on collaborative learning and student-patient relationships in the clinical environment.

Implications: Examination of the use of collaborative learning in student pairs in the clinical setting will provide an understanding of characteristics, structures and patterns of the phenomena and generate an interpretive description that can be used to inform clinical practice. With the prospect of further transformation of our current health care system, nurse educators must transform clinical education to meet those changing needs by implementing innovative pedagogies and new models of clinical instruction.

REPLICATION OF AN ACADEMIC-CLINICAL PARTNERSHIP MODEL: FROM URBAN TO RURAL SETTING

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Purpose: Enriching Clinical Learning Experiences through Partnerships (ECLEPS) is a model program for developing academic-clinical partnerships that support learning and practice in long-term-care (LTC) settings. Recruitment of new nurses into LTC is one goal of this program. Staff nurses and faculty collaborate in planning student learning experiences including projects that benefit care of residents and support the work environment. The model was developed and tested with one baccalaureate nursing program and four LTC organizations in a large metropolitan region. The purpose of this poster is to describe opportunities and challenges encountered when replicating ECLEPs in rural communities.
Background: The shortage of registered nurses with gerontologic expertise and the gaps in geriatric nursing content in undergraduate curricula are well documented. Shortages are particularly severe in rural settings. ECLEPs involves faculty and nursing staff sharing information about their respective roles, settings, goals and challenges; and participating in culture change and leadership workshops as strategies for developing working relationships. Federal funding facilitated expansion of the ECLEPs model to rural areas.
Project: Administrators at two associate and two baccalaureate degree programs volunteered to participate in the rural replication project. At each school, faculties with varying levels of gerontologic nursing experience participated in the project, including selection of potential partner agencies. The original criteria for identifying potential LTC partners included: (a) stable administrative team, (b) no regulatory deficiencies, (c) history of participation in quality improvement activities such as culture change, *Advancing Excellence in America's Nursing Homes*, *Pioneer Network*, or other quality improvement initiatives (d) a range of residential care options on site (e.g., dementia unit and skilled nursing), (e) reputation for seeking ongoing improvement in quality of care according to regulatory or industry staffs, and (f) two facility nurses interested in working closely with faculty and nursing students to develop clinical learning opportunities that students, residents, and staff would perceive as beneficial.
Outcomes: Replicate of ECLEPs in three communities indicated that rural faculty and staff nurses were very interested in a partnership model for student learning and improved practice. They appreciated access to professional development courses and materials without traveling for classes, and greatly valued the opportunities to learn with and from peers in their community. However, several challenges were encountered in attempting to meet replication criteria for clinical partner selection. Modifications were needed for the project to occur in communities that lacked the size and scope of agencies found in cities. Additionally, rural faculty had high clinical teaching workloads that made difficult their ability to attend training workshops or to add a new clinical site for students. Modifications in site selection and strategies for managing the challenges encountered in rural settings will be described.
Conclusions: Interest is great in developing partnerships between academic programs and LTC agencies in rural settings. Creative strategies are needed to support partnerships for student education and staff development that benefit the residents and address nursing retention and recruitment efforts. Research and quality improvement projects are needed that address the unique challenges in developing academic-clinical partnerships in rural communities.

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PORTFOLIO DEVELOPMENT WITHIN THE NLN CORE COMPETENCIES FOR NURSE EDUCATORS

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Purpose/Aims: The purpose of this project was to undertake a scholarly inquiry focusing on activities and coursework that supported my development as a nurse educator. My specific aims were to 1) organize my activities and coursework in a competency-based framework utilizing a portfolio format, 2) review the body of work within the framework and identify areas for further development, and 3) develop a personal philosophy of teaching and learning in relation to the activities and coursework contained within the portfolio.

Background/Rationale: After completing my first year of graduate school, I realized that nursing education was my major interest. In my second year of graduate school, I focused my curriculum on nursing education. To complete my scholarly project, I needed to identify an accepted framework within which I could select and organize my courses and activities, and as a way to document my scholarly progress. I chose to utilize the National League for Nursing Core Competencies for Nurse Educators as my scaffolding. The NLN Core Competencies for Nurse Educators describe eight competencies that define the scope of excellent practice as a nurse educator.

Brief Description of the Undertaking/Best Practice including the Approach, Methods, or Process Used: I reviewed literature on educational strategies, innovative teaching strategies, and faculty shortage. During this process, I developed my philosophy of teaching and learning. I also reviewed the NLN competencies and identified specific tasks within each Competency that were relevant to me and that I could support with documentation. My scholarly project presentation was structured within the organizing framework of the NLN Core Competencies in a portfolio format. I designed a page for each competency; the page has a descriptive statement with supporting artifacts drawn from projects and activities completed during graduate school, as well as projects completed in my workplace.

Outcomes Achieved/Documented: The NLN Core Competencies were an effective method of organizing and demonstrating scholarly achievement. I was able to provide artifacts and documentation to support seven of the eight core competencies as described by the NLN. I also found that the NLN Core Competencies were an effective way to select activities that will foster my development as a nurse educator and to measure my progress toward excellence in education practice.

Conclusions: The NLN Core competencies can be used to guide individual graduate student activities and course selection and document scholarly progress within a portfolio format. Using this organizational framework with clearly described tasks as a guide for portfolio development, I facilitated my personal and professional development as a nurse educator. Nurse educators may continue to utilize the NLN Core Competencies as a guide to their own professional development in the educational arena.

EDUCATOR ISSUES

STUDENT REGISTERED NURSE ANESTHETISTS REPORTED INAPPROPRIATE CLINICAL EXPERIENCES

Sass Elisha, Dana N. Rutledge

SELECTING DNP STUDENTS FOR A RURAL HEALTH TRACK: DETERMINING PREDICTORS OF SUCCESS

Anne Rosenfeld, Kathy Crabtree, Gary Laustsen, Kim Jones, Margaret Scharf

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PERSONAL ADMISSION INTERVIEWS IN A LARGE BSN PROGRAM

Anne Hirsch, Margaret Bruya, Tina Bayne, Naomi Lungstrom, Tracey Whybrow

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TRANSITIONING GRADUATES INTO PRACTICE

Anne Erickson

BACCALAUREATE NURSING STUDENTS' STRESS LEVELS IN NEONATAL INTENSIVE CARE UNITS

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CLINICAL PROJECT: DEVELOPING DEDICATED EDUCATION UNITS THE DENVER WAY
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RN TO BSN GRADUATES ASSESS PROFESSIONAL COMPETENCIES FOR THE 21ST CENTURY
Mary Hoke, Marilyn N. Pase

UNDERGRADUATE TEACHING ASSISTANT: HELP WITH LARGE CLASSES IN A WEAK ECONOMY
Kathy Reavy, Hannah Tobias

STUDENT REGISTERED NURSE ANESTHETISTS REPORTED INAPPROPRIATE CLINICAL EXPERIENCES

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Background/Purpose: Studies in medical and dental education document experiences of learners that can be considered attributable to inappropriate behaviors by clinical instructors and persons in contact with students or learners. No studies were found documenting frequency or correlates of SRNA experience of potential mistreatment or inappropriate experiences during clinical experiences. The purpose of this study was to describe inappropriate experiences reported by SRNAs related to clinical instruction that came from data from a larger descriptive study that used cross-sectional survey methodology.
Methods: A randomly selected stratified sample (by US region) of 2673 SRNA members from the American Association of Nurse Anesthetist roster responded to an online questionnaire during spring 2010. Of 696 SRNA respondents, 638 reported having some clinical education experience. The 3-phase study recruitment used electronic mail (information, invitation, reminder/invitation). This study comes from responses to 10 items from a 60-item adapted survey (Daugherty et al., 1998). Items measured frequency of specific experiences and persons involved in each experience.
Results: Respondents were two thirds female, predominately Caucasian, and younger than 38 years. These mostly new nurses (70% ≤6 years of experience) had worked in various critical/surgical care settings. Most were either in the first or second year of NA education. Their average number of hours of clinical experience varied from 31-34 hours /week.

Verbal abuse was reported more frequently than were sexual harassment, physical abuse, or racial discrimination. In fact, sexual harassment, physical abuse, or racial discrimination were never experienced by over 85% of SRNAs while verbal abuse was reported by almost 70%. Reported perpetrators of verbal abuse were predominately CRNA and anesthesiologist clinical educators, with less likelihood by surgeons, operating room nurses, SRNAs, and others. Those more likely to be responsible for sexual harassment, physical abuse, or racial discrimination were in "other" roles.

There were no statistically significant differences in experiences between men and women. However, sexual harassment was experienced more often by women (17%) than by men (7%), $p = .052$. Perpetrators of sexual abuse tended to be different for men and women (n = 134). Female SRNAs were more likely to suffer sexual harassment by anesthesiologists (22%) and CRNA preceptors (22%) than were men (8%, 8%) and men were more likely to experience sexual harassment from "others."
Implications: Study findings offer insights that may assist in improvements in the clinical component of SRNA and other nurse specialty education. Educators must make clear the standards of conduct for all personnel involved in clinical education and intervene when conduct falls short of these standards. There must be efforts to reduce any student's sense of being mistreated.

SELECTING DNP STUDENTS FOR A RURAL HEALTH TRACK: DETERMINING PREDICTORS OF SUCCESS

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Purpose: The Rural Health Track option within the OHSU School of Nursing Doctor of Nursing Practice (DNP) Program focuses on improving rural practice statewide. It is designed to prepare expert rural advanced practice nurse leaders needed to improve health and health care outcomes in rural communities. The purpose of this presentation is to describe the criteria for selecting students for the rural health track and plans to develop predictors of successful placement, employment and retention in rural areas.
Rationale/Background: The need for primary and mental health care providers in rural Oregon and the nation is significant and growing. In tandem with the family nurse practitioner (FNP) and psychiatric mental health (PMHNP) curriculum provided in the OHSU DNP program, the rural health track option offers components designed to develop clinicians with both the interest and skills to meet the unique health needs of rural populations.
Approach: The criteria for selection include a goal statement describing the student's interest in and commitment to rural advanced practice nursing. Students in good academic standing are chosen by a faculty committee after one year in the DNP program and must be recommended by their academic advisor. Students must indicate an understanding of the components of the rural health track. Other variables monitored as predictors of success include rural residency status at time of selection, advanced practice specialty, and location of clinical residency.
Outcomes: Four of five applicants were chosen for the first rural health track cohort. They consist of three post-baccalaureate students (two FNP and one PMHNP) and one FNP post-master's student. Two students currently live in rural areas of Oregon and two live in urban areas.
Conclusions: Determining predictors of success will help students select and faculty to advise the right career path. Selecting students for a rural health track is one method for increasing the distribution of primary care nurse practitioners to meet the health needs of rural populations.

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PERSONAL ADMISSION INTERVIEWS IN A LARGE BSN PROGRAM

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Purpose: To describe the logistics, the process and the effect of personal admission interviews in a large Baccalaureate Degree in Nursing program.
Rationale/Background: Careers in many health care professions, including nursing, are in high demand and the competition for admission to enrollment-limited educational programs can be intense. In light of the increased need to enlarge the nursing workforce, it is imperative that nurse educators select the best candidates from the growing applicant pool to enter nursing careers. The current nursing shortage places additional pressure on nurse educators to select the strongest candidates beyond grade point averages and standardized examinations. Additionally, faculty must identify, recruit and retain educationally disadvantaged applicants as well as individuals with experience working with a variety of cultural groups to provide appropriate care in our multicultural society.
Methods: The questions to be answered include: How do we identify the best candidates for limited enrollment placement in a pool of academically highly qualified candidates? How do we measure non-academic characteristics and attributes? Do personal interviews substantially contribute to the selection of qualified applicants?

A large baccalaureate program in Washington State added a personal interview to the list of criteria evaluated, in an attempt to identify the best candidates for admission. Since 2005, each qualified applicant has been interviewed by three faculty members over a 15 minute period. The questions asked focus on 1) values, language skills, diversity, and future mission; 2) personal interaction and problem-solving; 3) general information including personal well-being; and 4) commitment and overall readiness for the program.
Outcomes: Prior to implementation of the interviews, the algorithm used to rank applicants was based on a weighted composite score using the applicant's pre-requisite grade point average (GPA) and the applicant's cumulative GPA. The interview scores were inserted and given a weight (30%) equal to the weight of the cumulative GPA. Of the 697 students who applied and completed the interview process, 76% (532 students) were accepted to the program. Ten percent (67 students) who were offered admission to the program would not have been accepted without the influences of their interview scores. Similarly, the decision to not offer admission to the program for 67 students (10%) was based on the influence of their lower interview scores. The difference in mean interview scores among the groups of students was statistically significant ($p<0.0001$). No differences in gender, ethnicity or age among groups were found.
Conclusions: The College is committed to identifying the strongest candidates for admission and subsequent entry to the profession of nursing. To help identify the "best" candidates, faculty have endorsed the use of the personal interview in making admission decisions as it has been shown to make a difference in the decisions for a significant number of applicants. Faculty members perceive that values, diversity, personal interaction and problem solving skills, personal well-being, commitment and readiness of applicants are assessed effectively through personal interviews.

TRANSITIONING GRADUATES INTO PRACTICE

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Purposes/Aims: The focus of this study was to capture baseline data and examine nurse residents' perceptions of decision making, quality of clinical performance, job satisfaction, job stress, and organizational commitment in practice settings with goals to enhance transition into practice and thereby decrease nurse turnover. Social Support Theory provided a useful theoretical framework.
Rationale/Conceptual Basis/Background: Today's graduate nurses face significant challenges associated with transitioning from the role of student to graduate nurse. Consequently, dissatisfaction and turnover ensue, costing institutions lost time, money, and manpower.
Methods: The sample consisted of 35 new graduates working in six rural hospitals (25 beds or less) and two urban hospitals (152 and 438 beds) in Idaho. A 185-item self-reporting questionnaire was designed for respondents to answer in a variety of ways and was sub-divided into six individual surveys: nurse demographic information, clinical decision making, quality of clinical performance, nursing job satisfaction, job stress and organizational commitment.
Results: Data from the current study revealed the more time residents spent in their current hospital prior to becoming a new graduate, the better their perceptions were in the area of patient teaching (rho = .546). And, the more time residents spent in their current hospital prior to becoming a new graduate, the better their perceptions were of providing care in emergency situations (rho = .470).

Significant differences existed in how associate and baccalaureate prepared residents made clinical decisions, experienced job satisfaction and job stress. Further, residents prepared at the baccalaureate level scored their organizational commitment higher than those who were prepared at the associate degree level.

Additionally, this study showed that residents who took a professional socialization course in the last year of school perceived that they displayed better self direction, implemented good judgment and performed better and more competently in emergency situations that those who did not take the course. Further, those residents who did not take a socialization course believed more often that "their department did not have the equipment needed for the patients" (p = .020).
Implications: As the clinical environment continues to rapidly change in response to advances in technology, reimbursement issues, and highly developed information systems, it will become increasingly important to integrate Social Support Theory into nurse residency programs.

The additional infusion of resources, both functional and structural, as well as access to colleagues who will mentor and precept residents, will be imperative for a successful transition into practice and retention of nurses into the future. These are important initiatives for educators, practitioners and nurse leaders as we look at the opportunities in healthcare.

BACCALAUREATE NURSING STUDENTS' STRESS LEVELS IN NEONATAL INTENSIVE CARE UNITS

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Background: Nursing students and the level of stress they encounter in a neonatal intensive care unit (NICU) clinical setting is important for nursing instructors to comprehend. The researcher searched CINHAL, Pub Med, Elsevier, and Google Scholar for research articles related to nursing students and the stress they encounter when exposed to a neonatal intensive care unit (NICU) and no articles were found.
Purpose: The purpose of the research was to determine nursing students' stress and the types of stress they experience when exposed to at least one day in the neonatal intensive care unit.
Methodology: This was an exploratory, quantitative study. Subjects were senior nursing students and were approached by the researcher; the research was explained and nursing students were offered a packet which included a demographic sheet, a revised PSS (Parental Stressor Scale): NICU, and informed consent documents.
Results: Thirty-eight nursing students participated. The number of days the nursing students spent in the NICU ranged from 1 to 5 days. Nursing students experienced the most stress in response to sudden noises of the monitors and alarms, seeing the baby change color, and seeing the baby stop breathing. This may have been due to fear or not knowing how to respond appropriately to the situation. The majority of the nursing students, 31 (81.58%) did not have children. Only 7 (18.42%) of the nursing students had children and of those seven, only one (2.63%) nursing student previously had a child in the NICU. A Mann-Whitney test was used to determine if a difference existed between the stress level of students with children and students without children. The p-value of 0.9849 was not statistically significant ($p \leq 0.05$) and indicated there was no difference between the stress level of those with children and those without children. Only one nursing student previously had a child in the NICU, and the sample size was not large enough to use the Mann-Whitney test. However, by comparing the scores on the survey of that student with the average scores of the whole group, there was an indication of a higher stress level from the student who previously had a child in the NICU.
Nursing Implications: Informing nursing professors and NICU staff of the stressors that were significant for these nursing students can assist professors to inform BSN students prior to a NICU clinical rotation of what to expect. This may allow BSN students to more effectively cope with the anticipated stressors. Additionally, BSN students may be more comfortable in expressing their feelings and needs to professors and staff. Knowing the different aspects of the NICU that produced the most stress provides nursing staff and educators with the necessary information to anticipate BSN student needs and to respond appropriately. Including a videotaped tour first and then an in person tour of the NICU for BSN students may assist in decreasing stress levels. More research is required with a larger sample size to determine if this is consistently true.

ELECTRONIC PORTFOLIOS IN GRADUATE NURSING EDUCATION: A PRELIMINARY STUDY

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Purposes/Aim: Electronic portfolios are collections of documents and other artifacts which can demonstrate students' completion of graduate program objectives. Because of their many benefits, an increasing number of post-baccalaureate programs are requiring students to develop electronic portfolios (eportfolios) before graduation. Even so, little attention has been paid to students' opinions and learning associated with the eportfolios.
Rationale/Conceptual Basis/Background: Research and theory support the use of self-directed learning experiences that enhance the creation of significant learning. Eportfolios do allow students to be actively involved in the creation of their education and reflect on their learning. However, whether they feel it is beneficial and significant to them is unclear from prior research. This study is being conducted in order to identify the perceptions nursing graduate students have about eportfolios.
Methods: IRB approval for the project was obtained at a mid-sized mountain state public university. Following approval, recruitment started of graduate nursing students who have been using eportfolios in their graduate education. As part of the study protocol, they were asked to participate in interviews or provide written answers to several questions about the benefits and drawbacks of eportfolios. Qualitative research methods have been used in data analysis.
Results: Graduate nursing students have mixed feelings about eportfolio. Positive comments relate to the ability to be able to store and organize information. Some voiced that eportfolios could help them in finding employment after graduation by turning their eportfolio into an electronic resume for potential employers to view. The majority of negative statements are associated with learning the technical aspects of developing and managing an eportfolio.
Implications: Preliminary findings suggest that students can identify benefits of eportfolios and find the learning experience associated with them to be significant. However, students using eportfolios need to have additional technical support and skills in order to reduce frustration and improve the learning process. Thus, graduate programs that use eportfolios should keep this in mind and provide extra computer support to help their students get the greatest benefit from eportfolios. In addition, more research is needed regarding how to help students get significant learning out of their work with eportfolios.

Funding: This study was partially funded by Boise State University School of Nursing.

USING STANDARDIZED ASSESSMENTS TO PREDICT SUCCESS IN NCLEX-RN

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Purposes: To identify the predictors of passing NCLEX-RN of the academic outcomes using standardized assessments to collect the data of student files including admission, within the nursing program, and at the end of the nursing program. The research questions in this study included: (1) Are there relationships between the nursing student demographic data, admission data, nursing program data, and the rate of passing NCLEX-RN? (2) To what extent do the demographic data, admission data, during the nursing program data, and at the end of the nursing program data contribute to success in passing NCLEX-RN?

Background: Passing the NCLEX-RN is a legal validation that the public can count on competent nurses at the entry level. Based on the data of NCLEX-RN passing rates provided by the National Council of State Boards of Nursing (NCSBN) for the past 10 years (2000 to 2009), annual pass rates in the NCLEX-RN have fluctuated within 83.8% to 88.4%. In response to these fluctuating pass rates, nursing schools have tried to develop standardized assessments that help assure accurate identification of factors that would predict success in nursing licensure examinations. Few studies have been systematically and longitudinally conducted to evaluate the process and context of the nursing program for predicting students' academic outcomes using standardized assessments.

Methods: A longitudinal and correlational study using multivariate and multi-method designs was conducted at the university's Department of Nursing. Retrospective and prospective data were gathered from one cohort who enrolled in the ASN with BSN option program. Thirty-four nursing students participated in this study. Data collection was conducted in three stages of student matriculation, including admission, during the nursing program, and at the end of the nursing program. Admission data sets included prerequisite science courses' GPA, preadmission cumulative college GPA, and Test of Essential Academic Skills (TEAS) scores. During the nursing program, data contained student's GPA at the end of semesters 1, 2, 3, and 4 (complete the ASN program and be able to take the NCLEX-RN option). At the end of the program, data consisted of the scores of Assessment Technologies Institute (ATI) comprehensive exit exam and student cumulative final GPA at graduation. The dependent variable was the NCLEX-RN passing rate. The point biserial correlation, Chi-square test, and logic regression were used to analyze data.

Results: The findings indicated that there were positive relationships between age, entry score for nursing, TEAS, and the passing rate of NCLEX-RM but without significance ($p > .05$). With the absence of significance, the ATI and pre-GPA were negatively associated with NCLEX-RN passing rate ($p > .05$). For factors predicting NCLEX-RN passing rate, the overall analyses were not significant after three blocks entered. Insufficient subjects and a high passing rate for this cohort may result the absence of significance.

Implications: This study may serve as a pilot study for building a model to explore predictors in passing NCLEX-RN and provide information for early detection of nursing students who are at risk of passing the NCLEX-RN. A longitudinal study with larger sample size is recommended for future studies.

STUDENT PERCEPTIONS REGARDING AN ALTERNATE SENIOR PRACTICUM EXPERIENCE

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Purpose: This study was conducted to evaluate the perception of baccalaureate nursing students enrolled in a Senior Practicum course following the implementation of an alternative clinical experience.

Background: Senior Practicum experiences are common in baccalaureate nursing programs as an opportunity to integrate classroom education experience into the practice setting. These experiences traditionally are precepted learning experiences. During the 2008-2009 academic year faculty at this university were unable to locate a sufficient number of qualified preceptors for students enrolled in the Senior Practicum course. After exploring options to meet the course requirements for course and recognizing the co-existing nursing faculty shortage, a plan was developed to place these senior practicum students were placed with faculty who were teaching sophomore-level nursing courses. These senior nursing students acted as teaching assistants for the clinical instructors. Anecdotally, the alternative experience seemed effective in meeting the needs of the students, but further validation regarding the experience was needed.

Methods: After receiving IRB approval from the university, a survey was sent to all senior nursing students (n=67) using Survey Monkey. Students were asked about their ability to meet course objectives and their overall satisfaction with their Senior Practicum experience. The intent of this survey was to compare the experiences of the two groups in terms of their overall satisfaction and their perceived ability to meet the course objectives. Survey responses were compiled using a crosstab format to allow comparison between those students in the traditional senior practicum experience and those in the alternative experience.

Results: Seventy percent (n=47) of the senior students completed the survey. In terms of course objectives, both groups were overall satisfied with their ability to meet the course objectives. When asked about overall satisfaction with their clinical experience, students in the traditional, nurse clinician group were more satisfied (94.3%) than the nurse educator group (72.8%). Students were also asked to rate their ability to perform specific nursing role functions including Nurse Educator, Nurse Researcher, Nursing Practice, and Nursing Leadership. Students were also asked to rate their confidence in specific nursing actions, including communication, patient care, interdisciplinary collaboration and clinical decision-making. With the exception of the Nurse Educator role, results for role performance were comparable in the two groups. Students in the teaching assistant option were more satisfied in the nurse educator role (91%) than their nurse clinician counterparts (51.4%). Skills confidence was higher for the nurse clinician group in every action except for clinical decision-making; these results were essentially equal between the two groups.

Implications: There are several limitations to this study. The sample was small and there was no attempt at experimental control. The results were based on the perceptions of senior nursing students and not on measurable outcomes of success. Future research is needed that includes more rigorous experimental control, a larger sample size, and outcome measures that can be quantified. Budgetary constraints and limited clinical placements will continue to plague nurse educators and challenge them to develop and implement creative quality clinical learning experiences for their students.

GRADUATE NURSING STUDENTS' EXPERIENCE OF OVERSEAS COMMUNITY SERVICE

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Background: Universities strive to encourage international experiences among students. Additionally, these centers of higher education promote service-learning by the student body as well.
Purpose: This research explored what it was like for graduate nursing students to participate in community service learning overseas.
Methods: In May 2010, graduate nursing students traveled to Honduras for 13 days with faculty members. Graduate students engaged in several community service activities including elementary student health screenings at schools and physical exams of clients in the local community. Students kept written journals of the experience as assigned by course faculty. Phenomenological analysis of these journals yielded a better understanding of what it was like to be overseas as graduate nursing students providing service. Additionally, a focus group with students was conducted to further augment the description of what it was like to provide service overseas.
Results: Journals and transcribed focus group content were coded for themes and subsequent essences which formulated the basis of the description of providing service overseas.
Implications: Procedural changes of both international preparation and overseas service will improve the experience of faculty and students alike.

Funding: Supported in kind through a grant by the Northern Michigan University Action-Service Learning program.

BIAS IN THE NURSE PRACTICE ENVIRONMENT: IMPLICATIONS FOR NURSING EDUCATION

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Purpose: Nurses who are advancing their education, whether from associate degree to baccalaureate, or to masters level or higher, are uniquely positioned to assess and create positive change in the nurse practice environment. As the second in a series of studies on bias in the nursing workplace, the purpose of this study was to learn how nurses enrolled in a nursing bachelor's or higher degree program while employed perceived bias in the nurse practice environment, both in terms of prevalence and how bias was experienced. A further aim was to continue to test and refine the *Nursing Workplace Bias Scale*.

Rationale: It is well known that the nurse practice environment affects retention of nurses, yet there remains little reported about nurses' experiences of bias in the workplace. An earlier study with Latina nurses using the *Nursing Workplace Bias Scale* found that Latina nurses experienced bias on a regular and ongoing basis, and also reported witnessing it regularly. The study also demonstrated a significant correlation between experiencing bias and intent to leave employment, thus it is important to replicate this study with a broader group of nurses across health care settings and across degree and licensure levels. Addressing bias and other factors influencing nurses' intentions to stay or leave the workplace is important to the retention of nurses in the in view of the continuing nursing shortage.

Methods: Human Subjects permission was obtained from the University of Washington prior to beginning the study. This mixed methods study used an instrument consisting of a Likert-like scale and a qualitative component with questions about descriptions and experiences of bias. Demographic questions asked about age, gender, level of education, presence of an accent, and racial/ethnic identity. The tool was designed to measure the prevalence of bias and the effects of perceived bias, support, and other factors on nurse retention in the workplace. Questions were created from findings in current literature. Licensed nurses, whether LPNs, RNs, or those doing post-graduate studies enrolled in community colleges or four year institutions were provided information about the study, then invited to complete the anonymous survey in an online format.

Results: The number of participants was 92. Preliminary analysis reveals that a majority of nurses both experienced and witnessed bias regularly, with over half experiencing bias a least monthly. Results will be presented on frequencies, correlations between bias and workplace factors, and nurses' answers to qualitative questions. Recommendations for nursing education and practice settings will be presented.

Implications: As the nursing shortage continues and increases in severity, retaining nurses becomes as important as creating new nurses. Losing nurses due to nursing workplace issues such as bias is a waste of valuable human resources. Because of the interrelationship between nursing practice and education, nurse educators, nurse managers, and hospital administrators can play an important role to develop strategies to educate and promote non-biased interactions in the nursing workplace.

CLINICAL PROJECT: DEVELOPING DEDICATED EDUCATION UNITS THE DENVER WAY

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Purpose/Aims: Describe a joint project between a school of nursing and an acute care urban hospital to develop dedicated education units to provide a collaborative practice, teaching-learning environment.
Background/Rationale: In 2007 members of the school of nursing faculty attended a DEU educational conference at the University of Portland. Based upon attendance at that conference, a clinical partner was sought. After discussions with possible partners, the school and the selected agency agreed to collaborate to implement a DEU.
Description: The approach developed included a task force with members representing both the school and clinical agency. Key stakeholders were gathered for a two day retreat to provide education regarding the collaboration and determine the details of the process of establishing a DEU. Following the retreat, the task force met regularly to establish specific goals and protocols for this particular situation. Two units in the hospital were selected to be the DEUs. Hospital staff and nursing school faculty worked together to establish guidelines for implementation. Basic principles identified in the Portland model were considered and adapted to meet the practice environment. The use of high fidelity simulation as a teaching modality and an evaluative measure were included. Students applied and were interviewed for placement on the DEU's by unit management. After 2 1/2 years, the DEU model of collaborative practice is considered a success by all stakeholders.
Outcomes: At inception, the goals of the project included creating an enhanced practice and teaching-learning environment; evaluation of students' and new graduates' clinical reasoning through the use of simulation and decreased new graduate orientation time. Additional outcomes included better communication with the clinical agency and the school, high unit staff and student satisfaction and a pathway for new graduate employment. Evaluative data from the collaborative simulation experiences provide evidence that simulation is an effective tool to track changes in student clinical reasoning. A number of extenuating factors influenced achievement of all of the project outcomes. Staff turnover at the clinical agency directly affected full implementation of some of the stated goals. However, there is sufficient evidence of successes. There are plans to move to a new phase of implementation with the inclusion of specialty areas.
Conclusions: Dedicated Education Units provide a mutually satisfying environment for practice and education. The DEU experience requires ongoing monitoring and oversight by a designated steering committee representing all stakeholders. Challenges indentified from this project include: multiple leadership and clinical staff role changes, impact of the economy on patient census, ability to hire and retain new graduates on the dedicated education units, clarification of teaching roles of faculty and staff. Recommendations for the future include: adding more units for DEU experiences including specialty areas such as the Peri-operative area and ICU, expansion of the use of high fidelity simulation for teaching and evaluation of clinical decision making abilities, standardizing the roles of teaching staff and faculty and clarifying how students are assigned to each of the units.

RN TO BSN GRADUATES ASSESS PROFESSIONAL COMPETENCIES FOR THE 21ST CENTURY

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Purpose: The purpose of this study was to explore changes in competencies as perceived by RN to BSN graduates from initiation of a completion program to post graduation professional practice using the Pew Health Professions Commission's "21 Competencies for the 21st Century."

Background: The Pew Health Professions Commission has recommended several changes in the education of the professional healthcare workforce. These include: 1) training to meet the demands of the new healthcare system; 2) that the workforce reflect the nation's diversity; 3) requiring interdisciplinary competency; 4) continuing to move education into ambulatory sites; and 5) encouraging public services of all students and graduates. While an increasing amount of professional literature speaks to the improvements in patient-care possible with increasing levels of nursing education, little is known about BSN completion graduates' perceptions of changes in their professional practice competencies after graduation.

Methods: Using Survey Monkey, BSN Competition graduates completed an investigator-developed questionnaire using the Pew Health Professions Commission's "21 Competencies for the 21st Century." The ratings of the competencies were based on the work of Dreyfus and Benner using an investigator developed 5-point Likert instrument. Participants were asked to compare their perceived competencies for 21 items at time of entrance to BSN Completion Program and their current post graduation practice. Descriptive and correlations statistical methods were used in data analysis.

Results: Of the 21 competencies, an increase was found in all competencies for the study sample (N=40). The three competencies which showed the largest increase were: 1) continue to learn and help others learn; 2) contribute to continuous quality improvement of the health care system, and 3) work in interdisciplinary teams. The three competencies with the least amount of change were: 1) ensure care that balances individual, professional, system and society needs; 2) exhibit ethical behavior in all professional activities; and 3) improve access to health care for those with unmet health needs.

Implications: The findings of this study support previous clinical research studies that have demonstrated difference in patient outcomes based on the educational level of the nurse. The growth in professional competencies as perceived by the BSN completion graduate speaks to their recognition of a positive change in professional practice competencies following completion of their baccalaureate education. These views support the need for ongoing baccalaureate completion programs for associate degree educated registered nurses.

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UNDERGRADUATE TEACHING ASSISTANT: HELP WITH LARGE CLASSES IN A WEAK ECONOMY

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Purposes/Aims: To examine the effectiveness and satisfaction of an undergraduate teaching assistant role in a large (≥ 60 students) didactic nursing class with only one nursing professor.

Rationale/Background: Cutbacks in state funding for higher education and continuing challenges in hiring nursing faculty are contributing to increased class sizes. During spring semester, 2010, partial assistance in addressing the problem was realized by piloting the role of undergraduate teaching assistant (UTA). A search of current literature found scant information on the topic. One research article by Herrman and Waterhouse (2010) provided basic help for creation of the UTA role. A small, internal grant was received to pilot this project.

Undertaking/Best Practice/Approach/Methods/Process: A pilot project was developed using research methods to evaluate the effectiveness and satisfaction of the role. The UTA was hired to work 4 to 8 hours per week for 16 weeks in the semester. The class context was a 3-credit, didactic class titled Introduction to Nursing Research. UTA tasks included FAQ site monitoring, room and technology set up, collection and distribution of assignments and quizzes, assistance in monitoring and answering questions for in-class small group activities, assistance in correcting papers and monitoring discussion board sites. Data were collected using both qualitative and quantitative methods. Qualitative data were collected from the professor's and UTA's reflection journals, professor observations of student-UTA interactions, and weekly debriefing discussions between professor and UTA. An end-of-semester Likert-scale survey regarding the UTA role was completed by students.

Outcomes Achieved/Documented: Themes from the UTA's reflective journal centered on leadership, motivating opportunity for graduate school, increased self-confidence, and feelings of being trusted. Themes from the professor's reflective journal and UTA observations included leadership, anticipatory questioning, opportunities for teaching, and student-instructor partnership. UTA-instructor weekly discussions focused on teaching, including philosophy and learning theories, evaluation methods, importance of communication, and evidence-based curriculum building. End-of-semester survey results found that, overall, students were comfortable with the UTA's assistance and found the UTA role to be effective, but were ambivalent regarding their desire to become a UTA.

Conclusions: Based on results, it was recommended that the role of UTA be expanded to other classes for fall semester 2010. Suggestions for hiring a UTA were shared with nursing faculty and included: a) professor choice, not assigned UTA; b) paid position, not for credit; c) successful completion of class by student candidate prior to assuming UTA role for that class. UTA candidates are expected to a) demonstrate leadership qualities; b) show interest in graduate school; c) demonstrate good communication skills; d) demonstrate good internet skills; d) show a desire to learn.

Reference:

Herrman, J.W., & Waterhouse, J.K. (2010). Benefits of using undergraduate teaching assistants throughout a baccalaureate nursing curriculum. *Journal of Nursing Education, 49*(2), 72-77.

ELDER CARE ISSUES

"SAMEPAGE" COMMUNICATION TOOL

Randall W. Durrant

PILOT TEST OF A CULTURALLY SENSITIVE CD-ROM FOR HYPERTENSIVE, OLDER CHINESE IMMIGRANTS

Wen-Wen Li, Margaret I. Wallhagen, Cerena Leung

NUTRITIONAL STATUS IN RESIDENTS ADMITTED TO NURSING HOMES: CLINICAL OUTCOMES

Sheryl Nespor

RAISE ELDERLY: READINESS OF OLDER ADULTS TO ADOPT A USB PHR

Barbara Heise, Carl V. Asche, Lynda H. Oderda

EXPLORATION OF ISSUES WITH ANTIHYPERTENSIVE THERAPY IN THE OLDER ADULT VETERANS

Suzanne Chaplik, Margaret Clayton

NURSING CONTRIBUTIONS TO QUALITY PALLIATIVE CARE IN THE ICU

Lissi Hansen, Michael C. Leo, Susan J. Rosenkranz, Paula JJ Nagy, Tia Swaney, Vikas Grover, Richard A. Mularski

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OLDER HOMELESS WOMEN WITH DEPRESSION

Karen L. Cameron

DEVELOPING COGNITIVE FLEXIBILITY
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DIETARY AND PHYSICAL ACTIVITY PATTERNS IN OLDER
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Amy L. Silva-Smith, Julie Fleury

ACCESS TO HEALTH CARE AND HEALTH-RELATED
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Mei-Rong Chen

FALLS IN THE NURSING HOME & EMERGENCY ROOM USE:
A NATIONAL STUDY
Caroline Stephens

THE ROLE OF SELF-KNOWLEDGE IN PROMOTING
PHYSICAL ACTIVITY AMONG OLDER HISPANIC WOMEN
Adriana Perez, Julie Fleury

"SAMEPAGE" COMMUNICATION TOOL

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Geriatric Nursing Leadership Program

Purposes/Aims: Improved communication between a patient and their physician is desired by both the patient and the physician. I developed a SamePage communication tool to help improve such communication. SamePage tool includes comprehensive medical information in regards to the patient. Medications and diagnoses are provided in layman's terms. Contact information for MD, as well as an area to document questions the patient has on his/her situation. It is intended to be an ongoing communication tool that keeps both the patient and physician up to date on patient needs/conditions. My hope is that all patients will keep the tool in a conspicuous place in their home which is easily accessible and not forgotten.
Rationale/Background: The SamePage communication tool was developed in an effort to provide the elderly patient with better care. The intent was that the improved care would come from better communication between physician and patient. I have worked with the geriatric population for 17 years and have noted significant frustration when it comes to patient and families communicating effectively with their physicians.
Understanding/Best Practice/Approach/Methods: My project included piloting my SamePage tool with homecare patients. Upon admission to homecare, I introduced them to my idea and provided them with a SamePage folder. They were instructed to take the folder to follow up appointments with them and use it as instructed. After they had used it, I talked with them about how well it worked and/or what suggestions they had to make it work better. I also distributed a short survey to 25 physicians. The survey explained SamePage and simply asked if they thought it would improve communication.
Outcomes Achieved Documented: I piloted the project with 18 homecare patients. Nine of the patients utilized the tool effectively and were pleased with how it improved their communication with their physician. Five of the patients reported that it helped some but they forgot to use it on occasion or didn't take the time to understand the tool. The remaining four patients did not follow up with me at all to report whether or not the tool was helpful. Twenty-two of the Twenty-five physician surveys sent out came back with positive responses, indicating that physicians felt the tool was helpful if utilized by the patient. Comments made by some of the patients were, "I plan on using this folder for all of my doctor appointments," and "It helped me remember what I wanted to ask him and forgot on earlier visits."
Conclusions: I have decided to continue providing my homecare patients with this communication tool. It empowers the patient and reinforces education provided by the physician.

PILOT TEST OF A CULTURALLY SENSITIVE CD-ROM FOR HYPERTENSIVE, OLDER CHINESE IMMIGRANTS

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Purpose: To assess whether educational material designed to be culturally sensitive and promote self-management of hypertension (HTN) in older Chinese immigrants is accessible and acceptable when presented using a CD-Rom format.
Background: Little is known about HTN management in older Chinese immigrants. Since older Chinese have their own cultural practice in managing their health, it is important to develop a culturally sensitive material to help this population achieve optimal control of their HTN.
Methods: Design: This study had two phases. First, a CD-Rom designed to contain culturally sensitive, health educational material was developed based on the preliminary study findings and the first author's years of clinical practice with older Chinese immigrants with HTN. Second, a qualitative study using semistructured individual and focus group interviews was conducted to assess the acceptability of the CD-Rom format. Setting: Asian Outpatient Clinic in San Francisco Bay Area; Participants: Five older Chinese immigrants aged ³65 years participated in both individual and focus group interviews; Analysis: Content analysis using a structured coding scheme to identify issues related to the needs of the older Chinese learner was performed. The analysis included extensive line-by-line coding of the raw data. Coding and categorization continued until no new information came forth and categories appeared "saturated."
Results: Participants ranged in age from 71 to 81 (Mean 74.25, SD 4.82). The majority were female (4 out of 5), married (3 out of 5) and had annual household income <$10,000 (4 out of 5). The CD-Rom format was assessed as valuable based on several aspects of presentation. First, content was tailored towards older Chinese with appropriate visual and audio effects to maximize comprehension of the information. Secondly, information regarding HTN management was presented in the context of Chinese culture (e.g., using Chinese spices to reduce salt intake), which can help participants incorporate cultural practice into HTN management. Thirdly, the participants saw this CD-Rom as a guide towards HTN management as instructions were clearly stated and well supported by many explanations (e.g., the reason to report a use of Chinese herbs to a health care provider). Finally, the information allowed participants to take a more pro-active approach towards their patient-physician relationship and ask HTN-related questions leading to better control of HTN.
Conclusions and Implications: Findings suggest that educational information presented in a CD-Rom format in the context of Chinese culture is appropriate when targeting the older Chinese immigrant population. They also support the need to replicate the study be using a larger sample size and then tested in a randomized clinical trial. It is anticipated that this CD-Rom material will help nurses and nurse researchers develop a culturally sensitive intervention to assist older Chinese immigrants better manage their HTN.

Funding: 2008 Sigma Theta Tau International/Western Institute of Nursing research grant; Sigma Theta Tau Alpha Eta Chapter Research Grant.

NUTRITIONAL STATUS IN RESIDENTS ADMITTED TO NURSING HOMES: CLINICAL OUTCOMES

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Background: While weight loss during a nursing home admission has been associated with negative outcomes across a nursing home admission, little is known about the relationship between malnutrition being already present on admit and subsequent outcomes during the admission.
Purpose: The aim of this data based study is to describe the relationship between the admission nutritional status of nursing home residents and adverse outcomes (weight loss and pressure ulcers) at the end of a four week period. Specific aims are to describe a) nutritional status on admit, b) differences in nutritional status of residents admitted from the acute care setting and from the community, c) differences that occurred during the admission in both weight loss and pressure ulcers at 4 weeks between three groups (well nourished at admission, at risk for malnutrition at admission and malnourished at admission); and d) relationships between the nutritional status of residents on admission and clinical outcomes (weight loss and pressure ulcers) at the end of a four week period.
Methods: One hundred eight (108) charts were reviewed for inclusion with a final sample size of 82 cases. Nutritional status was determined for each case during resident admission using the Mini Nutritional Assessment (MNA) as part of standard practice. The MNA is highly sensitive (96%), specific (98%) and predictive (97%). Descriptive and inferential statistics will be utilized to analyze the data including ANOVA and logistic regression analysis.
Implications: Nurses can be instrumental in identification of malnutrition. Once malnutrition is identified on admission to skilled nursing home facilities, measures can be instituted to prevent negative outcomes.

RAISE ELDERLY: READINESS OF OLDER ADULTS TO ADOPT A USB PHR

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Aim: To identify the level of readiness of older adults and physicians to use a USB PHR.
Background: Advances in health information technology, such as personal health records (PHRs), hold promise to increase patient safety, cost-effectiveness and healthcare quality. Older adults with chronic illnesses may be particularly in need of assistance to adopt a PHR system due to potentially poor self-care management skills and few or nonexistent information technology skills. The challenge for older adults is how best to ready themselves for active partnership with their healthcare provider to ensure high quality healthcare.
Methodology: A descriptive exploratory study was conducted in this initial phase of the RAISE Elderly project. Two focus groups assessed the level of acceptance of a USB PHR system and identified barriers to use. With a design to engage physicians first, the initial focus group consisted of a convenience sample of geriatric physicians (N=15). An audience response system (ARS) was used which allows for increased interactivity, polling anonymity, and immediate feedback and clarification. Physicians were polled RE: previous experience with PHRs and their opinions about the potential impact of USB PHRs. Discussions ensued regarding physician concerns such as privacy, security and accuracy of information; viruses on the USB drive; difficulty in updating the PHR; and their willingness to work with a client with a USB PHR. Acceptance and perception of usability of USB PHRs was also assessed in a convenience sample of community dwelling older adults (N=15). Seniors (age 55 to 85) were asked if they used a computer; knew about PHRs; and USB PHRs specifically. Using the format of an ARS followed by discussion, opinions were obtained on the potential of PHR use to improve their healthcare and barriers to USB PHR use. Data Analysis: Descriptive statistics with qualitative comments from each focus group.
Results: The geriatric physician group indicated that USB PHR would increase patient-centeredness of care (81%) and patient safety (74%). Barriers to USB PHR use were identified by physicians as the accuracy of the information (94%) and the time to update the PHR (100%). The majority of physicians (94%) were willing to work with patients who used a USB PHR. Older adults admitted not being comfortable with computers overall, with the majority never having used any type of USB drive (67%). Older adults indicated that such a device could increase patient-centeredness (80%), patient safety (93%), and timeliness of their healthcare (93%). Almost all (93%) reported that if their provider updated the USB PHR, they would use it.
Implications: Although not generalizable due to small sample size, these findings are valuable as they suggest that although older adults may have little or no experience with computers and PHRs, they could see benefits to USB PHR use and may use them if they received adequate support from their healthcare providers. This research provided the foundational first phase of a feasibility intervention study to introduce the use of USB PHRs for medication reconciliation in a geriatric primary care clinic.

Funding: Brigham Young University College of Nursing Intervention Study Grant.

EXPLORATION OF ISSUES WITH ANTIHYPERTENSIVE THERAPY IN THE OLDER ADULT VETERANS

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Background: Hypertension is a national public health issue with greater than half of the adult population over age 60 taking antihypertensive medications. Approximately every 40 seconds an American has a stroke due in part to nonadherence in taking prescribed hypertension medications. As a result, nonadherence is an issue in this country. A review was conducted to explore medication adherence for hypertension management in the older adult military veterans where approximately 2.75 million are receiving care for hypertension.

Methods: An extensive online search evaluated studies over the last 3.5 decades to establish the history of medication adherence and the current practice. The key words were hypertension, adherence, and medication for the search in CINAHL, MEDLINE, and PUBMED, yielding 768 abstracts. Subsequently, in an effort to narrow the focus of the search, the keyword of veterans was added to the databases, yielding 65 abstracts. The abstracts were evaluated for the title, purpose, sample population, methods, and quantitative and qualitative analysis with the final number of twenty-one studies. The terminology of adherence evolved over time from compliance used in the earlier years. From 1975 to 1985, the studies were in a non-veteran population with interventions for relaxation interventions in modifying blood pressure and the locus of control; and education strategies to improve compliance with antihypertensive therapy. The research in the veteran population started in the following 10 years from 1986 to 1996, where the findings include the patient's view of hypertension and compliance; pill counting; electronic pill boxes; and once-daily dosing. The next 10 years provides transition to the terminology of adherence in the research findings from 1997 to 2007 where the results continue with electronic pills boxes and the locus of control. In addition, the other findings include demographic characteristics; medication knowledge; side effects; omitted doses; intentional and unintentional medication nonadherence; cognitive deficits; medication classifications; optimism and control. From 2008 to the present, the findings include ethnic groups and depression; participatory decision making process; selective adherence; refill algorithms; differential medication adherence; treatment intensification; and alcohol screening. The purposes in these studies are clear and the data interpretations are consistent with the study results. The statistical methods are more advanced during the later years with an increase of clinical significance.

Issues Relevant for Research: The VA and the Department of Defense recommendation for the hypertension clinical guidelines are to provide greater patient responsibility and involvement of the patient in their treatment. The studies do not reflect the patients' desire for participation in their hypertensive medication management, nor, do they reflect the patients' perceptions of their involvement in their treatment. These variables are salient for further understanding of their influence on medication adherence.

Implications: Investigating relevant variables and their direct and indirect influence on medication adherence will tailor the issues most important for future research.

NURSING CONTRIBUTIONS TO QUALITY PALLIATIVE CARE IN THE ICU

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Purposes/Aims: Over 540,000 people die in an intensive care unit (ICU) in the U.S. each year and millions of others experience serious symptoms or are in need of palliative care during critical illness. Measures are lacking for quality palliative care in the ICU to assess nursing contributions to such care. The purpose of this poster is to describe the development and pilot testing of the survey: Nurses' Quantification of their Contributions to Quality Palliative Care for each of the 14 Measures (NQCQPC).

Rationale/Conceptual Basis/Background: The ability to measure and relate nursing care to outcomes for patients and their families is a high priority in American healthcare and is acutely policy relevant, especially in the current financial climate and the recent call to action for nurses in the IOM report on the future of nursing. Palliative care broadly delivered applies to over 10 million ICU admissions in the U.S. each year. Furthermore, the doubling of persons with chronic diseases over the age of 65 by 2030, will require an expansion in palliative care provided to critically ill and dying patients in ICUs. The study for which this survey was designed has its basis in two conceptual models: the Donabedian model for quality of care assessment and the Analytic Model for Studying ICU Performance.

Methods: A modified Delphi technique was used to operationalize and specify 14 palliative care quality measures. These measures were developed based on six established domains of quality palliative care for the ICU: decision-making, communication, continuity of care, emotional support, symptom management, and spiritual support. Based on the 14 established quality palliative care measures, nurses were asked to quantify their perceptions of nurses' contributions for each of these measures using a scale from 0 - 100% in 10% increments as well as to rate the quality of the contributions.

Results: The survey was pilot tested with 18 ICU nurses. For the items measuring the percent effort that falls under the domain of nursing, mean scores ranged from 41.58% (documentation of timely physician communication with the family) to 95.26% (documentation of pain assessment). For quality care provided by nursing, the mean ranged from 58.89% (documentation of the goals of care) to 87.89% (documentation of pain assessment). Currently, 150 nurses in two ICUs are being surveyed.

Implications: Understanding nursing's specific contributions to the quality of palliative care and its relationship to patient and family outcomes will have clear practice and policy relevance for understanding and improving care provided to patients and their families in the ICU.

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OLDER HOMELESS WOMEN WITH DEPRESSION

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Research, Aims: Older homeless women with depression are relatively invisible on the streets, as well as in our research literature. We know little about how they describe their situation. The purpose of this qualitative descriptive study was to develop a foundational base of knowledge about older homeless women with depression so their future health care could be relevant and effective.
Rationale, Background: Several factors contribute to the knowledge gap about this underserved population. Past research about the homeless population focused on men as they formed the largest subpopulation within the homeless population. Current research focuses on homeless families and homeless children. The homeless older adult population is growing and yet, we lack the understanding of their perspective and the evidence upon which strong health care strategies can be based. This research addresses this gap and gives voice to this population.
Method, Research Question: This was a qualitative descriptive study in which seven participants were asked to talk about growing older, homelessness, and depression. The question guiding this study was, how do older homeless women with depression describe their depression, homelessness, and growing older? Participants were drawn from shelters and drop-in centers. Audio recordings were transcribed by a professional transcriptionist. Common themes emerged and were echoed by the participants.
Results: The over-arching theme of this study was "coping with the realities of life." The following themes were explored: pathways to homelessness, depression, aging, and chronic health. Fifty-seven percent of the women had been homeless before while the remainder were experiencing their first episode of homelessness. Forty-nine percent were homeless following the death of a loved one. None were currently employed; two received small incomes that could not pay for housing. All had chronic health conditions which contrasted with the reported rate in the literature of 48-69%. All of the women described chronic pain. This issue has not been addressed in the literature.
Implications: These data provide implications for practice, research and policy development. Practitioners need to pay closer attention to the complaints of pain that older homeless women express during clinic visits. This sample all had chronic health conditions and chronic pain that was not being treated. Some previous research has suggested that older homeless men and women might be more effectively treated as geriatric clients. A homeless person is considered "older" at the age of 50 years as a result of the stress of living on the streets.

Future nursing research needs to investigate larger samples of homeless women in order to develop intervention studies that will improve health outcomes for this population. For example, how do depression, addictions, chronic health conditions, and chronic pain interact to cause or prolong homelessness for older women?

Policy development could help homeless women in the 50-62 age group for whom no services exist. Nurses could advocate for housing and other services that would support improved health for this population. Giving voice to these women was a first step in closing this knowledge gap.

DEVELOPING COGNITIVE FLEXIBILITY USING A "SMART GAME" APPROACH

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Aim: To promote evidence-based reasoning and adaptive decision making skills in APRN students through creating an immersive, interactive, web-based learning environment utilizing a multimodal, multimedia, case-based, "smart game" instructional approach.
Rationale: Advanced practice clinicians must have adaptable, flexible decision making skills to successfully address the ambiguities and challenges inherent in advanced nursing practice. This requires clinicians to develop cognitive flexibility which encompasses: the appropriate selection, gathering and utilization of multiple perspectives of knowledge, which are re-assembled and tailored to the complexities of a given situation, in order to facilitate greater problem solving ability. Utilizing Cognitive Flexibility Theory (CFT) principles, adult learners can develop and hone cognitive flexibility given appropriate educational design, wherein knowledge evolves through the dynamic, continuous restructuring of mental schemas when presented with multiple, non-linear, variant, context-dependent case-based situations.
Approach: A required online course in the Psychiatric Mental Health MS program was redesigned using a "smart game" approach that applies CFT and Cognitive Flexibility Hypertext (CFH) principles. CFH utilizes digital technology to create interactive, immersive, learner-directed, responsive, case-based learning environments, where learners are presented with learning materials and experiences using a variety of multimedia formats accessed in multiple ways.

The primary course design is a first-person "smart game", where each student takes on the role of a new Psychiatric APRN providing treatment for three clients whose situations and needs change over the course of the semester. Upon accessing the course website, students enter a simulated APRN office containing multiple interactive access points or "portals" for acquiring client information and accessing related learning materials. For instance, the seating area portal provides students with pre-recorded video interviews of simulated clients, whose issues change across the semester and require students to make decisions accordingly. The bookcase connects students to reference materials and journal articles to help inform their decisions. The desktop computer provides a simulated patient record, where students access client history, order and review laboratory test results, and links to a shared WIKI where students complete documentation. The laptop computer links to community and Internet resources, while desk and cell phones provide messages from clinical team members and clients respectively. Portal links are updated as the case-based scenarios evolve, providing students with new links and information. Students attend bi-weekly, synchronous web-conferencing sessions with an expert Psychiatric Mental Health APRN provider to debrief, deconstruct, and process through students' clinical decisions.
Outcomes: We expect increased content mastery, evidenced by students' ability to apply concepts and articulate rationale for decisions made within context. Some students may be challenged by the novel format and degree of self-direction. This course will both more accurately model the practice context students will soon venture into and increase a sense of ownership and responsibility for continued learning.
Conclusions: This "smart game", CFT and CFH based course design can be adapted to any content and context in baccalaureate or advanced clinical training courses. Incorporating this approach to other web-based courses will provide nursing educators with another tool for helping students to bridge the theory practice gap.

CHALLENGES IN DETECTING AND PREVENTING PRESSURE ULCERS IN OLDER ADULTS WITH DARK SKIN

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Purpose: This poster reviews the state of the science and best practices for identifying and staging pressure ulcers in older adults with dark skin, and describes factors associated with disparities in pressure ulcer recognition and treatment outcomes.

Background: Pressure ulcers are a preventable cause of morbidity, mortality, and impaired quality of life in older adults. Yet, in the United States, pressure ulcers are a cause of death among 60,000 persons annually. Nearly 80% of pressure ulcer-associated deaths occur in people over age 75. Costs associated with pressure ulcer management account for $1 billion dollars annually. The Centers for Medicare and Medicaid Services classified stage III and IV pressure ulcers as a preventable hospital-acquired condition and do not reimburse hospitals for care costs. State and national organizations have developed campaigns related to pressure ulcer prevention, early detection and management including the National Pressure Ulcer Advisory Panel, an independent non-profit professional organization.

Despite increased attention on pressure ulcer prevention, detection and management, one poorly addressed area continues to be detection in people with dark skin. This may be related to difficulties recognizing non-blanchable erythema, an indicator of stage I ulcers, in dark skin. The National Pressure Ulcer Advisory Panel (2007) states that "in darker skin tones, the ulcer may appear with persistent red, blue, or purple hues." Dark-skinned people are substantially less likely than whites to have a Stage I pressure ulcer documented, while higher-grade ulcers are more common in blacks than whites. As a result, pressure ulcer-associated mortality is higher among blacks than among whites. This problem will only grow in coming years with the expanding population of darker pigmented older adults. Further, anecdotal evidence suggests that nursing education programs are not teaching students how to assess for pressure ulcers in people with dark skin.

Best Practice: Only recently has there been increased awareness of this disparity. The 2010 Revised National Pressure Ulcer Advisory Panel Guidelines include specific recommendations for assessing and managing pressure ulcers in older adults with dark skin. Key components of these guidelines will be discussed and a photo-essay will illustrate their use in assessing older adults with dark skin.

Conclusions: There is a need for research and performance improvement projects to identify the dissemination and use of guidelines for recognizing pressure ulcers in older adults with dark skin, and their efficacy in reducing the incidence of higher stage pressure ulcers in this population. Recommendations will be made for future research regarding use of the 2010 guidelines, and implications will be identified for educating care providers and nursing students in early recognition of pressure ulcers in older adults with dark skin. Registered nurses have a key role in improving the health of these clients by identifying and preventing pressure ulcers through education, research, and in their professional practice. Therefore, nurses need to be familiar with the new guidelines for detecting pressure ulcers in older adults with dark skin, and able to use and teach these guidelines to others.

MEDITATION IN OLDER ADULTS WITH POSTHERPETIC NEURALGIA

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Purpose: This study will compare the effects of usual care plus meditation with usual care alone on anxiety, depression, fatigue, pain, and quality of life in community dwelling older adults with postherpetic neuralgia (PHN).
Rationale: PHN is a severe, life altering condition that afflicts approximately 20-30% of individuals who have shingles. While an acute episode of shingles typically lasts 3-4 weeks, PHN can last for months or even years. The primary cause of morbidity in PHN is pain, which has been reported to be one of the most intractable neuropathic pain disorders.

Older adults tend to have more severe cases of shingles, and develop PHN more often than younger adults. The pain and stress associated with PHN can be debilitating, and may result in fatigue, interrupted sleep, depression, and anxiety disorders. The ability to perform activities of daily living can be affected, resulting in a loss of independence and decreased quality of life, especially in an older, more vulnerable population.

Although meditation has been reported as having a positive impact on quality of life, mental health, and other factors in some chronic conditions (e.g., fibromyalgia, low back pain), its use has not be examined in older adults with PHN.
Methods: This pilot study will use a repeated measures, experimental design to examine the effects of meditation in community dwelling older adults with PHN. The 20 participants who meet study criteria will be randomly assigned to either a treatment group or comparative group. Data will be collected at entry to the study (Time 1), two weeks later (Time 2), and six weeks later (Time 3). Between Time 1 and Time 2 all participants will follow usual care only, and record their levels of pain and fatigue in a daily log. Between Time 2 and Time 3 the treatment group will add meditation to their usual care, and all participants (treatment and comparative groups) will continue to record level of pain and fatigue in a daily log. Enrollment of study participants will occur November 2010 through February 2011, with a study completion date of March 15, 2011.
Plans for Data Analysis: Longitudinal data will be analyzed using mixed-model methods (hierarchical linear models) in SAS ver. 9.2. Daily pain and fatigue will be compared for trends between the two groups; mixed model methods can cope well with the expected large numbers of missing days of data in those logs. Data collected at the three distinct time points (Time1, Time 2, Time 3) will be compared between the groups with appropriate contrasts calculated for time period comparisons.
Implications: Multiple medications are often required for managing the pain in PHN. Meditation may provide an adjuvant to pharmacotherapy for pain control, and may enhance quality of life through its effects on anxiety, depression, and fatigue. Meditation is easily taught, and can be incorporated into a nurse's plan of care for older adults with PHN.

Funding: This study is supported by a grant from the Clinical and Translational Science Center (CTSC), University of New Mexico Health Sciences Center.

COLLECTING PHYSICAL ACTIVITY DATA FROM CULTURALLY DEAF ADULTS

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Purpose: The purpose of this study was to evaluate two methods for collecting physical activity data from Deaf adults: the Adapted 7-day Physical Activity Calendar and pedometers with both in-person and take-home instructions provided in American Sign Language.

Background: Physical inactivity has been established as a major risk factor for heart disease and as a primary health promotion and CVD prevention behavior. There has been no published research specific to physical activity among culturally Deaf adults. One barrier to Deaf adults' participation in physical activity research is the absence of culturally and linguistically appropriate measures of physical activity.

Methods: A correlational descriptive design was used and interview data were reviewed to evaluate acceptability of the protocols. A convenience sample of 31 Deaf adults were recruited using a snowballing/ networking strategy The study was approved by the Human Subjects Protection Program. Data was collected using 1) the Adapted 7-Day Physical Activity Record 2) pedometers and 3) a semi-structured interview guide.

Results: The mean METs/day for purposeful physical activity (PAR calendar) was 2.68 (SD = 1.91) with a range from 1.00 to 8.71. The mean steps/day (pedometer) was 5615 (SD = 2893.85) with a range from 1504.4 to 13621.0. There was no significant correlation between mean METs (data from the 7-Day PAR) and the steps/day (pedometer data) in this sample ($r = 0.19$, $p = 0.32$). The most common activities listed were walking (with or without a pet) and yard work. Interview data showed strong preference for pedometers rather than the PAR calendar.

Implications: Results of this study demonstrate 1) support for providing both in-person and take-home instructions in ASL for culturally Deaf adults 2) difficulties using the Adapted 7-day PAR with culturally Deaf adults, and 3) support for use of pedometers to collect physical activity data from culturally Deaf adults.

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DIETARY AND PHYSICAL ACTIVITY PATTERNS IN OLDER ADULTS AT RISK FOR STROKE

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Purpose: The purpose of this poster presentation is to describe demographic, social contextual resource, behavioral change process, physical activity and dietary patterns from a randomized controlled study of a behavioral change intervention to reduce stroke risk factors in older adults.

Background: Stroke is a leading cause of long-term disability worldwide. Interventions addressing the problem of limited motivation to reduce stroke risk factors and the contributions of social and environmental factors are needed. The 8-week Promoting Older Adult Wellness (POW) intervention, framed by Wellness Motivation Theory, targets social contextual resources and behavioral change processes to promote physical activity and healthy eating in sedentary, overweight older adults at risk for stroke. Social network support, empowering education, and motivational support are key elements of the intervention.

Methods: Baseline data provides demographic characteristics for a sample of sedentary, overweight older adults; descriptive and frequency data will be used to report social contextual resources, behavioral change process variables, body mass index, 24-hour dietary recall, 7-day activity recall, and 7-day blinded pedometer counts.

Results: Data will provide descriptive information about a low to low-moderate income, multi-ethnic sample of adults over 60 who are sedentary, overweight and enrolled in a randomized controlled study of a behavior change approach to reduce stroke risk factors.

Implications: In order to plan interventions targeting stroke risk reduction, it is important to describe the demographic characteristics, social contextual resources, behavioral change processes, physical activity levels and dietary patterns of older adults who are sedentary and overweight. By understanding these characteristics, researchers will be better able to design studies and plan recruitment strategies for this specific population.

Funding: This research is supported by a John A. Hartford Foundation/Building Academic Geriatric Nursing Capacity, Claire M. Fagin Postdoctoral Fellowship to Dr. Silva-Smith.

ACCESS TO HEALTH CARE AND HEALTH-RELATED QUALITY OF LIFE OF ELDERLY CHINESE IMMIGRANTS

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Rapid growth of the aging population is becoming a global phenomenon. Deterioration of biological functions as a result of the aging process significantly affects daily life and impacts older adults' overall quality of life. Aging presents special problems for Chinese-American immigrants. At a minimum, these individuals need to be able to see health care providers as needed. However, medical illiteracy, cultural differences, and lack of transportation and assistance with health care appointments still present barriers for access to health care (AHC) for this population. This has not been a well-researched topic.

The purposes of this study were to examine AHC of elderly Chinese immigrants and to explore their level of health-related quality of life (HRQOL) in the cultural context of the Pacific Northwest. Mixed methods were used to conduct this research. The World Health Organization Quality of Life–Old Module instrument was used to measure Chinese immigrants' HRQOL. The demographic data sheet and the questionnaire on access to health care were used to obtain personal background information.

The participants were 108 elderly Chinese immigrants recruited from regional communities, with a mean age of 75.3 year old and 43 (39.8%) of the participants being male. Results showed that the mean HRQOL score was 68.8 on a scale from 0 to 100, indicating that most participants felt their HRQOL was above average. Participants having religious beliefs showed significantly higher HRQOL. Contrary to expectation, participants living alone scored higher in HRQOL than their counterparts who did not live alone. English language difficulty turned out to be the main barrier to access to health care.

Ten of the 108 participants provided an additional in-depth interview about their aging experience. Content and theme analysis were used to determine what the participants felt were the most valuable things in their lives, which included physical health, religious belief, happiness, and good family relations.

The research results can be applied to nursing practice and education in the care of older adults of different ethnic backgrounds living either in the United States or in Asia. Future research on aging populations could broaden the study sample to compare HRQOL between different races or ethnicities, between immigrants and non-immigrants, and between institutionalized and non-institutionalized adults. Implications for policy development: living independently as long as possible and build environments that are conducive to elders' health and independent living. Increasingly, older adults are able to live independently, and, as noted in the findings of this study, health-related quality of life was also highest for those elderly who were able to live the most independently.

FALLS IN THE NURSING HOME & EMERGENCY ROOM USE: A NATIONAL STUDY

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Purpose: This study used Economic Theory and the Andersen Behavioral Model as a theoretical framework to examine the association between falls and emergency room use among a national random sample of nursing home (NH) residents, controlling for predisposing, enabling and need characteristics.

Background: Evidence suggests that falls are responsible for considerable disability, functional decline, morbidity, depression, reduced quality of life and increased mortality among older adults, particularly among those living in NHs. Compared to community-dwelling seniors, NH residents have a 2-3 times greater incidence of falls, about 1.7 falls per bed annually. In addition, 10-25% of falls in this population result in fracture, laceration, or need for hospital care.

Methods: Using a descriptive, cross-sectional study design, this study was a secondary analysis of Centers for Medicare & Medicaid Services administrative claims and Minimum Data Set resident assessment data from January 1 - December 31, 2006. As part of a larger study examining the factors associated with ED use by cognitively impaired NH residents, this study utilized multinomial logistic regression models to determine the odds of any ED visit by a 5% random sample of Medicare beneficiaries residing in nursing facilities in the U.S. (n=132,753). Results are presented as adjusted odds ratios (AORs) with 95% confidence intervals (CI).

Results: Of the 132,753 NH residents included in this study, 57.7% had cognitive impairment, 68.8% were female, 80.5% were 76+ years old, and 9.4% were African American. A striking 62% (n=82,335) had an ED visit that either resulted in a hospital admission or return to the NH without hospitalization. Across all predictor variables, residents who suffered a fall within the last 30 days had the highest odds, almost 2.5 times greater odds, of any ED visit than those without a fall in the last 30 days (CI: 2.4-2.5, p<.0001).

Implications: Although it is not possible to prevent all falls in the NH, given the extraordinarily high odds of ED utilization due to falls found in this study, it is clear that more needs to be done to significantly reduce the frequency of falls and the severity of fall-related injuries. Nursing should take the lead in engaging a thorough interdisciplinary diagnostic, therapeutic, and preventative approach for all NH residents who fall, as well as for those identified as high risk for falls.

Primary Study Funding: John A. Hartford Foundation BAGNC Predoctoral Scholars Program; Sigma Theta Tau International-Alpha Eta Chapter Research Award.

THE ROLE OF SELF-KNOWLEDGE IN PROMOTING PHYSICAL ACTIVITY AMONG OLDER HISPANIC WOMEN

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Purpose: The purpose of this presentation is to describe the role of self-knowledge as a basis for understanding motivation and goal setting for regular physical activity among older Hispanic women. This research builds upon a trajectory focused on testing the Wellness Motivation Theory to promote cardiovascular health among older Hispanic women.

Rationale: The role of self-knowledge has been found to be important among older minority populations in which possible-selves have served as motivational forces in achieving health goals. Formative focus group data indicate that indeed, older Hispanic women describe how they imagine themselves engaging in physical activity, not only for desired health outcomes, but also to help serve as role models for children and grandchildren. The recognition of discrepancy between valued health goals and current behavior enhanced motivation to engage in behaviors to address the discrepancy.

Methods: Self-knowledge was measured using the Possible Selves Questionnaire and included three open-ended questions designed to elicit insight into a feared possible or actual health problem, valued health goals, and activities envisioned to meet personal goals. A content analysis of responses was conducted to provide a systematic description of narrative data. The questionnaire also includes two Likert-scale questions to evaluate self-efficacy and expectancy outcomes.

Results: 55 older Hispanic women met inclusion criteria. Mean self-efficacy score = 2.42 (SD = 0.63) and outcome expectancy = 2.45 (SD = 1.17). Women reported the following feared health problems: obesity/overweight (29.1%); diabetes mellitus (27.3%); high blood pressure (20%); high cholesterol (5%) and 18.2% reported others, such as arthritis (3), depression (2); anxiety; asthma, and gastric reflux. For health goals most women listed wanting to lose weight, control their blood pressure, blood sugar, and cholesterol, as well as feel better about themselves, prevent heart attack or stroke. Some women described wanting to be more active and wanted to remain independent for themselves and for their family. Some women reporting wanting "weight loss to feel more energy" or "weight loss to prevent more health problems" and "control blood pressure to be around for kids." Activities to reach goals included: "continue to walk 30 minutes every morning by walking my grandkids to school (5 days)," "Evening walk for 35 minutes with friends at the clinic, Tuesday through Friday," others described new activities such as, "Begin using the park nearby to walk with my husband during weekend days," and "keep up my movement [physical activity] for at least 10 minutes when I sweep and mop the floor every day." One woman wrote "I will have the bus drop my off 5 blocks away from my house each time, this is at least 15 minutes."

Implications: Self-knowledge includes the concepts of valued goals, outcome expectation, and self-efficacy, which guide the construction of an action plan to achieve health goals. This data supports the role of self-knowledge as an important factor in promoting health behavior change among older Hispanic women. Findings are consistent with studies that suggest that programs that include building self-knowledge skills are effective in promoting health behavior change in Hispanic communities.

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IMPACT OF PSYCHIATRIC CONDITIONS ON PATIENTS

CONCEPT ANALYSIS OF AGGRESSIVE BEHAVIOR

Hiromi Hirata

A NURSE LED TRANSITION PROGRAM FOR EATING DISORDERS PATIENTS

Kirsti Weekes, Sharon Devonish

PHYSICAL ACTIVITY ADHERENCE AND PATTERNS OF ADULTS WITH SCHIZOPHRENIA

Heeyoung Lee, Irene Kane, Christina Jolley, Karen G. Schepp

INFLUENCE OF GABRA6 POLYMORPHISM ON THE STRESS RESPONSE IN VETERANS WITH PTSD

Donna Velasquez, Rochelle Lambert, David Montgomery, Alice Pasvogel

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SOMALI REFUGEES' PERCEPTIONS OF MENTAL ILLNESS

Joanna Bettmann, Debra Penney, Pamela Clarkson Freeman

PHYSICAL ACTIVITY, MOTIVES FOR EXERCISE, AND STRESS IN SCHIZOPHRENIA

Shunju Hsieh, Heeyoung Lee, Irene Kane

RELATIONSHIP AMID SEASONAL AFFECTIVE DISORDER SYMPTOMS AND VITAMIN D LEVELS

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CONCEPT ANALYSIS OF AGGRESSIVE BEHAVIOR

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Background: Caring for elderly people can be burdensome for caregivers, especially when an elderly person has dementia. Dementia sometimes causes aggressive behavior (e.g., hitting, pushing, biting, spitting, name calling, etc). Since the elderly person with dementia often resists getting care or acts aggressively toward caregivers, those behaviors may result in harm to others and increase burnout of caregivers. As a result, aggressive behaviors may alienate caregivers and affect quality of care for the elderly person with dementia. While there are many studies related to aggressive behavior among elderly people with dementia, there is inconsistent definition of the behavior in the clinical literature. Consequently, the interchangeable use of multiple terms to describe aggressive behavior is problematic.
Purpose: The purpose is to analyze the concept of aggressive behavior among elderly people with dementia using the principle-based concept analysis by Penrod and Hupcey (2005).
Sample: CINAHL and Ovid MEDLINE (1950 to November Week 1 2009) were searched using the concept "aggressive behavior," and the keywords "aggression," "dementia," and "patient care." The search yielded 203 articles in CINAHL and Ovid MEDLINE. Exclusion criteria eliminated articles that lacked the words "aggressive behavior" or "aggression" in the key words, or in the text of the article; dealt with "elder mistreatment;" presented a personal opinion; or reported on medication trials. The search emphasized care of elderly persons exhibiting aggressive behavior. The titles and abstracts were screened for exclusion criteria, and 13 articles were identified meeting these criteria.
Approach: A concept analysis was completed using Penrod and Hupcey's (2005) principle-based approach to determine the current state of knowledge about aggressive behavior. Four principles (epistemological, pragmatic, linguistic and logical) were used to analyze how aggressive behavior is defined in the literature. An integrated schema was developed to interpret aggressive behavior among in elders with dementia for future research and clinical application. All the data were categorized according to each philosophical principle and integrated schema was developed to relate the findings to the context of elder care.
Findings and Conclusion: Agitation, aggression, and disruptive behavior are used interchangeably in the literature and share mutual characteristics. Some authors use aggressive behavior as the broadest category including agitation, challenging or disruptive behavior. The definition of aggressive behavior includes a broad range of behaviors that vary in degree of harmfulness. Aggressive behavior among people with dementia is defined as verbally and physically destructive actions an individual takes that unintentionally afflicts harm on others while trying 1) to protect themselves, 2) to express fear of something (or some person) in the environment, or 3) to express personal needs. More research is needed to better define aggressive behavior in the context of elders with dementia to understand antecedents and consequences linked to this behavior to prevent or reduce the behavior and its consequences.

A NURSE LED TRANSITION PROGRAM FOR EATING DISORDERS PATIENTS

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Anorexia nervosa and bulimia nervosa are the primary eating disorders for which people seek treatment. Treatment approaches focus on improving patients' self-concept and self control through medical interventions, nutritional rehabilitation, and individual/group therapy (Gilbert, 2005). Consistency and continuity of care is of utmost importance for this population of patients, therefore nurse led out-patient groups, know as "transition groups", were implemented at the Regional Centre for the Treatment of Eating Disorders at the Ottawa Hospital to address this need. The purpose of these groups is to provide ongoing support, education, and weekly monitoring of the health status of patients discharged from intensive in or day treatment programs at the clinic. The need for this component of the program comes out of a widening of the program's catchment area, resulting in an increased number of referrals to the clinic, resulting in shorter intensive treatment lengths of stays. Watson's "Theory of Caring" was utilized as a framework in the development of the format for these groups to promote a more passive role for the nurse allowing for patient empowerment and self-responsibility (Watson, 1988). The groups are 1.5 hours in length offered 1-2 times per week. Patients are weighed and symptoms (restricting, binging, and/or purging) are recorded. Patients discuss their progress in group format with a nurse facilitator present. A program evaluation was conducted to determine both the needs of the patients and their treatment outcomes. The program evaluation consisted of; focus groups containing current and former patients of the clinic, weight and symptom measurements, as well as both quantitative and qualitative analysis of data obtained from the Client Satisfaction Questionnaire, CSQ-8 (Attkisson & Zwick, 1982), and the Regional Centre for the Treatment of Eating Disorders Transition Group Service Evaluation. Results indicated that of the 26 patients involved in the program evaluation, 20 remained in a healthy body mass index (BMI) range (between 18.5 - 25) at the end of six months in a Transition Group. Of the six patients who fell below the healthy BMI range, only one began binge/purging, the other five restricted their food intake. Focus group and service evaluation results identified a desire by patients to have groups focus on body image, assertiveness, and self esteem. Themes that emerged from the anecdotal reports in the service evaluation questionnaire were; the value of support, being in a non-judgmental supportive environment, and receiving honest feedback from staff and co-patients. Based on the findings of this program evaluation, nurses working in this field (and related mental health areas) could utilize the format, content, and treatment approach of this group to deliver post-treatment services to patients. Future research might explore the long term outcomes of these patients.

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PHYSICAL ACTIVITY ADHERENCE AND PATTERNS OF ADULTS WITH SCHIZOPHRENIA

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Purpose: The purpose of this study is to explore pedometer-determined physical activity adherence and patterns of physical activity in adults with schizophrenia in community settings.

Background: Individuals with schizophrenia experience medical comorbidities, including obesity, in addition to psychiatric problems. The consequences of obesity include medication non-adherence, reduced quality of life, and greater morbidity and mortality. Established evidence of the role of Physical Activity (PA) as an important contributor to improved mental and physical health in various populations indicates that regular PA is a legitimate adjunctive intervention that leads to self-management of the long-term care for adults with schizophrenia. However, there is significantly less research available to support PA and its associated benefits in adults with schizophrenia.

Methods: A prospective and observational design was used to explore the pedometer-determined physical activity frequencies and patterns. Adults between the ages of 18 and 60 years were recruited from a local outpatient clinic where patients with schizophrenia are managed. Pedometers measured PA over 2 weeks. Subjects learned how to wear and properly use the pedometer and to walk briskly for 30 minutes each day. Descriptive statistics were used to describe PA data. Average hours for walking were calculated over the 2-week study. Mean step counts were recorded on each day of the 14-day monitoring period and were also used to enable determination of any activity patterns.

Results: Fourteen subjects were recruited and two of them were dropped. Most subjects identified themselves as African American (n=12, 83.3%) and had an average age of 43.25 (SD=10.58) years with 13.5 (SD=1.78) years of education. Most were unemployed (n=10, 83.3%). Subjects walked for an average of 52.64(SD=35) minutes each day for the first week, and for 56.07 (SD=26.47) minutes each day for the second week. Five subjects (42%) walked at least 30 minutes each day on more than 5 days a week for the first week, and six subjects (50%) did so for the second week. In terms of patterns of physical activity, subjects exhibited the repeated engagement in walking approximately 3 days before returning to the usual sedentary habit.

Implications: Clinicians need to prescribe physical activity for individuals with schizophrenia. In particular, depending on their behavioral patterns, clinicians need to approach individuals with schizophrenia with different strategies to have them engage in and maintain their behavioral patterns. Pedometers are effective self-monitoring tools and can be effective for patients with schizophrenia to improve their PA.

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INFLUENCE OF GABRA6 POLYMORPHISM ON THE STRESS RESPONSE IN VETERANS WITH PTSD

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Purpose: The purpose of this study was to test the feasibility of examining the relationship between GABRA6 variants (polymorphisms) and stress system dysregulation as measured by salivary cortisol among veterans diagnosed with post-traumatic-stress-disorder (PTSD).
Background: PTSD is a complex disorder severely impairing relationships, work, and self-care and reducing quality of life for affected individuals. The wars in Afghanistan and Iraq are the most sustained combat operations since Vietnam increasing the risk for PTSD among returning soldiers. Although it is not known how many of the these soldiers will develop PTSD, in the period between 2002 and 2006, over 25,000 individuals constituting 15% of all returning veterans sought treatment for PTSD from Veteran's Affairs. In 2008, a study of 1,938 soldiers previously deployed in Iraq or Afghanistan found that 13.8% had PTSD**.** Although the pathophysiology of PTSD is not well understood, evidence suggests a link between stress system dysregulation and aberrant memory consolidation that may contribute to the re-experiencing of stressful events, a defining criterion of PTSD. Stress system dysregulation is characterized by abnormal cortisol feedback. However, unexpected variations in cortisol cycles have been found to occur, even in healthy individuals. In a study of 120 healthy individuals, 17% were found to have flattened diurnal cortisol cycles. The significance of flattened cycles is not well understood, however it may signal stress system dysregulation. Among women with breast cancer, flattened salivary cortisol cycles have been found to be a significant predictor of mortality. A common gene variant has been demonstrated to blunt the HPS axis theorized to be dysregulated in PTSD.
Methods: Twenty-eight veterans diagnosed with PTSD enrolled in a 3 week inpatient treatment program at a VA hospital located in southwest United States participated in the study. Salivary cortisol and salivary alpha-amylase were assessed by enzyme immunoassay using commercially prepared kits. The polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP) method was used for genotyping.
Results: Of the 28 subjects, 26 were genotyped. Four (15.4%) of the participants had the TT variant, 14 (53.8%) had the CT variant, and 8 (30.8%) demonstrated the CC variant. Raw cortisol scores will be log transformed to adjust for skewness and regressed against time. Chi Square will be used to examine relationships between genotype and cycle type.
Implications: Results from this study will provide necessary preliminary data for a larger study that may enhance understanding of the relationship between stress system dysregulation and PTSD. Furthermore, identification of genetic risk factors may lead to preventive strategies for this debilitating disorder.

SOMALI REFUGEES' PERCEPTIONS OF MENTAL ILLNESS

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Purpose: Somali refugees' perceptions of mental illness are described in order to provide greater understanding of cultural and social paradigms that influence acceptance and accessibility of current health services. Between the years of 1996 and 2004 an estimated 325,000 Somali refugees and asylum seekers entered the U.S. (US Committee for Refugees and Immigrants; 2005). In the state of Utah, 1,432 Somalis with refugee status have migrated from Africa for resettlement, between the years of 2000 and 2009 (Refugee Services Office, 2010). Language barriers, cultural differences and educational background have created barriers for culturally congruent care. This research aims to explore Somali refugee perceptions and experiences of mental illness to bridge this divide in rendering health services.

Methods: Semi-structured interviews were conducted with Somali men and women (n=15) and inductively coded for categories and themes related to mental health and illness. Qualitative descriptive design was used to draw upon meanings of mental illness as described by Somali refugees and includes ideas of reasons for mental illness, descriptions of behavior and links with a spiritual lifestyle embedded in Islam. This qualitative approach presents a basic description of mental illness from the interviewee's life-world, with explanations that are typically agreed on and validated by those analyzing the data (Sandelowski, 2000).

Results: Preliminary data provides a rich description of mental illness behaviors, reasons for illness, medical and religious, and traditional care activities to address illness, and links between trauma and mental illness.

Implications: Findings will provide guidance for health providers in understanding this refugee group's past experience with mental illness, its causes and traditions for providing care. This information will broaden the health provider's perspective of possibilities in providing culturally competent care.

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PHYSICAL ACTIVITY, MOTIVES FOR EXERCISE, AND STRESS IN SCHIZOPHRENIA

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Purpose: The purpose of this study is to explore physical activity and its associations with motives for exercise and stress in adults with schizophrenia.
Background: Weight gain in patients with schizophrenia is a major side effect of most antipsychotic medications. Weight gain not only increases patients' risk for cardiovascular disease, it also triggers the discontinuation of antipsychotic medications. As a result, psychotic symptoms exacerbate and relapse of schizophrenia occur. Physical Activity (PA) has been shown to be an effective intervention in weight control and in improving general mental and physical health status in various populations. The studies about the PA for adults with schizophrenia, however, are very limited and more research is needed.
Methods: A total of 12 subjects with schizophrenia were drawn from a study of pedometer-based exercise adherence program for adults with schizophrenia. The original study was a prospective and observational study. Pedometers measured PA over the 2 weeks. Subjects evaluated motives for exercise by Motives for Physical Activity Measure-Revised (MPAM-R) and stress by Perceived Stress Scale (PSS) at baseline and 2 weeks. Descriptive statistics were used to describe the data. Spearman correlations were computed.
Results: Among the 12 subjects with schizophrenia, five were male (41.7%) and seven were female (58.3%). The mean age of the subjects was 43.25 (SD=10.58) years and 16.7% were Caucasian. Based on baseline data, 33.3% (n=4) of the sample were overweight and 66.7% (n=8) of the sample were obese. The average steps were 4731.03 (SD=3318.19) for the first week and 5002.58 (SD= 3041.03) for the second week. The highest motive for exercise was fitness (mean=6.03, SD= 1.10; mean= 5.72, SD= 1.03) in both baseline and two weeks respectively. No significant correlations were found between motives for exercise and PA at baseline and 2 weeks respectively ($p>0.05$). The mean stress score was 1.97 (SD=0.72) at baseline and 1.99 (SD=0.64) at two weeks. The relationships between the level of stress and PA number of steps were negatively associated at baseline and 2 weeks ($r=-0.02$, $p=0.96$; $r=-0.54$, $p=0.07$).
Implications: The subjects in this study were overweight or obese, engaged in PA, and were motive to get healthy. Although marginally significant, stress may be a reason that is preventing the patients from exercising. Further study should be conducted to investigate the factors that could hinder the patients with schizophrenia from exercising. By realizing the contributing factors, we could eliminate the barrier and promote exercise in this population.

Funding: Sigma Theta Tau, International.

RELATIONSHIP AMID SEASONAL AFFECTIVE DISORDER SYMPTOMS AND VITAMIN D LEVELS

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Purpose: To determine if there is a relationship between level of Seasonal Affective Disorder (SAD) symptoms and level of serum vitamin D.

Rationale: SAD is a frequent diagnosis among the northern populations (Booker & Hellekson, 1992; Rosen, Knudson, & Fancher, 2002). Individuals who met diagnostic criteria for SAD had deficient 25-hydroxyvitamin D and when these individuals were given a large dose of vitamin D supplement, serum D levels rose by 75% and SAD symptoms decreased (Gloth et al., 1999). Several theoretical etiologies point to a decrease in vitamin D stores during the winter. There is consistent evidence of a relationship between levels of serum vitamin D and levels of SAD.

Methods: This study used a cross-sectional correlational design, to determine the relationship between level of seasonal affective disorder (SAD) symptoms and level of serum vitamin D among Alaskan residents. Data was collected from a convenience sample (n=28) of attendees at a health fair and a private medical clinic in Anchorage, Alaska. Serum vitamin D [25(OH)D by immunoassay] was drawn and a demographic survey was administered along with the Seasonal Health Questionnaire (SHQ).

Results: A moderate inverse relationship was found (r=0.523, p=0.003), suggesting as serum vitamin D decreases, symptoms of SAD increase.

Implications: These findings support prior research suggesting that most individuals who meet diagnostic criteria for SAD have deficient 25-hydroxyvitamin D. Vitamin D supplementation should be considered as adjunct therapy for SAD.

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SYMPOSIUM: INTERPROFESSIONAL EDUCATION: CURRENT EXPERIENCE IN ARIZONA AND WASHINGTON

OVERVIEW: INTERPROFESSIONAL EDUCATION: CURRENT EXPERIENCE IN ARIZONA AND WASHINGTON

Cathleen L. Michaels

DEVELOPING INTERPROFESSIONAL SIMULATIONS: A RESEARCH PROJECT

Brenda K. Zierler, Erin L. Abu-Rish

A STUDENT'S PERSPECTIVE OF INTERPROFESSIONAL EDUCATION

Erin L. Abu-Rish

USING TEAM SCIENCE TO TRANSFORM INTERPROFESSIONAL PRIMARY CARE EDUCATION

Gerri Lamb, Bernadette Melnyk, Cathy Lalley, J.A. Eve Krahe

QUALITY AND SAFETY: INTERPROFESSIONAL EDUCATION FOR PRE-PROFESSIONAL STUDENTS

Cathleen L. Michaels

IP RURAL PRIMARY CARE POSTDOC WITH OUTCOMES & COMPARATIVE EFFECTIVENESS RESEARCH

Sally J. Reel, Ivo Abraham, Tamsen Bassford, Edward Armstrong, Myra Muramoto, Ted Rigney

INTERPROFESSIONAL EDUCATION: CURRENT EXPERIENCE IN ARIZONA AND WASHINGTON

Overview: Interprofessional Education: Current Experience in Arizona and Washington

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Purposes/Aims: To describe the progression of interprofessional education (IPE) toward best practices in Arizona and Washington.
Description of Theory or Concept: As defined by the IOM Crossing the Quality Chasm, quality health care is the "degree to which health services increase the probability of desired health outcomes and are consistent with current professional knowledge." IPE is linked to quality and safety by educating health care professional students together about health care, its delivery and the impact of collaboration on health outcomes, both pre-professional and post-professional students. Six domains for interprofessional (IP) competencies were identified by the Canadian Interprofessional Health Collaborative: 1) IP communication, 2) patient, client, family and community-centered care, 3) role clarification, 4) team functioning, 5) collaborative leadership, and 6) IP conflict resolution. Heretofore, IPE has developing programs, like didactic, simulation, collaborative learning and clinical practice, and addressing barriers, like conflicting academic schedules and misunderstanding of others' professional roles. Today, however, past experience enables development of best practices. Important to best practices is evidence-based faculty preparation, application to post-professional students, shorter-term outcomes evaluation monitoring compared with longer-term impact assessment, use of technology, and accumulating emerging team science and other scientific knowledge that undergirds IPE.
Process Used: Best practices in health care demonstrate the highest success in achieving desired health outcomes and in education, the highest success in learning outcomes. Best practices are disseminated through publications and presentations in conferences, like the Collaborating Across Borders conference with participants from the US and Canada. This presentation will describe the progression of IPE toward developing best practices in Arizona and Washington: 1) a new model of IPE focused on post-professional students as a team practicing together and conducting effectiveness research, 2) a new model that uses team science to transform preparation of nurses and students from other health disciplines to deliver primary care, 3) a new model for IPE events for large numbers of IP pre-professional students that provides the basis for an IP quality and safety curriculum and 4) a new model that demonstrates faculty preparation required for IP education in relationship to student perspectives.
Logic Linking Theory or Concept to Nursing Practice or Research Problem: Given their proximity to patients, nurses are essential contributors to IP collaboration, and therefore learning to collaborate as students, equally essential. Nursing students involved at the university-level include 1st and 2nd degree pre-professional students and post-professional students who are advanced practice DNP students, as well as DNP graduates.
Conclusion: IPE best practices are beginning to flourish. Developing models for best practices from Arizona and Washington have evolved from previous IPE endeavors, are strengthened by emerging evidence about quality and safety, team and other scientific knowledge, ongoing IPE and IP collaboration of faculty and students, dissemination conferences, and thus will be meaningful contributions to maximizing health care quality and safety.

INTERPROFESSIONAL EDUCATION: CURRENT EXPERIENCE IN ARIZONA AND WASHINGTON

Developing Interprofessional Simulations: A Research Project

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Purposes/Aims: The purpose of this project is to describe faculty development strategies for promoting and sustaining interprofessional education at an academic health sciences center.

Rationale/Background: The rationale is to develop faculty who can successfully integrate IPE into curricula and ensure that all health professional students are prepared to practice collaboratively to improve patient safety.

Undertaking/Best Practice/Approach/Methods/Process: The approaches to developing faculty include train-the-trainer modules focused on communication across teams and facilitation of IPE cases utilizing simulation and standardized patients.

Conclusions: The approaches have been successful and to build a larger cadre of IPE faculty at the local and national level, we will disseminate existing strategies to other health science schools and we will create an IPE Teaching Scholars Program for national dissemination.

Funding: The Josiah Macy Foundation and the Hearst Foundation.

INTERPROFESSIONAL EDUCATION: CURRENT EXPERIENCE IN ARIZONA AND WASHINGTON

A Student's Perspective of Interprofessional Education

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Purposes/Aims: The purpose of this project is to describe the experience of participating in a multi-faceted interprofessional education (IPE) project from the student perspective at an academic health center.

Rationale/Background: The rationale is that student perspectives and experiences of IPE are valuable to the development and evaluation of project success.

Undertaking/Best Practice/Approach/Methods/Process: Student participation in this project has taken the form of participating in interprofessional pilot simulation activities in error disclosure and acute care scenarios as well as launching a new patient safety and quality improvement focused student group—IHI Open School—for students in all of the health professions schools on campus.

Conclusions: Student participation has added to the feasibility to this project. The combination of student participation in simulation pilots as well as the new student group has helped to build a parallel cadre of IPE students to partner with IPE faculty.

Funding: The Josiah Macy Foundation and the Hearst Foundation.

INTERPROFESSIONAL EDUCATION: CURRENT EXPERIENCE IN ARIZONA AND WASHINGTON

Using Team Science to Transform Interprofessional Primary Care Education

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Purpose: The purpose of this presentation is to deliver a compelling case for using teamwork science to transform preparation of nurses and students from other health disciplines to deliver primary care. Key points are drawn from a Macy Foundation funded project to design a new, interprofessional curriculum for primary care education for NPs, physicians, and pharmacists.

Rationale: Primary care is a central component of an improved healthcare system envisioned in national healthcare legislation. The Affordable Care Act incorporates powerful incentives for new primary care models that rely on effective coordination and collaboration among providers. While accreditation guidelines emphasize teamwork and collaborative education for all health disciplines, research and experience indicate that students are not adequately prepared for the rigors of teamwork. What passes today as teamwork education and practice is not sufficient to achieve the quality and cost goals envisioned in healthcare reform.

Project Description: The Interprofessional Primary Care Project is based on a new curriculum model that builds incrementally on teamwork science across graduate curricula for NPs, physicians, and pharmacists. Theories and research on effective teamwork guide the selection and evaluation of shared competencies across the curriculum and decisions about timing and placement of teamwork content and clinical experiences. In this curriculum, students go beyond traditional review of team roles to content and experience in achieving team cognitive and social processes reflected in current theories of effective team process and outcomes. Examples of embedding team science in education and practice are provided as well as new teamwork performance measures for students and faculty.

Outcomes: Development of this curriculum was undertaken with full involvement of deans and faculty from nursing, medicine, and pharmacy from two universities. A set of shared competencies has been developed and drafts of new integrated coursework. New performance measures for primary care teams are recommended.

Conclusions: Effective team performance is central to achieving quality and safety goals in primary care. A strong body of research links teamwork processes to patient outcomes. It is essential that we move beyond cursory and atheoretical approaches to preparing students for the complexity of teamwork. It also is essential that faculty understand and practice new pedagogies consistent with current science. Understanding and using teamwork science – the models, theories and evidence for effective coordination and collaboration – has the potential to transform primary care education and practice.

INTERPROFESSIONAL EDUCATION: CURRENT EXPERIENCE IN ARIZONA AND WASHINGTON

Quality and Safety: Interprofessional Education for Pre-Professional Students

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Purposes/Aims: The purpose is to present four interprofessional education (IPE) sessions, as best practice and as the basis for an interprofessional (IP) curriculum developed at the University of Arizona Health Science Center for pre-professional students from the Colleges of Medicine, Nursing, Pharmacy, Public Health with occasional participation by Colleges of Law and Communication and the Arizona State University Social Work Tucson satellite.
Description of Theory or Concept: Beginning in 2006, the University of Arizona IPE Core Planning Group with representatives from the Colleges of Medicine, Nursing, Pharmacy and Public Health, have been creating and testing IP learning activities. IPE was initially conceived as the goal, but replaced as the means to the goal of improving quality and safety. IPE has included: IP culture and communication, effective teamwork, patient-centered approaches, emergency preparedness and related legal and ethical issues and error reduction. Learning forums address the quality and safety of healthcare for individual health and public health situations. During the first year (2006-2007), student enrollment in IPE was 1,289, and, to date, enrollment has totaled approximately 5,500 student contact hours.
Process Used: The initial step for IPE was development of the IPE Core Planning Group whose purpose was to design and integrate IPE for students; promote an IP culture among faculty; and to inform administrative leaders of progress. Nursing, Medicine, Pharmacy, Public Health and Law were represented in the initial IPE Core Planning Group with members also serving as champions for IPE in their respective colleges. Current IPE for beginning pre-professional students that will be presented are: 1) professionalism for quality and safety and 2) quality and safe health care services for disabled patients for the beginning pre-professional students. Current IPE for more advanced pre-professional students are: 1) safe and effective emergency preparedness for pandemic flu, and 2) cardio-pulmonary resuscitation simulation for teamwork and closed-loop communication. Students complete an extensive online evaluation after each activity. Evaluation focuses on the content and learning experience, as well as students' perception and appreciation of the IP team and collaboration. Research is needed to demonstrate change in professional role attitude and behavior across the pre-professional programs. Overall, student evaluations have been positive, identifying the need for more facilitation of teamwork. IPE has not only been appreciated by students—IPE is also gratifying to the faculty involved. From 10 to more than 40 faculty, primarily from nursing, medicine, and pharmacy volunteer from 4 to 20 hours of their time to serve each academic year as small group facilitators, planners or speakers.
Logic Linking Theory or Concept to Nursing Practice or Research Problem: Both 1st and 2nd degree nursing students participate in IPE. Nursing and other pre-professional students are eager to understand their own professional role and contributions to health care, as well as other professional students. Through this interest, all health care students are oriented to the importance of teamwork and IP collaboration for quality and safe health care services that maximize health care outcomes for the patient, family and community.
Conclusion: We have overcome a major barrier for implementing IPE initiatives—previous lack of an IP culture and the value for IPE. With our six-year IPE history we envision adding to our foundation by moving to a mainstream curricula, capitalizing on using advanced technologies for virtual and distance learning available through Arizona Telehealth and hosting IP simulations, and exploring IP clinical practice options with the Arizona Area Health Education Centers.

INTERPROFESSIONAL EDUCATION: CURRENT EXPERIENCE IN ARIZONA AND WASHINGTON

IP Rural Primary Care Postdoc with Outcomes & Comparative Effectiveness Research

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The purpose of this project is to describe a new interprofessional (IP) rural primary care fellowship that combines elements of a traditional clinical practice residency with clinical outcomes that is supported by the Arizona Area Health Education Centers (AzAHEC) program. The significance of this project reflects the national (and growing) shortage of primary care providers particularly within rural communities coupled with national concerns about health system quality and the need to develop team-based care strategies. To develop best practice and future team-science at the point of patient care this IP rural primary care fellowship combines the experiential residency with clinical outcomes and (comparative) effectiveness research – CO(C)ER and will prepare graduates to function on teams to conduct both practice and "real world" research about the effectiveness of primary care interventions under conditions of patient, provider, setting, and health system heterogeneity. The COCER IP Fellows will be educated to 1) provide team-based primary care with emphasis on rural health care; 2) demonstrate theoretical and practical skill in COCER; 3) participate in the conceptualization of outcomes studies; 4) select appropriate study designs and methods to answer study questions; 5) participation in the development of analytic plans; and 5) interpret and translate findings for dissemination into practice. Fellows will represent nursing, medicine, pharmacy and public health. The faculty planning team began work in March 2010. The IP primary care training will occur beginning in 2011-2012. The Arizona AHEC program will provide support for rural community integration of the fellows through the regional AHEC centers, particularly the Southeast Area Health Education Center (SEAHEC) regional center in Nogales, Arizona.

ISSUES IN ADULT HEALTH

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Jené M. Hurlbut, Mary M. Hoke

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THE RELATIONSHIP BETWEEN SPIRITUALITY AND HEALTH PROMOTING BEHAVIORS

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There is little research related to spiritual well-being and health promoting behaviors among sheltered homeless women. This potentially has implications on nursing practice and education. The purpose of this study was to explicate the relationships between spirituality and health promoting behaviors among sheltered homeless women.

A descriptive, correlational design was used to examine the relationship between spiritual well-being, religious well-being, existential well-being, and health promoting behaviors among sheltered homeless women living in an urban city in the western United States. A non-random convenience sample (N = 90) was obtained. Variables were measured using the Spiritual Well-Being Scale (SWB), the Health Promotion Lifestyle Profile II (HPLP II), and a researcher developed demographics form.

The results indicated a positive correlation between spirituality and health promoting behaviors among sheltered homeless women. This supports the call for nurses to routinely assess spirituality and health promoting behaviors of their clients including those who are homeless. By doing so, this will facilitate a holistic approach to health care among various vulnerable populations.

MSI & IHC TESTING OF COLON TUMORS AMONG US CANCER PROGRAMS AND FOLLOW UP OF ABNORMAL RESULTS

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Purpose/Aims: The purpose of this survey-based study is to determine the current MSI and IHC testing practices and subsequent follow-up of abnormal results in U.S. cancer programs. The study aims include to: 1) explore the practice of MSI/IHC testing based on type of cancer program and the number of CRC cases accessioned during 2009 and 2) identifying the process and factors associated with follow-up of abnormal results.

Background: Abnormal results of microsatellite instability (MSI) or immunohistochemistry (IHC) testing of colorectal (CRC) tumors may suggest the presence of Lynch Syndrome (LS), a hereditary cause of CRC. Individuals with LS are at high risk for second primary cancers. Abnormal results of MSI and IHC testing influence care decisions. MSI is also a prognostic marker. Routine MSI and IHC testing of CRC tumors is an emerging practice in the U.S. To date, no published studies were found that describe the practice of reflex testing for MSI and IHC abnormalities on colorectal tumors in the U.S.

Methods and Materials: A study packet (i.e., letter of invitation, survey, and postage-paid return envelope) was mailed to the director of pathology and tumor registry directors at the 40 NCI-designated Comprehensive Cancer Centers, 567 ACS-accredited Community Hospital Comprehensive Cancer Programs, and 521 ACS-accredited Community Hospital Cancer Programs in the U.S. Collaboration between the pathologists and tumor registrar is being encouraged and only one set of survey responses per cancer program will be retained. The survey was developed based on input from an internal and external panel of experts and revised following pilot testing in 22 centers (99.5% return rate). The survey includes 12 check-box items of which 6 also have an option to write in comments. Recruitment will follow Dillman's method (i.e. pre-notice letter; study packet, thank you/reminder postcard; repeating up to 2 cycles). Center characteristics and MSI/IHC practices will be summarized using descriptive statistics. Chi square tests will explore associations between type of cancer program and MSI/IHC testing practices. Analysis of variance or planned comparisons will examine differences between program's CRC cases in 2009 and the type of cancer program. Content analysis will be used to analyze narrative responses to survey questions.

Results: Results will be presented and outcomes will be described.

Implications: The findings of this study may influence (and ultimately enhance) uptake and translation of MSI and IHC testing practices for newly diagnosed CRC tumors, which may lead to improved cancer screening and prevention practices.

VENTILATOR-ASSOCIATED PNEUMONIA PREVENTION: PROVIDER GUIDELINE ADHERENCE

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Purpose: To understand barriers and facilitators of guideline adherence regarding established non-pharmacologic VAP prevention interventions (oral hygiene, spontaneous breathing trial, semi-recumbent patient positioning, and hand hygiene). Specific aims are: (A) Explore the differences in attitudes among different VAP prevention practices, (B) Explore the differences among professions on knowledge, attitudes, and behavior toward VAP prevention practices, and (C) Explore the relationship among guideline user, guideline quality, contextual factors, and guideline adherence.

Background: There are numerous evidence-based guidelines to prevent ventilator-associated pneumonia (VAP). However, real life implementation of these guidelines is limited. Previously, guideline user factors (knowledge and attitudes) have been the primary focus to understand suboptimal guideline utilization. There is limited knowledge about how contextual factors such as communication methods, unit, and hospital characteristics or guideline qualities affect guideline adherence. Further, multi-disciplinary perspectives on guideline adherence are rarely studied.

Methods: This cross-sectional study surveyed medical-surgical, neurological, and cardiac critical care nurses (RNs) at a single hospital. A survey was created based on a conceptual model adapted from Theory of Diffusion of Innovation and Theory of Complex Adaptive Systems. The survey measured self reported adherence rates for VAP prevention guidelines. The survey also measured guideline user, quality, and contextual factors associated with adherence to VAP prevention practices (possible score 1-4. "4" indicates positive attitude). Additionally, respiratory therapists (RTs) and critical care fellows (MDs) were surveyed for their perspectives as well.

Results: Data were collected from 122 RNs (34% response rate). In general, RNs have positive attitudes and behavior toward various VAP prevention practices (mean scores for oral hygiene, spontaneous breathing trials, semi-recumbent patient positioning, and hand hygiene: 3.1-3.9). However, "prioritization" and "actual practice" of these interventions were consistently lower. Oral hygiene scored lowest at 2.81 for the level of prioritization. Total of 26 RTs and 5 MDs participated in the study. Interestingly, VAP prevention knowledge, attitudes, and behavior were mostly similar across the profession even for oral hygiene. Some items with significant differences were prioritization of semi-recumbent patient positioning, how a guideline could conflict with other guidelines, and self reported adherence of hand hygiene ($p<0.05$). Results from Spearman's correlation indicated that "user attitude" and "guideline qualities" were consistently and significantly correlated across VAP prevention interventions ($p<0.05$). Correlations among "user attitude," "clinical situation," "guideline adherence" were significant for some VAP interventions but not for others.

Implications: This study described clinicians' attitudes toward VAP prevention guidelines, characteristics of the guidelines, and contextual factors that facilitate optimal VAP prevention practices. Importantly, the current study showcased how clinical guidelines can be improved to enhance users' attitudes toward VAP prevention. This study builds the basis for a larger multi-hospital study that aims to indentify how hospital characteristics affect adherence to VAP prevention guidelines.

Funding: This study was supported by: Agency for Healthcare Research and Quality Pre-Doctoral Fellowship (F31HS018879) and 2010 Sigma Theta Tau Alpha Eta Chapter Research Award.

TESTING POSITIVE FOR HEP B: UNDERSTANDING SOCIAL SUPPORT

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Purpose/Aims: The study examines the educational and social support needs of Asian Americans who are chronically infected with Hepatitis B in three domains: patient quality of life, knowledge of hepatitis B and patient-doctor communication.
Background: Asian Americans represent a population disproportionately affected by hepatitis B (HBV) infection responsible for 80% of all liver cancers. Infection in the general U.S. population is less than one percent, however, it is estimated that 1 in 10 people in the Asian American community have an undiagnosed infection. The incidence of hepatitis B infection and liver cancer between the Asian American and the general population is one of the greatest health disparities in the United States. Asian Americans have the highest risk of hepatitis B of any ethnic group and bear a disproportionate burden of liver cancer and undetected HBV infection. Hepatitis B is known as the "silent killer" because it has few symptoms. The San Francisco Bay Area has one of the highest populations of Asian Americans in the nation. The high hepatitis B incidence rate in the Asian American community has prompted community health promotion campaigns throughout the nation. These campaigns have been active in disseminating information to the Asian American community and promoting screening, testing and vaccination. Unfortunately, research on the needs of those diagnosed with hepatitis B is scarce, with even less information of resources and support for those within the Asian American community.
Methods: A sample of 150 Asian Americans infected with Hepatitis B will answer questionnaires through surveymonkey. The survey utilizes 4 questionnaires: a demographic survey, HBV Knowledge Survey (16-items), the Hepatitis B Quality of Life Survey v.1 (HBQOLv.1 - 31-items) and a revised Interpersonal Processes of Care (IPC-I) Questionnaire. For each survey, descriptive statistics will be provided for each Asian American subgroup (ethnicity) as well as an overall average for Asian Americans in the San Francisco Bay Area. A chi-square analysis will be conducted with the Asian American subgroups most heavily represented in the sample to determine if there are differences in hepatitis B knowledge among subgroups. An independent t-test will investigate differences between high and low knowledge of Hepatitis b and quality of life. Lastly, a one-way analysis of variance (ANOVA) will examine significant differences between Asian American subgroups on their HBQOL.
Results: Both descriptive and exploratory results will be presented.
Implications: The goal of the following study is to gain greater insight into the needs of Asian Americans infected with hepatitis B. This population faces the highest risk of having this non-symptomatic disease, and is therefore imperative that those infected get the support they require. As a pilot study, and one of the few of its kind, this data will be utilized to conduct future needs support research in order to gain insight into the needs of those infected and how to best develop effective support programs.

MUSICIANS WITH TYPE 1 DIABETES: A QUALITATIVE ANALYSIS OF PUBLIC INTERVIEWS

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Purposes/Aims: The purpose of this study is to conceptualize the information musicians share publicly about their type 1 diabetes.

Background: Celebrities are well-known public icons. Being in the public eye allows musicians to influence public perception about health and illness, whether true or factitious, through their literal and figurative microphone. There is little research concerning the message popular music performers with medical conditions, such as type 1 diabetes, share about their disease with the lay public.

Methods: In this qualitative descriptive study six musicians with DM1 who had publicly discussed their diabetes were included. A single interview or commentary, accessible via the internet, was selected by purposeful sampling for each music icons.

Results: All sampled individuals are male with two-thirds being Caucasian and the minority being African American. There is equal representation of the pop, rock, and rap music genres. Three of six musicians were diagnosed with DM1 while on tour with their band. Seven categories emerged from the data: just before the diagnosis; being diagnosed with diabetes; the wake-up call; treatment regimens; diabetes on the road; clearing up rumors; and think positive, think acceptance.

Implications: Musicians with DM1 have the opportunity to publicly share information about how they live with diabetes while still living out their dreams of performing music. Icon status provides these musicians the ability to role model healthy behaviors for their fans who share the same chronic condition. The impact these musicians, and the message they share related to living with diabetes, have on adolescent and young adult fans with type 1 diabetes, should be explored.

FUNCTION, HOPELESSNESS, AND QUALITY OF LIFE AMONG ALS PATIENTS IN KOREA

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Purpose: The purpose of this paper is to describe characteristics of ALS patients in South Korea in relation to their functional status, quality of life, and feelings of hopelessness.

Background: Amyotrophic Lateral Sclerosis (ALS) is a progressive and degenerative neuromuscular disease, which results in muscle weakness and atrophy throughout the body. The devastating nature of the disease can decrease psychological and physical health greatly in patients with ALS. Little is known about the functional status, sense of hopelessness, and quality of life (QOL) of patients with ALS in Korea.

Method: The original project used a qualitative ethnographic approach with a mixed method to explore illness experiences and describe psychological responses of ALS patients in South Korea. Purposive convenience sample of 15 ALS patients were recruited via Korean Amyotrophic Lateral Sclerosis Association (KALSA) website. Diverse clinical stages of patients were involved. The demographic questionnaire, Korean version of Amyotrophic Lateral Sclerosis Specific Quality of Life Scale (ALSSQOL), Korean version of Amyotrophic Lateral Sclerosis Functional Rating Scale –Revised (K-ALSFRS-R), and the Beck Hopelessness Scale (BHS) were used to measure patient characteristics, QOL, and hopelessness.

Results: The 15 participants had a mean age of 49.2 years (range 38-64). They were 86.7% male (13/15); 93.3% were married (14/15), 53.3% were high school graduates (8/15), and 93.3% were unemployed (14/15). The mean time since ALS diagnosis was 57.73 months with a range of length since diagnosis of 15 months to 130 months. Six participants used home ventilators or BiPAP to support respiration, and one patient reported a family history of ALS. 93.3% (14/15) had experiences with complementary alternative medicine such as acupuncture, moxibustion, herbal medicine etc. The mean score of ALSFRS was 21.33 (SD = 11.968) and 5.70 (SD = 1.23) for ALSSQOL. The mean score of hopelessness was 11.87 (SD=4.719) indicating that as a group of the ALS patients in this study experienced moderate level of hopelessness.

Implications: This study describes general and disease specific characteristics of ALS patients in South Korea. Since the cause is not known and curative treatment is yet unavailable, improving QOL and lessen hopelessness should be the main aims to support these patients. The findings add to the body of knowledge on patients with ALS in Korea and provide rationale for designing therapeutic nursing intervention programs to lessen hopelessness and improve QOL with ALS patients in Korea.

IMPEDENCE CARDIOGRAPHY IN DETERMINING FUNCTIONING EPIDURAL CATHETER

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Background: Endotracheal Cardiac Output Monitor (ECOM) is a non-invasive monitor that has the potential to measure changes in stroke volume, cardiac output and peripheral vascular resistance associated with surgical or anesthetic interventions. Changes in hemodynamics: (systemic vascular resistance, cardiac output, cardiac index, blood pressure), induced by starting epidural anesthesia at the end of abdominal surgery may predict adequate dermatomal blockade and predict effective epidural pain control during the first 24 hours of the postoperative period.
Methods: A study population of 20 patients undergoing intra-abdominal surgery who would otherwise be offered an epidural catheter for post operative pain relief, and would have an arterial line placed for intra-operative monitoring where enrolled. After pre-operative placement of an epidural catheter and commencement of general anesthesia, hemodynamics (cardiac output, cardiac index, systemic vascular resistance, stroke volume, systolic, diastolic and mean blood pressures) where monitored and recorded in 15 minute intervals using the ECOM monitor. At the commencement of abdominal closure the epidural catheters where bolused with 5cc of 0.25% bupivicaine in ten minute intervals for a total of 10cc total local anesthetic volume. The same hemodynamic parameters where then recorded at five minute intervals until the conclusion of surgery. In the post anesthesia care unit, dermatomal blockade was assessed using temperature discrimination at 10 and 20 minutes after arrival. Mean PACU VAS pain scores and any intravenous pain medication administration was also recorded. Patients were then followed 24 hours post-operation, patient satisfaction on 0-10 scale with 10 being very satisfied, interventions, and mean pain scores on a VAS scale where attained. Results of hemodynamic changes where then compared to above parameters which would predict a successful epidural blockade for post operative pain relief.
Results: When taken as a total population significant reductions in systemic vascular resistance 906.6 +/-178.7 vs 737.9 +/-143.4 (p-0.002), systolic blood pressure (mm/Hg) 107.1 +/- 7.1 vs 98.9 +/- 11.5 (p 0.01), diastolic blood pressure (mm/Hg) 56.7 +/- 6.0 vs 49.7 +/- 6.7 (p 0.001) and mean blood pressures (mm/Hg) 73.5 +/-5.66 vs 66.1 +/- 7.74 (p 0.001) were seen post bolusing of epidurals. Cardiac output, stroke volume (ml/beat), and heart rate (beats/min all increased post bolus although not significantly. Two patient populations were then formed based on significant change in systemic vascular resistance. Level of dermatomes blocked 10.3 +/-2.05 vs 5.2 +/-5.2 (p0.002), and average 24 hour VAS pain scores 2.17+/- 1.45 vs 3.77+/- 1.66 (p-0.04) where significantly different between two groups based on students t-test. Average post-anesthesia care unit pain scores and patient satisfaction where not statistically different between groups.
Conclusions: The ECOM monitor was able to show predicted changes in hemodynamics post bolusing of an epidural. The ability to determine a significant change in systemic vascular resistance may predict the onset of at least a ten level dermatomal blockade in the post anesthesia care unit and this may also predict better pain control in the first 24 hours post operatively.

PERIOPERATIVE OUTCOME ANALYSIS PROJECT

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Significance/Background: Significant changes in perioperative care during the last decade challenge the clinical provider to be more proficient in the areas of post-operative nausea and vomiting, hypothermia, surgical infection, sleep apnea consequences and beta blocker maintenance. It is generally accepted that PONV after balanced anesthesia will be between 20% and 30. The risk of surgical site infection is approximately 1-3%, while reported incidence of hypothermia in patients undergoing surgery is 10-15%. Obstructive sleep apnea with a prevalence of 10% in women and 25% in men is the most prevalent breathing disturbance with an incidence of 4-10%; and, when combined with inadequate beta blockade, increases the incidence of post-operative myocardial infarction. Over the last five years, several organizations have established practice guidelines that incorporate current practice guidelines to improve institutional measureable outcomes for PONV, sleep apnea, antibiotic use, beta blocker use, and intraoperative temperature monitoring.
Theoretical/Conceptual Framework: To expedite this change process, the Iowa Model of Research-Based Practice was selected to promote quality and to address the above questions.
Design and Methods: Pre and post quasi-experimental time design series project to include three phases: Phase One: Pre-data collection: retrospective review of anesthesia patient charts to collect: ASA classification, PONV Groups 1-5 stratified to each patient, number of interventions per group, antiemetics used, number of PACU emetic events, length of each case, identification of anesthesia type, temperature device, first and last operating room temperatures, first PACU temperature, antibiotic use, and beta blocker history / use. Phase One data will be used to support five intervention projects. Phase Two: Anesthesia preoperative clinic will identify each patient's PONV risk / treatment profile and place it on the anesthesia pre-operative assessment form. Sleep apnea risks, antibiotic use and betablocker documentation will be reviewed with all anesthesia providers. Temperature monitoring will be added to presurgical time out protocols. Phase Three: Post-data collection will occur quarterly in a time design fashion to include data sets on PONV outcomes, sleep apnea outcomes, antibiotic and beta blocker use, and temperature outcomes. The pharmacy will provide a quarterly EXCEL spreadsheet of all antiemetic and temperature medication use. Cost analysis: all pre and post data will be analyzed for use and cost savings.
Subjects/Statistical Plan: Six-hundred fourteen charts were reviewed from three perioperative areas looking at twenty variables. One-hundred twenty charts will be reviewed each quarter from three perioperative sites. Pre and post means will be evaluated using a student t-test.
Results: Six-hundred fourteen pre-intervention charts were reviewed for twenty variables. PONV was identified in 32.69% of patients. Anesthesia providers utilized PONV guidelines 26.86% of the time and undertreated 55.12% of the time. Sleep apnea was identified in 11.88% of population, antibiotics were correctly administered 98.9% of the time, and beta blockers were documented correctly 91.7% of the time. Phase Two and Phase Three data are pending.
Conclusions and Implications: This evidence-based outcomes project will focus on improving five perioperative clinical outcomes that impact patient care. Over time, this project will decrease waste, improve practitioner effectiveness, and show a cost-benefit value for the organization.

HEART FAILURE MANAGEMENT IN THE OBSERVATION UNIT

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Background: Heart Failure (HF) is the number one cardiovascular disease process in the US for those 65 years and older. This age group is expected to double over the next 30 years and because of this, HF will increase in both incidence and prevalence. HF costs exceed any other disease and has a serious impact on our health care system. The Emergency Department is an area where three out of every four HF patients are admitted to the hospital (Orledge & Radford, 1999). Patient treatment is often delayed until the patients are transferred to their designated area. Research has shown that this not only leads to a prolonged length of stay (LOS), but also contributes to less than optimal outcomes (Peacock, 2004). Twenty percent of HF patients return to the hospital within 30 days and 50% within 6 months.

Aim/Purpose: The purpose of this project is to address the problem of the large burden of HF by implementing an evidenced based process for HF patients evaluated in the ED. Research reveals that an early diagnosis and treatment of HF in the ED permits a rapid discharge and minimizes the need for rehospitalization within 30 days (Peacock, 2006). Additionally, research reveals that this is best accomplished in a short stay unit called the observation unit (OU) where aggressive treatment protocols assure early diagnosis, effective treatment, and discharge to home within 24 hours. The author's objective was to evaluate outcomes after implementation of an ED OU treatment protocol for HF exacerbation.

Design and Methods: This is a quasi-experimental pre/post-test design of the effect of an aggressive treatment protocol for ED OU HF patients. Baseline HF data on LOS, readmission rates at 30 days, and rehospitalization rates at 31-days to six months, were collected for 12 months prior to implementing the treatment protocol. A HF educational program inclusive of pathophysiology, epidemiology, and the treatment protocol was taught to telemetry nurses on a newly designated HF unit, called the Observation Specialty HF Unit (OSHFU). The HF protocol included cardiology consultation, diagnostic and therapeutic algorithms close monitoring, patient education, and discharge planning with pre-arranged cardiology follow up in 48 hours post discharge.

Results: The preceding 12 months, 555 HF patients were admitted to in patient beds from the ED for an average length of stay (LOS) of 5.3 days. The 30-day readmission rate is 20% and the rehospitalization rates at 31 days to six months is 50% (S. Small, personal communications, February 1 2010). On October 4, 2010, the OSHFU opened and data will be collected as previously described.

Conclusions and Implications: The OSHFU decreases LOS, as well as 30 -60 day reshospitalizations in mild to moderate degree risk HF patients.

INTERDISCIPLINARY ONCOLOGY REHABILITATION: A PROGRAM EVALUATION PROJECT

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Purpose: The purpose of this project is to determine the effectiveness of a unique interdisciplinary, group-focused, oncology rehabilitation program.
Rationale: Cancer survivors must deal with a multitude of difficulties during and after treatment. Exercise has been shown to decrease fatigue (Kirshbaum, 2006) and increase quality of life (QOL) (Chen et al., 2009) in cancer survivors. This project will evaluate the effect of a unique approach to oncology rehabilitation. Through a secondary analysis of five years of data, key health-related quality of life (HRQOL) factors will be described, summarized and compared to the literature. Measuring key HRQOL factors with a standardized tool will provide evidence on program effectiveness in an outpatient oncology setting.
Methods: This program evaluation project has used a retrospective, pretest-posttest design. Data were collected from a retrospective record review of five years of data for approximately 200 program participants. The RAND, 36-Item Short Form Health Survey (SF-36) (RAND 2009) was used. It is a self-report questionnaire measuring HRQOL. It focuses on physical and mental components of health. The eight subscales of health measured were physical functioning, role functioning/physical, role functioning/emotional, energy/fatigue, emotional well-being, social functioning, pain, and general health. The SF-36 has shown satisfactory internal consistency (alpha 0.76-0.90) and construct validity in studies of HRQOL (Bell & Kahn, 1996).
Data Analyses: Descriptive statistics will be used to summarize the demographic characteristics of the sample, as well as the SF-36 scores. Overall scores and subscale scores will be analyzed using a paired sample t-test.
Findings and Recommendations: Study findings will determine program effectiveness, as well as add to the current state of evidence surrounding exercise rehabilitation for survivors of cancer. Recommendations for further program development in the unique area of oncology rehabilitation will result.

ISSUES IN THE CARE OF INFANTS

FEEDING BUDDIES: A STRATEGY TO PROVIDE SAFE INFANT-FEEDING FOR HIV-POSITIVE MOTHERS

Jennifer J. Andreson, Barbara Hepfer, Kiersten Israel-Ballard

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FEEDING BUDDIES AS A STRATEGY FOR SAFE INFANT FEEDING

Barbara Hepfer, Jennifer Andresen

OPIOID EFFECT ON PREMATURE INFANT BRAIN FUNCTION: A PRELIMINARY ANALYSIS

Lauren Thorngate, Shuyuann Wang Foreman, Karen A. Thomas, Robert Burr

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USING THE EVIDENCE TO DEVELOP A NOISE MITIGATION PROGRAM FOR THE NEONATAL INTENSIVE CARE UNIT

Susan M. Bowles, Susan Instone

PARENTS' AND PROVIDERS' PERSPECTIVES OF THE FEEDING PROBLEMS OF NICU AND PICU GRADUATES

Kristin F. Lutz

A RANDOMIZED CONTROLLED TRIAL OF NICU MUSIC: IMPACT ON PRETERM INFANT REST AND GROWTH

Isabell B. Purdy, Priscilla Kehoe, Marianne S. Anderson, Mary Alice Melwak, Whitney Brown, Meena Garg

FEEDING BUDDIES: A STRATEGY TO PROVIDE SAFE INFANT-FEEDING FOR HIV-POSITIVE MOTHERS

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Purpose: The goal of the PATH (Program for Appropriate Technology in Health) research team is to use a program already in place per South African policy recommendation to support HIV positive mothers in following safe feeding practices. This study seeks to examine the experiences of mothers and their 'buddies' to ascertain the potential for using this support system as a strategy for promoting safe feeding strategies for HIV positive mothers.
Background and Significance: Approximately 300,000 infants contract HIV through prolonged breastfeeding yearly (UNAIDS, 2005). In areas where resources are limited, breastfeeding for extended periods of time is common practice. Research has shown that mixed feedings, that is combining breastfeeding with formula or solid foods, are associated with higher rates of HIV infection compared with breastfeeding exclusively (Iliff et al., 2005). Unfortunately, pressure from the community to practice mixed-feeding and shame regarding HIV status discourage mothers from breastfeeding exclusively. It has been demonstrated that support based in the home increases the rates of exclusive breastfeeding (Coutsoudis, 2005). South African Prevention of Maternal-to-Child Transmission (PMTCT) policy recommends that HIV positive mothers be counseled to disclose their HIV status to a trusted individual who could provide them support and accompany them to clinic visits. It is hypothesized that counseling these 'buddies' as well as the mothers regarding safe feeding may provide support for HIV positive mothers back in their homes. The goal of this research is not to develop a new model, but to evaluate one that is already recommended by South African PMTCT policy. The PATH research team is collecting interview data from HIV mothers and their "buddies". The goal of this study is to conduct an analysis of interview data collected by PATH researchers to evaluate the experiences of HIV positive mothers and their support "buddies" and to make recommendations for future support strategies.
Methods: This project is a primary analysis of data being obtained by PATH researchers with HIV positive women in South Africa. Survey data obtained from questionnaires will be analyzed using descriptive statistics using SPSS statistical software. Open-ended questions asked of women will be analyzed using steps of conventional content analysis outlined by Hsieh and Shannon (2005). These steps include multiple readings to extract key words and impressions, labeling key impressions and sorting them into content-related categories, organizing categories into meaningful clusters, and finally naming categories and assigning relationships to categories.
Sample: A convenience sample of 20 mothers and their buddies who met inclusion criteria have been recruited from the Butterworth Gateway Clinic.
Results: Data collection and analysis are in process.
Implications: No studies have been done to ascertain the use of the "Buddy" to support safe infant feeding practices. This study will provide new knowledge to make recommendations regarding future support strategies for this vulnerable population of women.

FEEDING BUDDIES AS A STRATEGY FOR SAFE INFANT FEEDING

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Purpose: To investigate the acceptability of a "buddy system" in which pregnant HIV positive women would designate a partner or "buddy" to whom they disclose their HIV status. The role of the buddy would be to support the new mother in sustaining her chosen method of infant feeding: either exclusive breastfeeding for the first six months or exclusive formula feeding.

Background: The stigma of HIV/AIDS is well documented, as is the impact of this stigma on efforts worldwide to prevent transmission of the virus from mother to child. Of the 500,000 new cases of HIV infection in children each year, 250,000 to 300,000 of them result from transmission through breast milk. Despite governmental efforts to educate women about the importance of exclusive breastfeeding or exclusive formula feeding as strategies to minimize the risk of mother to child transmission (MTCT), mixed feeding remains common in Africa where it is the cultural norm. Women who have not disclosed their HIV status are under tremendous pressure to combine breast and bottle feeding and the majority of them do, thus increasing the risk of transmission of the disease to their infants as much as five-fold.

Disclosure of her status and the presence of a supportive person in the life of an HIV positive mother have been shown to increase compliance with safe infant feeding recommendations. The buddy concept is not new and is part of standard PMTCT policy in South Africa; however, it has not been routinely taught or encouraged in the past. PATH, an NGO working with the government of South Africa, is proposing that the buddy system be taught and encouraged in the antenatal period.

Methods: In 2009, PATH conducted a series of 8 focus groups to evaluate the acceptability of the "buddy system" as a way for HIV positive women to resist the stigma of HIV/AIDS and thereby increase their ability to resist the cultural pressure to mix feed their babies. The focus group discussions were Phase I of a two phase study conducted to determine the acceptability and efficacy of this concept. In the summer of 2010, a team of two graduate nursing students, advised by a professor skilled in qualitative methods, conducted a qualitative analysis of the focus group data, using conventional content analysis to extract themes and subthemes.

Results: The focus group results echoed previous research findings that illuminate the difficulties faced by HIV positive women in sustaining safe infant feeding practices. The concepts of disclosure, support and the buddy system elicited positive responses from the majority of the participants and the buddy system itself was seen as an acceptable approach to be used in PMTCT efforts.

Implications: The results of this study can be used by nurses and counselors in South Africa and elsewhere to help HIV positive women resist the cultural pressures that put their infants at increased risk for MTCT.

OPIOID EFFECT ON PREMATURE INFANT BRAIN FUNCTION: A PRELIMINARY ANALYSIS

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Purpose: To describe patterns of brain waves in relation to opioid administration among premature infants 26-34 weeks postmenstrual age (PMA) undergoing ventilation for respiratory failure associated with prematurity. Evaluate changes in brain wave signal variability with quantification of signal cyclicity by extracting raw EEG signal and examining differences in power spectral density distribution before and after standard morphine administration.

Background: Premature birth is associated with physiologic stress and pain. Neonatal intensive care results in daily painful procedures and conditions. Repetitive exposure to pain affects physiologic and behavioral responses into adulthood. Clinical practice commonly includes the use of morphine for the treatment of pain and sedation during mechanical ventilation in many neonatal settings. However, we do not yet know the specific effects of opioids on the developing brain. Findings of a large randomized controlled trial implied the use of morphine in early born infants might be associated with poor neurologic outcomes.

Design and Methods: An intensive within-subject experimental design with ABAB withdrawal phasing is in progress. Up to fifteen infants will be studied under baseline (no morphine) and treatment (bolus dose) conditions with an FDA approved limited channel amplitude-integrated EEG device (CFM 6000, Natus Medical, San Carlos, CA). Continuous recording captures the brain function patterns within a natural experiment in the clinical setting of morphine dosing and administration under standard neonatal intensive care. Background EEG defined as continuous (baseline amplitude >5 μV), or discontinuous (baseline amplitude <5μV, intervals of low amplitude between high amplitude bursts) is obtained and compressed. Three hydrogel scalp electrodes are applied in P3-P4 placement (modified International 10/20) to form a single channel of continuous raw EEG sampled at 200 samples/second. After smoothing, power spectral density exploration of selected standardized epochs before and after morphine dosing may identify data structure and quantify signal cyclicity.

Results: Power spectral density distributions will be used to evaluate possible differences with opioid administration in at least one infant.

Implications: Limited channel EEG monitoring is the initial direct, noninvasive assessment of the effect of opioids on premature infant brain function. Demonstration of limited channel EEG patterns before and after morphine administration will establish a literature of neurophysiologic effect of morphine in premature infants. Descriptions of opioid effect may lead to interventional research evaluating dosing or alternative pharmacologic agents for treatment of pain in premature infants.

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USING THE EVIDENCE TO DEVELOP A NOISE MITIGATION PROGRAM FOR THE NEONATAL INTENSIVE CARE UNIT

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Rationale/Background: Sound is one of the most pervasive stimuli that occur in the Neonatal Intensive Care Unit (NICU). Safe sound levels are essential for the healthy development of premature infants. Because much of the sound that occurs in the NICU is excessive and unpleasant (noise), it is important that an understanding of recommended and actual sound levels that occur in the NICU and the definition of noise be provided to caregivers. (Brown, 2009) The American Academy of Pediatrics (AAP) recommends that NICUs be monitored for noise. Current AAP standards recommend that sound in the NICU should remain at less than 50decibels (dB) most of the time. At this level, the neonate's sleep is not disturbed by excessive noise, and staff can communicate and work without the stress of high noise levels (White, 2007).
Aim/Purpose of the Project: The aim of this evidence based project is to maintain Neonatal Intensive Care Unit (NICU) sound levels at or below the American Academy of Pediatrics (AAP) recommended noise criteria. In an evidenced based project, the hypothesis is replaced with a research question posed in the PICO format (population, intervention, comparison, and outcome.) The research question for this project is: Does a staff education program designed to mitigate noise in the NICU achieve decibel levels equal to or below the American Academy of Pediatrics recommendations for the NICU versus current decibel levels.
Design and Methods: This quasi experimental study using the Clinical Excellence Through Evidenced Based Practice model is designed to reduce noise in a 20 bed Level 3 NICU with 4 pod configuration in a Southern California community hospital. The NICU has an average daily census of 14 neonates. The intervention involves an educational program about the deleterious effects of noise on the premature infant. Education will be offered to all NICU clinical and support staff. Research supports the notion that staff education and behavior modification are important in the effort to reduce noise (Cmiel et al., 2004). Sound levels will be measured and recorded using the NoiseMeters, Inc. SoundLog before during and after the educational offering. Baseline sound levels in the NICU were measured at 62 Decibels. Data analysis using an independent t test will compare baseline decibel data with decibel data collected after the education is completed.
Results and Outcomes: In progress.
Implications and Conclusions: To be determined following review and analysis of results. The expectation is that the project should result in a lowering of the ambient sound levels by 15% (62dB to 53 dB).

PARENTS' AND PROVIDERS' PERSPECTIVES OF THE FEEDING PROBLEMS OF NICU AND PICU GRADUATES

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Purposes/Aims: The study purposes were to collect information regarding the magnitude of feeding and nutrition problems in families of infants and young children who are graduates of neonatal or pediatric intensive care units, the family consequences of feeding problems, and identify potential family-centered interventions for this population.
Rationale/Conceptual Basis/Background: The growing number of preterm infants, with an increased risk of immediate and long-term consequences, presents a significant public health problem. Feeding problems, common in healthy and full-term infants and young children, are even more likely among infants and young children born preterm or with other health problems. Little is known about the family consequences of feeding problems or the interventions most effective for optimizing family outcomes. A theoretical model integrating the Model of Children's Risk of Special Health Care Needs and the Parental Internal Working Model of Feeding guided this study.
Methods: A qualitative, descriptive design was used. In-depth, semi-structured interviews lasting approximately 1-2.5 hours were completed with 22 participants (9 professionals; 13 parents). The convenience sample consisted of parents of young children under age 4 who were graduates of a Neonatal Intensive Care Unit (NICU) or a Pediatric Intensive Care Unit (PICU) with feeding concerns and health professionals who care for this population. Qualitative data were analyzed for major topics and themes.
Results: Children's feeding problems included behavioral, relational, mechanical, and physiological aspects and significantly impacted families and required comprehensive solutions. Parents described myriad emotions about their children's health ranging from guilt and grief to hopefulness and gratitude. Though parent and provider perspectives often differed, both considered education and resources to be important, but resources were often inadequate to meet families' needs. Relationships between parents and professionals were considered essential, but conflict, communication issues, and lack of collaboration were common. System barriers, surgical and diagnostic setbacks, and uncertainty regarding effective interventions and future outcomes were frequent experiences, leading to parental frustration and worry. Discrepancies between their own family's situation and experience and those of "normal" children and their families led to violated parental expectations. Influential factors which shaped families' experiences obtaining care within the health care system were limited access to relevant services, many health care providers and settings, financial and insurance issues, and having a major impact on work and family life.
Implications: Feeding and nutrition problems profoundly impact families' daily life and their relationships, consuming a great deal of parental emotion, energy, and time as well as depleting financial resources. Health care services are often inadequate to meet the needs of families, and barriers to care are numerous. Understanding the experiences and perspectives of parents and providers is an important first step in addressing the complex feeding and nutrition problems commonly experienced by NICU and PICU graduates and their families and developing effective family-centered interventions.

Funding: The Center for Patient-Centered Interventions (NINR; P20 NR008987).

A RANDOMIZED CONTROLLED TRIAL OF NICU MUSIC: IMPACT ON PRETERM INFANT REST AND GROWTH

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Aims: To determine if a structured music intervention offered twice daily for 7 days, increases rest, growth, serum insulin and insulin-like growth factor-1 (IGF-1) in preterm babies over a 1 week period in the neonatal intensive care unit (NICU).

Background: Stress may affect the sensitive balance of the hypothalamic-pituitary-adrenal axis and alter neuroendocrine system function and growth in preterm infants placing this vulnerable population at higher risk for less rest and greater delays in growth. Music has the unique ability to potentially reduce stress, enhance rest and promote growth but there is a paucity of rigorous research focused on music as an intervention in the preterm infant population.

Methods: This is a randomized controlled blinded multi-center study examining a structured NICU music intervention. After identification of eligibility and consent of parents, the participant neonates are randomized according to high versus low maternal stress and high versus low infant perinatal stress with standardized instruments. NICU infants (28 to <37 weeks gestational age at birth) are randomly assigned using Urn Randomization to the music group for two, 30-minute periods daily for 7 days total or a sham control group that receives the standard NICU care. On days 1 and 8, serum collected by venapuncture, is assayed for insulin and IGF-1. During the 7 day intervention period, hours of rest (Actigraphy), weight gain in grams, calories per kilogram consumed and sound decibel levels (Larson Davis Dosimeter 706) are recorded daily.

Analyses: Descriptive statistics and two-sample independent t-tests examining difference scores to determine differences in weight gain (grams), rest, Insulin, and IGF-1. Bonferroni adjustments will be used for multiple comparisons.

Implications: With the increased educational awareness on neonatal growth and development, healthcare providers need to rely on strong research that support evidence-based guidelines to better unify practice and raise the bar on refining music interventions for NICU.

Future Research: The next phases of this research are underway to further examine structured music and the impact on stress reactivity, immunity and behavioral outcomes. For future research a NIH RO1 grant proposal submission is planned in February 2011.

Funding: Support received from a NIH/NINR- R07077-12, an Oppenheimer Complimentary Alternative, Integrative Medicine Grant, and an American Association of Critical Care Nurses Clinical Care Grant.

ISSUES IN CARING FOR PEOPLE FROM VARIOUS CULTURES

SOCIAL MARKETING WITH FAMILIES OF HMONG ORIGIN WITH DEVELOPMENTAL DISABILITES

Dian L. Baker

ETHNIC DIFFERENCES IN MENOPAUSAL SYMPTOM CLUSTERS

Eun-Ok Im, Young Ko, Wonshik Chee, Hyenam Hwang

ASIAN MIDLIFE WOMENS' ATTITUDES TOWARD PHYSICAL ACTIVITY

Eun-Ok Im, Young Ko, Hyenam Hwang, Wonshik Chee, Alexa Stuifbergen, Hannah Lee, Eunice Chee

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SELF-TRANSCENDENCE AND DEPRESSION IN TAIWANESE MEN WITH ORAL CANCER

Hsiu-Chin Chen, Pamela G. Reed

THE DEVELOPMENT OF GLOBAL NURSING LEADERSHIP

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ENHANCEMENT OF CULTURAL AWARENESS WITH A VIRTUAL COMMUNITY

Jean Foret Giddens, Sarah North, Erin Rogers, Louis Fogg, Linnea Carlson-Sabelli

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THE LIVED EXPERIENCE OF MISCARRIAGE FOR LATINA WOMEN

Shannon Dillon

KOREAN AMERICAN WOMEN'S PREVENTIVE HEALTH CARE PRACTICES
Young-Shin Lee, C. Richard Hofstetter, Veronica L. Irvin, Melbourne F. Hovell

HEALTH LITERACY AND RISK FOR TYPE 2 DIABETES AMONG KOREAN IMMIGRANTS
Sarah Choi

THE ELDERLY SOMALI BANTU EXPERIENCE OF AMERICAN HEALTH CARE
Cathy Deckys

FACTORS ASSOCIATED WITH SATISFACTION WITH CARE AMONG LOW-INCOME PATIENTS
Eileen K. Fry-Bowers, Aurelia Macabasco-O'Connell, Adrianna Mendez, Crystal deGuzman

CULTURAL BARRIERS TO CANCER CARE FOR SOUTHWESTERN AMERICAN INDIANS
Emily A. Haozous

CHINESE AMERICAN YOUTH: PERCEIVED PARENTING STYLES AND PSYCHOSOCIAL HEALTH
Weichao Yuwen, Angela Chia-Chen Chen, Usha Menon, Laura A. Szalacha

HELPING RUSSIAN NURSES DEVELOP RESEARCH SKILLS
Marie Driever, Janet Larson, Barbara Mandleco

FEMALE MIGRANT FARMWORKERS AND HIV RISK: APPLYING THE THEORY OF GENDER AND POWER
Cynthia R. Albarrán

RECRUITMENT STRATEGIES IN A LATINO FAITH BASED POPULATION: AN ETIC AND EMIC APPROACH

Julie K. Carr, Leonie Sutherland, Dawn M. Weiler, Jonathan Glogowski

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HEALTHY EATING IN LATINO FAMILIES: ACCULTURATION, FOOD SECURITY AND OBESITY

Jill Berg, Susan Tiso, Mary Knudtson, Merry Grasska, Yasmin Chowdhury

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DESCRIPTIVE ANALYSIS OF HEALTH CONDITIONS IN RURAL TANZANIA, AFRICA

Benjamin J. Miller

ASSESSING DIABETES IN RURAL TANZANIA WITH THE COMMUNITY READINESS MODEL

Benjamin J. Miller

SOCIAL MARKETING WITH FAMILIES OF HMONG ORIGIN WITH DEVELOPMENTAL DISABILITES

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Aims: The aims of this study were to determine effective social marketing strategies and to test a media campaign with the Hmong community regarding early identification and services available for developmental disabilities.

Background: This study was based on the public health principles of primary and secondary prevention for a cumulatively marginalized group within an ethnic minority community: families of Hmong origin experiencing a developmental disability. American families of Hmong origin are underrepresented among recipients of special education and social services for persons with developmental disabilities; this lack of early intervention and services may lead to unnecessary lifelong impairments. In 2008, employing a community based participatory research (CBPR) approach, focus groups were conducted with the Hmong community to determine perceptions of developmental disabilities and barriers to services. Findings included multiple barriers such as a lack of accurate information, language usage, and limited outreach. Despite these barriers, participants indicated that with an increase in culturally responsive education and outreach, persons with developmental disabilities would likely accept services. Results from the study prompted the design of a social marketing campaign. There have been several studies indicating that social marketing approaches are effective in reaching hard-to-reach and hardly reached communities to create awareness of health-related issues and services.

Process: A CBPR partnership designed the entire study. A cross sectional, qualitative focus group design using thematic analysis informed the social marketing campaign. The study consisted of three steps: (1) four focus groups to guide development of social marketing materials regarding developmental disabilities and services in the Hmong community, (2) development and testing of materials with media partners, and (3) a post-campaign focus group to determine campaign effectiveness.

Outcomes Achieved/Documented: Results of focus groups indicated that Hmong TV, Hmong radio, and Hmong New Year events are effective channels for communication. Test marketing of the messaging across various media were effective in reaching the Hmong community and creating a call to action. This research demonstrates that principles of social marketing can be applied to complex health promotion topics.

Implications: Nurse researchers can use CBPR and social marketing to reach marginalized communities. Outreach campaigns may reduce health inequities through culturally responsive message design when delivered through effective communication channels.

ETHNIC DIFFERENCES IN MENOPAUSAL SYMPTOM CLUSTERS

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Purposes/Aims: The purpose of this study was to determine ethnic differences in menopausal symptom clusters among four major ethnic groups in the U.S. using a post-modern feminist perspective.
Rationale/Conceptual Basis/Background: Despite a large number of studies on menopausal symptoms, very few studies have been conducted to identify menopausal symptom clusters among multi-ethnic groups of midlife women. Consequently, very little is known about ethnic differences in menopausal symptom clusters.
Methods: This was a secondary analysis of a larger Internet survey study on menopausal symptoms of 512 midlife women in the U.S. Only 501 subjects were included for this secondary analysis after eliminating 11 subjects that had missing data on menopause symptoms (130 Whites, 105 Hispanics, 97 African Americans, and 105 Asians). Only the Internet survey data on demographic characteristics, general health, lifestyle factors, menopausal status, and menopausal symptoms (measured using the Midlife Women's Symptom Index [MSI]) were used for this study. The data were analyzed using descriptive statistics, factor analysis, hierarchical cluster analysis and multinominal logistic analysis. For the cluster analysis, the hierarchical clustering method was performed using an agglomerative approach and average linkage between groups.
Results: After comparing the menopause symptoms scores, the three-cluster solution was finally adopted for this study ($F=575.71$, $p<.01$). Fifty four percent of the participants (n=274) were grouped in Cluster 1 (the low symptomatic group) who reported an average of 8.84 (±5.50) number of menopause symptoms. Twenty nine percent of participants (n=148) were grouped in Cluster 2 (the moderate symptomatic group) who had an average of 28.49 (±8.07) number of menopause symptoms. Fifteen percent of the participants (n=79) were grouped in Cluster 3 (the high symptomatic group) who reported an average of 35.11 (±10.66) number of menopause symptoms. The patterns of symptoms according to clusters were same in the scores of total symptoms and physical and psychosomatic symptoms (a-b-c). However, the scores of Clusters 2 and 3 did not differ in psychological symptoms, and the scores of Clusters 1 and 2 did not differ in menstrual symptoms. The three clusters differed significantly in age, education level, income, number of children, country of birth, ethnicity, BMI, self-reported health, diagnosed disease, smoking, and physical activity ($p<.05$). Only in Cluster 1, there were significant ethnic differences in the scores of total symptoms and physical and psychosomatic symptoms. In Cluster 2, there were significant ethnic differences in some individual symptoms. Yet, ethnic differences in menopausal symptoms in Cluster 3 could not be examined in this study because the small sample size in Cluster 3 did not meet the required assumption of the analyses.
Implications: The findings supported ethnic differences in low and moderate symptomatic groups. These findings suggest that the linkage of menopausal symptoms to ethnicity needs to be further examined through future studies with a larger number of midlife women in multiethnic groups.

Funding: This study was conducted as a part of a large study funded by NIH/NINR/NIA funded study (R01NR008926) entitled "A Multiethnic Internet Study on Menopausal Systems.

ASIAN MIDLIFE WOMENS' ATTITUDES TOWARD PHYSICAL ACTIVITY

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Purposes/Aims: The purpose of the study was to explore Asian American midlife women's attitudes toward physical activity using a feminist perspective.
Rationale/Conceptual Basis/Background: The participation rate of midlife Asian American women in physical activity remains low. One of the reasons for the low physical activity level of Asian American midlife women would be that most physical activity promotion programs rarely incorporated their attitudes toward physical activity. Indeed, with few investigations on Asian Americans, little is known about how Asian American midlife women uniquely view physical activity and what makes them participate in physical activity in the multicultural contexts of the U.S. This lack of knowledge may result in culturally inadequate or inappropriate physical activity promotion programs aimed at Asian American midlife women, which will subsequently make it difficult for health care providers to promote physical activity among this specific population.
Methods: This was a qualitative online forum study among 17 Asian American midlife women who were recruited through Internet settings using a convenience sampling method. Using 17 online forum topics and related prompts, a 6-month qualitative online forum was conducted. The data were analyzed using thematic analysis by Braun and Clarke. To ensure scientific rigor of the study, the research team used the standards of rigor in feminist research by Hall and Stevens.
Results: Three major themes related to Asian American midlife women's attitudes toward physical activity were extracted from the data: (a) "keeping traditions," (b) "not a priority," and (c) "not for Asian girls." Asian American midlife women were busy in keeping their cultural traditions, and they rarely found time for physical activity. The women gave the highest priority in their children, and physical activity was placed in the lowest priority in their busy life. Also, the women were rarely encouraged to participate in physical activity from their childhood, and they themselves perceived that their weak and small bodies were not appropriate for physical activity. All the themes of this study reflected Asian American midlife women's marginalized experience with physical activity in the U.S. Their marginalized experience with physical activity basically came from their Asian cultural heritage, values, and beliefs that circumscribe their physical activity in the U.S. society.
Implications: The findings suggest that physical activity promotion programs for this specific population need to provide some strategies that could include the family members in their physical activity.

Funding: This analysis was conducted as a part of a large study funded by NIH/NINR funded study (1R01NR010568-01) entitled "Ethnic Specific Midlife Women's Attitudes Toward Physical Activity."

SELF-TRANSCENDENCE AND DEPRESSION IN TAIWANESE MEN WITH ORAL CANCER

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Purposes/Aims: The purpose of this study is to examine the role of the self-transcendence in Taiwanese men with oral cancer, and explore the mediating effect of self-transcendence on the relationship between illness perception and depression, to determine if self-transcendence alleviates depressive symptoms.

There are three main research questions. 1) What are the relationships among the following variables: demographic variables (age, education level, marital status, income, and work class), illness perception, self-transcendence, and depression? 2) How does self-transcendence relate to depression–directly or as a mediator between illness perception and depression? 3) What set of variables best explain the variance in depression?

Significance and Conceptual Framework: Oral cancer is the 4th leading cause of cancer deaths among men in Taiwan since 2003. Depression is common in oral cancer patients and is associated with poor quality of life and negative health outcomes, such as morbidity and mortality. Illness perception is the person's understanding of his/her health threat based upon previous experiences and how perceptions affect an individual's coping. Self-transcendence is an inner resource of which research evidence suggests that it promotes well-being and decreases depression in the context of significant life-altering health events. It is proposed then that during the crisis of diagnosis and treatment of oral cancer, self-transcendence may be an independent contributor to well-being, or function as a mediator in alleviating depression.

Method: This is a cross-sectional, descriptive design. A convenience sample of men who have a confirmed diagnosis of oral cancer will be recruited from a medical center in southern Taiwan. The inclusion criteria are male, ages 18 or older, ability to communicate in Mandarin or Taiwanese, and agreeing to participate this study.

Participants will answer demographic information, Chinese versions of the Revised Illness Perception Questionnaire, Beck's Depression Inventory, and Reed's Self- Transcendence Scale. Data analysis includes use of descriptive statistics, correlation coefficients, and multiple regression.

Results and Implications: A better understanding of factors associated with depression will help nurses develop interventions to enhance well-being or decrease depression in men with oral cancer. This study also will further inform nursing theory development regarding self-transcendence as it may contribute to decreased depression in men with oral cancer.

THE DEVELOPMENT OF GLOBAL NURSING LEADERSHIP

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Purpose/Aim: To identify key issues in fostering the development of global nursing leadership and develop a toolkit of best practices.

Background: A European Union/United States (EU/US) Policy-Oriented Atlantis Grant supported the activities of four international partners, intent on developing strategies for advancing global nursing leadership. The four consortia partners, including the University of Southampton in the UK, Alice Salomon University in Germany, and the University of Washington and Washington State University in the U.S., collaborated on the exploration and analysis of nursing leadership competencies and preparation in a global society.

Process: After a thorough literature review regarding global nursing leadership, three transatlantic meetings were held over the two year funding period. The first summit, with key nursing leaders from industry and education, was held at the University of Washington and focused on stakeholder expectations, obstacles and potential solutions to student and nurse mobility. The second meeting, in Berlin and Brussels, allowed the participants to further refine cross cultural understandings regarding the different systems of education and health care while the third summit was held in both the UK and Germany. In addition, six virtual meetings were held between all consortia members to synthesize the information needed to establish meaningful benchmarks for nursing leadership knowledge and skills competencies and develop a global nursing leadership toolkit.

Outcomes Achieved: This presentation will focus on the contents of the global nursing leadership toolkit and best practices of global alliances and partnerships in nursing.

Conclusions: The development of global nursing leadership can be facilitated through the establishment of effective international partnerships and the availability of toolkits with identified best practices.

ENHANCEMENT OF CULTURAL AWARENESS WITH A VIRTUAL COMMUNITY

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Purpose/Aims: The purpose of this study was to assess the effectiveness of a virtual community as a teaching application to foster cultural awareness among nursing students. Cultural awareness is the first step toward developing cultural competence.
Rationale/Background: Cultural competency is an expectation of nurses and is an expected component within nursing curricula. Although nursing faculty understand the need to integrate cultural competence into the curricula, many lack expertise in developing effective teaching strategies or a curriculum plan to support this initiative.
Methods: The study involved 342 first-semester undergraduate nursing students from 5 baccalaureate nursing programs using a virtual community as a learning approach in Fundamentals of Nursing/Nursing Skills courses. Institutional Review Board approval was attained at each site. The programs were located across the country including two on the East Coast, and one each in the Southeast, Midwest, and West. The study design was a nonexperimental approach that involved the collection of surveys during one academic semester. Analysis included descriptive and comparative approaches. A 19-item exit survey was used to learn about the participants' personal experiences as users of the virtual community. Survey items were from the Current Student Inventory, part of the Flashlight Evaluation System. The items, based on the seven principles of good practice in higher education, underwent extensive content validity. A cultural awareness subscale was used as the basis for this study. The research team relied on a site PI at each of the academic institutions for data collection.
Results: A correlation between frequency of use and cultural awareness was significant ($r = .246$; $p > .000$). An ANOVA, calculated on the mean cultural awareness scores and frequency of use (as reported by participants), revealed statistically significant differences: $F = 11.78(2,339)$, $p > .001$. These findings show that participants reporting high/frequent use of the virtual community were significantly higher in cultural awareness compared to participants reporting low/infrequent virtual community use.
Implications: Utilization of the virtual community was the main predictor of cultural awareness in this sample of first semester nursing students. It is thought that the diverse characters featured in the virtual community stories provided necessary context for students to have meaningful discussions about cultural influences associated with an individual's perspectives and preferences. These are necessary elements in developing cultural awareness. Further research is needed to specifically test cultural competence education strategies using a virtual community platform.

THE LIVED EXPERIENCE OF MISCARRIAGE FOR LATINA WOMEN

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Purpose: The purpose of this qualitative descriptive phenomenological study is to explore the experience of miscarriage from the perspective of a Latina mothers in the United States.

Background: Spontaneous abortion, or miscarriage, refers to unintended pregnancy loss at fewer than 20 weeks' gestation. Cramer and Wise (2000) suggest that 12% to 31% of all conceptions end spontaneously in miscarriage. However, Speroff, Glass, and Kaswe (1999) argue that the true early pregnancy loss rate might be closer to 50% because of the high number of unrecognized miscarriages that occur as early as two to four weeks after conception. From April 1, 2000, through July 1, 2008, approximately seventeen percent of women of reproductive years (ages 14-44) were Hispanic residents. Additionally, according to the US Census Bureau, there are approximately 8.7 million illegal immigrants (of Hispanic/Latino origin), suggesting that each year a sizable population of Latina women experience miscarriage in the U.S. Yet, little is known about miscarriage experience from the Latina women's perspective.

Method: The proposed qualitative research study will use descriptive phenomenology through the process of one to two in-person and phone interviews until data saturation is attained. This study will aim to have ten participants from the greater Seattle area and gather information until no new conceptual information is generated from the interviews.

Findings: Data collection in process.

Implications: Due to the lack of research on Latina miscarriages, it is nearly impossible for a health care provider to understand this population's miscarriage experience. Providers additionally may not know the best coping mechanisms for this population of women or be able to provide culturally sensitive care during and after pregnancy loss. Hence, research studies of miscarriage from Latina women's perspective are desperately needed to better understand their unique post-miscarriage care needs.

KOREAN AMERICAN WOMEN'S PREVENTIVE HEALTH CARE PRACTICES

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Purpose: The purpose of the study was to explore the characteristics of preventive health care practices (influenza vaccination, mammogram, and pap test) among 1786 Korean American women residing in California by telephone survey.
Rationale: While regular preventive health care practices are necessary to reduce mortality and morbidity, overall preventive care coverage in the U.S. fails to meet the goals of *Healthy People 2010* and further shows ethnic disparities.
Methods: Demographic variables, acculturation, having a primary care provider, preventive health care practices - influenza vaccination, mammography were measured. Bivariate and multivariate logistic regressions were applied to evaluate the differences in prevalence of each preventive health care service and to clarify the behavioral bases of general preventive behaviors.
Results: About 53% among participants aged 18-59 years while 90.0% among those aged 60+ reported having received influenza vaccination during the prior year. Among all respondents, 79.0% had at least one mammography and 85.1% had at least one pap test. Rates of women's cancer screening practices, mammography and pap tests, are higher than the previous reports and above the U.S. overall screening rate.

Three preventive health care practices were related to the goals set by *Healthy People 2010*: Participants with no education in the U.S., who were born in Korea, had longer residence in the U.S., and who had a primary care provider were more likely than others to reach these goals. KA women without a primary care provider were significantly less likely to have had screening (mammogram and pap testing) than others. It is also noted that KA women with a Korean primary care provider were less likely than those with non-Korean primary care provider to be screened. Our findings indicate that a behavioral model was suitable to explain the three preventive health care practices.
Conclusion: Korean American women in California are more likely to follow preventive health care practices than are reported in national reports as well as other reports concerning KA women in the U.S.

Funding: The project described was supported by a grant to C. Richard Hofstetter, R01CA105199, from the National Cancer Institute.

HEALTH LITERACY AND RISK FOR TYPE 2 DIABETES AMONG KOREAN IMMIGRANTS

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Aims: The aims of this project are to: 1) assess type 2 diabetes (DM) risk of Korean immigrants through biological and health behavior measures; 2) determine their level of health literacy by the Newest Vital Sign scale; and 3) examine the relationship between health literacy and DM risk outcomes (BMI, WHR, BP, and glucose).
Background: Despite the rising incidence of DM in Korean immigrants and the importance of prevention through DM risk factor identification and management, little is known about DM risk status and health literacy level in these individuals. Obtaining information and data about unmet health needs is vital to planning appropriate DM prevention care for this at risk population.
Methods: A cross-sectional descriptive study design was used. Data were collected from 145 Korean immigrant men and women between the ages of 21-79 who have never been diagnosed with DM but are at risk for DM. "At risk" was defined by 1) positive family history of DM in first degree relatives; 2) BMI>23; or 3) history of gestational diabetes (women). Participants completed questionnaires in English or Korean, and also underwent a blood pressure test, a finger stick blood glucose test (fasting or postprandial), and anthropometric measures.
Results: Both biological and health behavior measures confirmed that participants presented risk factors for DM. According to national practice guidelines, 77% of participants were overweight, 89% exhibited an abnormally large waist to hip ratio, over 60% had high systolic or diastolic blood pressure, and nearly 30% had glucose levels in the pre-diabetic or diabetic range. In terms of health behaviors, 56% reported eating one serving or less of fruit and 89% reported eating one serving or less of vegetables per day over the past week. On a positive note, however, 74% reported engaging in moderate physical activity, and 50% reported engaging in vigorous physical activity at least one day in the past week. Participants' health literacy was rather low overall, with an average NVS score of 2.37 (range: 0-6), or 39.6% correct, and health literacy was significantly positively correlated with both English proficiency and acculturation measures (rs = .41, ps < .001). Few significant associations between health literacy scores and DM physiological risk outcomes emerged. However, higher scores on the NVS scale were significantly associated with lower waist to hip ratios (r = -.19, p < .05).
Implications: Findings indicate high prevalence of DM risk factors among Korean immigrants at risk for diabetes. Low diet health literacy level adds to the concern for this population because of its implication for weight management and obesity prevention. Korean immigrants who are less acculturated and less proficient in English language may deserve more attention as their health literacy level tends to be lower than those who are more acculturated and more proficient in English. Linguistically as well as culturally appropriate diet health literacy education should be incorporated in an effort to prevent further growth of diabetes prevalence in this group.

Funding: This study was supported by UCI Institute for Clinical and Translational Science Community Collaboration Research Incubation Grant 2009-2010.

THE ELDERLY SOMALI BANTU EXPERIENCE OF AMERICAN HEALTH CARE

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Background: A paucity of research exists involving the emic perspective of the elderly Somali Bantu as it pertains to their experience of health care. The elderly Somali Bantu refugee has experienced many changes since their resettlement to the United States from United Nations' refugee camps in Kenya four to seven years ago. The majority of this population is pre-literate and has no native written language. This is a particular challenge when adjusting to new American systems such as health care.
Purpose: The purpose of this qualitative, descriptive study was to gain insight into the factors that influenced the elderly Somali Bantus' experience of American health care in Boise, Idaho based on their perspective.
Sample: The participants ($n = 14$) of the study were a subset of the larger Somali Bantu community of Boise, Idaho and were self-described as "elderly" (50+ years of age) as per their cultural norm.
Methods: An initial community assessment was conducted over an 18 month period, utilizing theoretical frameworks from cultural (Giger & Davidhizar, 2008) and community assessment (CBPR, 2006) models. In-depth interviews and an elderly focus group were conducted, utilizing a Somali Bantu interpreter from the community. Institutional Review Board approval was obtained.
Results: The findings of this study indicate that the elderly Somali Bantu refugee experiences complex, influencing factors related to their health and navigating new systems such as health care. Learning English and health literacy may be affected by age and memory, but they do not prevent the elderly Somali Bantu from learning over time. Co-morbidities, poor language skills, transportation barriers, and loss of health insurance for the 50-64 year old demographic were found to be significant factors in health care access and health outcomes. The degree to which functional limitations affect the elderly Somali Bantu population in Boise is unknown and requires further baseline data collection.
Implications: Nurses can assist the elderly Somali Bantu refugees navigate through the health care system in a variety of ways. Extended English language learning classes and health literacy classes are needed for this age group. Cultural orientation programs specific to this ethnic group and others with a high percentages of pre-literacy are needed as well. Nurses can collaborate with community agencies to develop interactive health education programs. Nurses can advocate for policies and programs that support refugee adjustment to new systems such as health care in order to create positive health outcomes in this population. Further research is needed to more fully understand the complex nature of adjustment as it relates to elderly Somali Bantu resettlement and health care. Health screenings and chart audits need to be conducted to obtain baseline data for further assessment of the health status of this population. Further inquiry is also needed to determine the best methods for teaching English, job skills, and health literacy topics to ethnic groups who are pre-literate and who include many elderly members.

FACTORS ASSOCIATED WITH SATISFACTION WITH CARE AMONG LOW-INCOME PATIENTS

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Purpose: This study examines the relationship between patient satisfaction with care and specific sociodemographic variables among a low-income population receiving ambulatory care services.
Background: Patient satisfaction is defined as the extent to which a patient's general health care and condition-specific expectations and needs are met. Dissatisfied patients are often reluctant to seek health promotion / disease prevention services or to follow up with diagnostic or treatment plans which negatively impacts health outcomes. Although satisfaction frequently depends on the patient's perception of the quality of care received, prior research indicates that it may also be influenced by patient background, including race and ethnicity.
Methods: This cross-sectional descriptive sub-study examined the relationships between patient satisfaction with care and specific sociodemographic variables among a low-income population receiving ambulatory care services at a large, urban county hospital serving ethnic and minority populations in Southern California.
Results: The mean age of participants was 55±9 years, 64% (n=21) were females and 42% (n=14) were Latino. The majority of respondents (n=26, 80%) reported an annual income < $30,000 and 66% (n=22) had less than a high school education. Most participants (n=24, 72%) reported having public insurance. Mean acculturation score was 2.94 (SD 1.75) and most respondents had lived in the U.S. for at least 20 years (n=24, 73%). As level of acculturation rose, patients became less satisfied with care as measured by four of seven patient satisfaction subscales: general satisfaction (r = - .372, p =.047), technical quality (r = - .383, p =.044), communication (r = - .514, p =.004), and accessibility and convenience (r = - .396, p = .037). Non-Latino and Latino participants differed regarding the subscales of technical quality (t = - 2.33, p = .027) and communication (t = - 2.22, p = .034). No significant difference in mean subscale scores was found between men and women or between groups for birthplace, type of insurance, whether the patient had recently seen a provider, by usual place for health advice or by usual place of receipt of care. Those without insurance reported significantly lower levels of satisfaction for general satisfaction (t = - 5.821, p < .001), technical quality (t = - 3.795, p < .001), interpersonal manner (t = - 2.698, p = .011), communication (t = - 3.163, p = .003), time spent with doctor (t = - 2.806, p = .009) and accessibility and convenience (t = - 3.384, p = .002). Ethnicity/race, acculturation and insurance status were predictive of "general satisfaction" and "interpersonal manner." Insurance status and acculturation, but not race, were predictive of "communication" and "accessibility and convenience." Health insurance and race predicted "technical quality," while "health insurance alone" predicted time spent with doctor.
Implications: Health insurance status, race and level of acculturation were found to be predictive in six of the seven subscales for patient satisfaction among low-income patients. Further inquiry is required to determine how each of these characteristics influences patient satisfaction in this population in order to guide appropriate intervention and improve patient outcomes.

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CULTURAL BARRIERS TO CANCER CARE FOR SOUTHWESTERN AMERICAN INDIANS

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Background: American Indians (AI) have poor survival from cancer when compared to Non-Hispanic Whites (NHW). Although cancer incidence rates for AIs are lower than in NHWs, morbidity is disproportionately high. AIs have later stages at diagnosis, and poorer outcomes as a result. While multiple barriers are understood to influence cancer outcomes in AI, little research has been conducted that specifically examines barriers to cancer care for Southwestern AI.

Purpose: The purpose of this study was to explore the cultural barriers to cancer care for a population of Southwestern AI.

Methods: This Critical Realist Ethnography investigated cultural barriers to cancer care in Southwestern AIs through semi-structured interviews, field notes, and participant observation. Data were analyzed through a process of immersion, synthesizing, and recontextualizing until clear themes emerged. Informants validated these results to establish authenticity and trustworthiness of findings, and new findings from the validation process were incorporated into the analysis. Twenty-four informants were interviewed, representing a range of ages, sex, and tumor types. In addition, another 11 health care provider and community member informants were interviewed for triangulation of the data.

Results: Cultural barriers to cancer care included the need for privacy, community service, food, traditional life, path in life, trust, politeness, and good fortune. Data analysis led to the development of a cultural model representing Southwestern AI culture as affected by cancer, titled “Finding Balance Between Culture and Cancer: the Corn Plant Model” (See image).

Implications: Implications from this research include clinician inclusion of family in all decisions, consideration of the effect of cancer treatment on traditional life for AI patients, and need for AI-targeted teaching materials that include family and community.

CHINESE AMERICAN YOUTH: PERCEIVED PARENTING STYLES AND PSYCHOSOCIAL HEALTH

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Purpose: This qualitative study aimed to gain an in-depth understanding of Chinese American adolescents' perceived parenting styles and how parenting styles might influence adolescents' psychosocial health.

Background: Asian Americans are one of the fastest growing minority groups in the U.S of which Chinese is the leading group. Evidence suggests that Asian American adolescents experience higher levels of depressive symptoms than their same-gender White counterparts. Quantitative findings suggest associations between parenting factors (e.g., parental control, supportive parenting) and Chinese American youth's mental health. A qualitative understanding regarding Chinese American youth perceived parenting styles and its relationship with youth's psychosocial health is warranted.

Methods: The study was approved by the Institutional Review Board**.** We used purposive sampling to recruit 15 Chinese American youth through Chinese schools and churches in a southwest metropolitan area. Two focus groups were conducted in the participants' preferred language – English or Chinese. Group discussions were held in a safe room (60-90 minutes each) and were videotaped or audiotaped with permission. Demographics, immigration history and acculturation data were obtained in a survey (available in English and two Chinese written versions--traditional and simplified). Two investigators independently conducted a qualitative analysis of the transcribed transcripts and summarized the findings using an 8-step content analysis method (Downe-Wamboldt, 1992). Frequency distributions and descriptive statistics were calculated for all measures in the quantitative survey.

Results: The 15 participants were ages 12 to 17 years old (M = 15.1; SD = 1.5); 66.7% were females. More than half (66.7%) of them were U. S. born; 87% of the adolescents were living with their birth parents. The adolescents reported slightly higher Chinese orientation scores (M = 29.5; SD = 5.4) than U. S. orientation scores (M = 28.3; SD = 4.5). All parents were foreign born except one father. Six themes were generated from the focus groups data. Chinese American adolescents perceived higher parental expectation on academic performance and moral aspects and stricter family rules regarding choices of friends compared to their non-Asian peers regardless of sex of the child. Parents tended to be more protective of girls than boys. Both boys and girls reported poor or ineffective communication between parents and adolescents and cited it as a main reason for family-child conflicts and emotional distress of the adolescents.

Implications: Chinese American parents may find it challenging to discipline their adolescent children within a different culture context. Linguistically and culturally tailored resources (e.g., parent support groups, programs aimed to improving parent–child communication) may enhance parenting skills and consequently reduce emotional distress of their adolescent children.

HELPING RUSSIAN NURSES DEVELOP RESEARCH SKILLS

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Purposes/Aims: To describe a collaborative project between US nurse researchers, the Russian Nurses' Association (RNA), and the Arkhangelsk Regional Nurses' Association (ARNA) to promote a climate of inquiry and research use by Russian nurses.
Rationale/Background: In 2005 an invitation to offer a nursing research workshop to Russian nurses launched a collaborative effort with the RNA/ARNA to jointly develop learning activities to help Russian nurses learn about nursing research and evidence based practice. With research being valued by the Russian culture and the RNA/ARNA desiring to promote nurse professionalism, these workshops are helping Russian nurses learn more about their practice and ways they can contribute to the Russian health care system.
Project Description: Since 2007 the project has provided four week-long workshops designed to help Russian nurses develop research skills and projects they could implement in their work settings. Workshop content has included how research advances nursing practice and quality of care, commonly used research designs, clinically relevant measurements, and strategies for quality improvement and evidence-based practice. Learning activities incorporated brief presentations by American researchers followed by small group work with presenters serving as mentors to aid participants develop projects to implement in their work settings. The Russian nurses who attended the workshops were employed in inpatient/outpatient units in maternal, child, adult or psychiatric settings, chosen by their employers to attend the workshops, and considered leaders in their health care agencies. Over a hundred nurses mainly from Arkhangelsk but also various Russian regions have attended these four workshops.
Outcomes: Participant feedback continues to confirm their enthusiasm for the workshops, appreciation of the information presented and commitment to improving nursing practice through research. Thus far, three studies have been completed, and others are in process. The completed studies include evaluating methods of reducing children's pain during a dressing change; helping oncology patients more effectively cope with and manage their pain; and evaluating a program to improve hepatitis B immunization rates in infants. In the fall of 2010, the ARNA offered this region's first Russian Nursing Research Conference with nurses who had completed their projects presenting study results. The conference goal was to assist participants understand how nursing research can help them answer practice questions and demonstrate nursing leadership that advances the quality of care.
Conclusions: Participant feedback suggests new found knowledge that has helped them assume responsibility for improving nursing practice, and provided a sense of empowerment through increased understanding of how evidence can enhance nursing practice/strengthen health care quality and their contribution to the Russian health care system. Those who attended more than one workshop provided valuable assistance/suggestions to first time attendees. However, there are challenges: Russian nurses do not have access to nursing research texts in their native language and many do not speak English. Consequently, literature published on their study topics was difficult to obtain, all workshop information needed to be translated into Russian, and ongoing conversations between Russian nurses and their US mentors did not occur as frequently as hoped for/planned.

FEMALE MIGRANT FARMWORKERS AND HIV RISK: APPLYING THE THEORY OF GENDER AND POWER

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Purpose: To apply the Theory of Gender and Power (Connell, 1987) as a lens to examine the sexual risk factors of Mexican female migrant farmworkers.
Description of Theory: The Theory of Gender and Power was adapted for understanding women's HIV risk by Wingwood and DiClemente (2001). Originally developed by Connell (1987), this theory is social and structural in nature. It posits that the gendered relationships between men and women are characterized by: the sexual division of labor, the sexual division of power, and the structure of social norms and affective attachments. These three structures exist interdependently at both the societal and the institutional level. The society is the highest level at which schema of power are imbedded (via historical and sociopolitical forces), and ascribed (via gender roles and norms). At the institutional level, places of work, schools, families, religious institutions, healthcare and the media continue to reproduce gender inequities and foster unequal power dynamics between men and women.
Logic Linking Theory to Problem: Agricultural labor is one of the most dangerous jobs in the United States. Female workers are placed in a particularly vulnerable situation as they negotiate a high demand work environment complicated by the threat of sexual harassment from both supervisors and peers. At home, intimate partner violence can heighten the risk of HIV and sexually transmitted infections (STIs). Often, migrant women report that they lack a social support system to assist in coping with these risks. Migrant farmworkers are commonly uninsured, undocumented, and impoverished. They often live in crowded and unstable housing and have low HIV knowledge. In addition, the partners of migrant women are at high risk for contracting HIV/STIs through sexual risk, problem drinking, and the use of illicit drugs. Mexican cultural norms of "machismo" and "marianismo" influence migrant women's relationship power and ability to negotiate for protective sex in the face of infidelity. Undocumented migrant farmworkers are often weary to access healthcare for fear of deportation, making the identification and treatment of HIV/STIs extremely complex. Finally, depression and psychological stress further add to the cumulative risk factors experienced by female farmworkers.
Internal Consistency of Theory: Prior research has demonstrated findings that are guided by the theoretical constructs in the Theory of Gender and Power. This theory must be examined with further qualitative and quantitative analysis to confirm its utility with this population and analyze relationships between concepts.
Conclusion: The Theory of Gender and Power assists in organizing what is known about female migrant farmworkers and highlights potential sexual health risks. Although HIV does not yet appear to be endemic in migrant farmworker populations, further research is necessary to understand the interplay between cultural beliefs, relationship power, intimate partner violence, and gender roles in Latino migrant couples. Research should also examine how migrant women utilize self-protective strategies and strength factors as coping mechanisms. This is necessary so that nursing and policy interventions can offer timely prevention and care to this vulnerable population.

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RECRUITMENT STRATEGIES IN A LATINO FAITH BASED POPULATION: AN ETIC AND EMIC APPROACH

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Aims: To examine recruitment strategies used with Latino members of two churches over a two year data collection period.
Conceptual Basis: Integration of the etic/emic perspective as proposed by Morris, Leung, Ames, and Lickel (1999) was utilized to enhance recruitment.
Methods: Culturally appropriate recruitment strategies, such as word of mouth, use of ethnically similar recruiters, and recruiting where the population normally gathers, were initially employed for a descriptive study of health status of Latino adults attending two different churches. The researchers worked with the Latino Health Coalition for a year to establish trust and credibility. The Coalition was the connection between the researchers and church members. Announcements were made during the church services, flyers were handed out after the services, and information sessions were held before and after church services. An analysis of recruitment results showed an over reliance on etic activities. Continued immersion with the Latino population led to the adoption of an emic approach. New strategies included connecting with church members and church activities, consulting with community members to find what has worked in the past. A Fiesta Research day was planned. A mass marketing campaign with weekly reminders, enlisting the help of a church member to cook the food, and a fiesta atmosphere were incorporated. Church based interpreters were present at all recruitment activities.
Results: Initially the use of culturally relevant recruitment strategies using the more universal (etic) perspective was employed. As the researchers made connections with key informants from the Latino Health Coalition and members of the different individual churches, a more culturally explicit (emic) perspective toward recruitment emerged. Recruitment was improved as the researchers used both the emic and the etic perspectives.
Implications: As nursing researchers strive to provide culturally appropriate interventions, recruitment remains a difficult process. Using the integrative explanatory framework as presented by Morris, Leung, Ames, and Lickel (1999) for recruitment allows for more a more balanced approach.

HEALTHY EATING IN LATINO FAMILIES: ACCULTURATION, FOOD SECURITY AND OBESITY

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Purpose/Aim: The purpose of our proposal was to determine the prevalence of overweight/obese preschool children, the relationship between mother and child weight status, food security and acculturation status in an early education program in a Southern California school district.
Rationale/Conceptual Basis/Background: Ethnic minorities, especially Latino children, are at an increased risk for obesity. According to the CDC (2006), children of Mexican descent are more often overweight than other children. Some recent studies have attempted to understand the complexities of obesity in this Latino subgroup in an effort to better tailor interventions (Snethen, Hewitt and Petering, 2007; Gomel & Zamora, 2007; Hernandez-Valero et al. 2007; Matheson et al. 2006). Monies are increasingly available to support child obesity interventions for families, school and communities but it is important to discover the key ingredients necessary to effect change. The study used the Social-Ecological Model as a theoretical foundation for the study. This model guided us in examining the many influences on individual eating behavior, such as interpersonal, organizational, community and societal influences.
Methods: Parents with a preschool aged child enrolled in the Newport Mesa Unified School District were invited to participate in our study. Participants' heights and weights (parents and children) were recorded for calculation of BMI. Parents (mostly mothers) were then asked to complete a survey with a variety of instruments related to acculturation and nutrition.
Results: Ninety-two parents participated in the study. Ninety-seven percent were Latino and female. Eighty-one percent were born in Mexico. Seventy-eight percent of the mothers and almost half (45%) of the children were overweight or obese. There was no significant association between parent and child BMI. As mothers had a greater acculturation to the non-Hispanic domain, children's weight status significantly increased ($r = .23$, $p < .05$). Food security was also an issue for these families. Although few of the families reported an insufficient food quantity, one third reported insufficient food quality.
Implications: Childhood obesity is a critical health problem across the nation. Latino children who are overweight are more likely to have diabetes in addition to a myriad of other health complaints (Must et al. 2003). It is therefore important to intervene early in childhood, and to provide parental support and culturally appropriate programs geared toward Latino families.

DESCRIPTIVE ANALYSIS OF HEALTH CONDITIONS IN RURAL TANZANIA, AFRICA

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Purpose/Aims: This descriptive study identifies the general health needs and health conditions affecting people in rural Tanzania, Africa. The aims are to: 1) Describe the general health conditions affecting residents in the Kikatiti ward of northern Tanzania, Africa 2) Identify the incidence of health conditions of people living in the Kikatiti ward of northern Tanzania, Africa.
Background: Medical conditions experienced in developing counties are similar to those in developed countries however there are special conditions that are unique to developing counties including those in sub-Sahara Africa. In Tanzania, Africa, there is one physician for every 33,000 residents, with clustering of health services in the urban centers. Understanding the health conditions affecting people in the rural communities is beneficial for the development of health programs and targeted interventions. This retrospective descriptive study investigates the health conditions observed in a rural Tanzanian health clinic. These data will serve as a pre-investigatory evaluation for future interventional studies to improve health conditions.
Methods: De-identified data from May of 2009 and May of 2010 were obtained from the New Hope International Hospital (NHIH). These data were analyzed for type and frequency of health conditions observed in the NHIH Sakila clinic.
Results: Data from 1723 charts were reviewed. The leading diagnostic groupings for clinic visits between 2009 and 2010 were Orthopedic/MSK {236(22.1%) and 128 (19.6%)}, abdominal/GI complaints {152 (14.2%) and 65(10.0%)}, HEENT/URI complaints {141(13.2%) and 95 (14.5%)}, Topical fungal infections {100 (9.3%) and 63 (9.6%)}, and pulmonary {52 (4.9%) and 68 (10.4%)}. Random blood sugars were obtained in 173 people resulted in 35 (20.2%) people being classified as pre-diabetic (BS 121-140) and 40 (23.1%) people being classified as diabetic (BS greater than 141) Systolic blood pressure were obtained from 1042 people being screened using the JNC-7 guidelines. Results showed. 384 (36.9%) had normal blood pressure, 400 (38.4) were pre-hypertensive, 158 (15.2%) had stage 1 hypertension, and 79 (7.6%) had stage two hypertension. Hemoglobin testing performed on 396 people with 167 (42.2%) were considered anemic with a hgb level less than 10 gm/dl. Point of Care HIV testing were performed on 327 people with 4 (1.2%) positive new cases being reported.
Conclusions: Health conditions in rural Tanzania, Africa are diverse. Leading clinical diagnostic disorders include musculoskeletal, abdominal, and URI symptoms. The incidence of elevated blood sugar, blood pressure, and anemia are concerning. The incidence of HIV appears to be quite low for this region. Diabetes is concerning with 43% of those sampled have diabetes or are at high risk. These findings warrant additional investigation to better understand this phenomenon.

ASSESSING DIABETES IN RURAL TANZANIA WITH THE COMMUNITY READINESS MODEL

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Purpose/Aims: This prospective community readiness assessment will evaluate community's readiness for change in the self-management of diabetes. The aims are to: 1) Describe the general perception and impact of diabetes on people living in the Kikatiti ward of northern Tanzania, Africa 2) Identify the community resources for people living with diabetes in the Kikatiti ward of northern Tanzania, Africa.

Background: Medical conditions experienced in developing counties are similar to those in developed countries however there are special conditions that are unique to developing counties including those in sub-Sahara Africa. In Tanzania, Africa, there is one physician for every 33,000 residents, with clustering of health services in the urban centers. The incidence of non-infectious health conditions in sub-Sahara Africa is expected to exceed infectious disease. In the Kikatiti ward of rural Tanzania, pre-diabetes and diabetes affects 20-40% of the adult population. Understanding the health perception of this condition and assessing the communities readiness to change will guide the development of culturally sensitive interventions for the treatment and management of diabetes.

Methods: Using the community readiness assessment, key informants from the Kikatiti ward in northern Tanzania, Africa will be interviewed using a series of anchor statements. The responses will be analyzed by two raters to determine a subset readiness assessment score as well as a composite readiness score.

The interviews will be conducted via a translator and the anchor statements will be translated into Swahili with reverse translation to insure accuracy in meaning and comprehension. The number of interviews will continue until saturation is achieved.

Conclusions: Access to health care in Tanzania, Africa is limited. Approaching the growing concern about type II diabetes requires a comprehensive knowledge of the condition. Developing and educational intervention for the self-management of diabetes requires a culturally appropriate understanding the scope and magnitude of the condition. These data will guide the development of a non-pharmacologic intervention based at self-management of type II diabetes in rural Tanzania, Africa.

ISSUES IN COMMUNITY HEALTH

COMMUNITY ENGAGEMENT WHEN THE PROTOCOL IS SET: NATIONAL CHILDREN'S STUDY

Beth Tigges, Robert Annett, Sally Davis, Renate Savich, Kristine Tollestrup, Andrew Rowland, Josala Fetherolf

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BARRIERS TO PUBLIC HEALTH NURSES REPORTING DOMESTIC VIOLENCE

Lucrecia Molina, Kathleen Gilchrist

COMMUNITY-BASED RECRUITING IN A POPULATION WITH HEALTH DISPARITIES

Cecile B. Evans

CBPR: GRIEF AND HISTORICAL TRAUMA WITHIN A TRIBAL COMMUNITY

Patricia A. Holkup, Emily Matt Salois, Gyda Swaney, Annie Belcourt, John E. Salois, Mary Louise DeRoche, Melveena Malatare

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PILOTING THE NURSING COMMUNITY APGAR QUESTIONNAIRE (NCAQ)

Molly Prengaman, Ed Baker, Jeri L. Bigbee, David Schmitz

FAITH COMMUNITY NURSING: A PILOT STUDY

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PUBLIC HEALTH BUDGET CUT IMPACTS ON MATERNAL/CHILD HEALTH OUTCOMES IN WASHINGTON STATE

Erin L. Abu-Rish

WHAT'S UP IN CUBA? A VIEW OF THE CUBAN PUBLIC HEALTH SYSTEM

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COMMUNITY ENGAGEMENT WHEN THE PROTOCOL IS SET: NATIONAL CHILDREN'S STUDY

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Purpose: The purpose of this paper is to describe the community engagement strategies for a national, longitudinal, epidemiological study with a set protocol–the National Children's Study–in Valencia County, New Mexico.
Background: The National Children's Study is a prospective cohort study of 100,000 children nationwide who will be followed from before birth until 21 years of age. The purpose of the observational study is to examine genetic and environmental influences on children's health and development. Valencia County, New Mexico (55% Hispanic; 3% American Indian) is one of counties that was selected using probability-based methods for recruitment and retention of 1,300 pregnant women (1,100 children). Women are being recruited using door-to-door household contact, thus it is critical that families be willing to open the door to investigators and participate in enumeration and discussions about the Study. It is equally important for research results to be available to and benefit community members.
Methods: The continuum of community engagement ranges from high community involvement in community-based participatory research to low community involvement in traditional research. The National Children's Study epidemiological *design* involves a core protocol and is at the traditional end of the continuum. In contrast, the Study's research *process* places a high value on community engagement and includes strategies to work with community members to best implement the Study. These strategies include, but are not limited to, hiring a Community Liaison, hiring data collectors from the community, convening a Community Advisory Council, and an extensive advertising campaign involving locally produced television, radio, and billboard ads.
Results: Strategies for community engagement have resulted in significant enthusiasm for the Study among community residents and Study participants, both prospective and enrolled.
Implications: It is anticipated that recruitment and retention of women and families in the Study will be highly dependent on the success of community engagement activities. An understanding of how best to engage communities when working with a set research protocol will provide the most benefit for both community members and researchers.

BARRIERS TO PUBLIC HEALTH NURSES REPORTING DOMESTIC VIOLENCE

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Background: Domestic violence (DV) is defined as the willful intimidation, physical assault, battery, sexual assault, and/or abusive behavior perpetrated by an intimate partner against another. DV disrupts the whole family while intensely affecting the well-being, health, and vitality of family members. It costs ~$5.8 billion/year in lost wages, missed work, and household productivity and ~ $4.1 billion in mental health services. Females comprise 85% of the DV victims. Public health nurses have a unique position to detect domestic violence before many other health care professionals, due to greater access to troubled families especially through home visits.

Purpose: The purpose of this quantitative, cross-sectional study was to partially replicate J. Smith and colleagues' (2008) Domestic Violence Survey and identify the barriers public health nurses encounter to reporting domestic violence in a California public health department.

Methodology: A quantitative, exploratory, descriptive study was conducted. A demographic form and revised Domestic Violence survey was e-mailed to 110 public health nurses.

Results: Thirty-two surveys were mailed back to the researcher (29% response). The findings indicated the top reporting barriers for public health nurses were: Not enough evidence of DV, client did not want the episode reported, and fear of repercussions/ retaliation toward the client. 37. 5% PHNs suspected DV but did not report it stating not enough evidence as the top barrier. Despite these reporting barriers, the majority 62.5%, reported domestic violence and provided referrals for the victims. Interestingly, 12.5% said there was a DV assessment tool, 68.75% said no, and 18.75% did not know if there was a DV assessment tool, however no standardized tool is being used. Therefore, results indicate a need for a domestic violence assessment tool. Twenty-nine nurses (90.63%) knew someone as a target of domestic violence, which represented clients, friends, family members, and/or co-workers. Both J. Smith's and this study had the same top two reporting barriers.

Nursing Implications: For the subjects (37.5%) who suspected domestic violence but did not report it, education, training, and a standardized assessment tool for domestic violence are recommended. This would be beneficial to public health nurses to confidently and properly report domestic violence without facing reporting barriers. In 1994, CA mandated that domestic violence be reported. Not all of the PHNs seem to be aware of this law and need to be educated about how to report DV and who to report it to. In addition, nursing students need to be educated in their ADN & BSN programs about DV violence reporting laws and where and how to refer clients.

COMMUNITY-BASED RECRUITING IN A POPULATION WITH HEALTH DISPARITIES

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Purpose: To describe the process and results of recruiting for a research study to assess function and pain in community-dwelling, adults with limb loss in the Mid-Southern United States.

Background: The population in the Mid-South is affected by health disparities that place them at risk for limb loss. These include high rates of diabetes, obesity, smoking, and poverty. Additionally, a large proportion of the population is of African American ancestry, which is an individual risk factor for limb loss. There were no studies discovered that studied function and pain in persons with limb loss from the Mid-South, or a population with the same unique combination of health disparities that increase limb loss risk.

Methods: A purposive sampling technique was used. Prior to starting the recruitment process, the principal investigator networked with limb loss support groups, national advocacy groups, prosthetic practices, physical and occupational therapists, and other health care providers to promote collaboration for the recruitment process. Several recruiting sources were used including support groups, traditional mail, prosthetic practices, physical/occupational therapists, individual health care providers, flyers, media announcements, web-based announcements, printed articles about the study, and web-based magazines.

Results: There were 62 research participants recruited that were entered into the research study. Recruiting sources provided the following number of participants; 21 from support groups, 14 from direct traditional mailing, 9 from prosthetic practices, 9 from physical/occupational therapists, 7 from individual health care providers, and 2 subjects reported that flyers were given to them by friends. No one responded to media announcements, web-based announcements, articles, or web-based magazines.

Implications: Nurses who recruit populations with health disparities need to make personal contact with the target population and key health care providers in the community. This includes active involvement with support groups and advocacy groups. Advertising and promoting the study through print or web-based media was not effective to recruit study participants.

CBPR: GRIEF AND HISTORICAL TRAUMA WITHIN A TRIBAL COMMUNITY

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Purpose: The purpose of this poster is to describe how principles of community-based participatory research (CBPR) have been instrumental in the development and implementation of a culturally anchored intervention to address historical trauma and unresolved grief in one Tribal community.

Rationale/Background: Native American scholars have developed a compelling case for linking centuries of historical trauma to continued unresolved grief in Native communities today. Historical trauma can be traced through a centuries-long legacy of genocide covering roughly 6 periods: first contact with western Europeans, competition for resources with vastly differing values toward these resources, the invasion wars, era of subjugation and forced movement onto reservations, boarding school era, and the era of forced relocation and termination. Although beginning centuries ago, this constant and relentless traumatic process continues today. The historical trauma response has been associated with internalized oppression, depression, suicide, homicide, domestic violence, and addictions.

Project Description: In response to an informal community survey, Tribal community members identified grief and historical trauma as underlying causes of experienced health disparities. The project was conceptualized in consultation with community members with the goals to begin a healing process for unresolved grief and to interrupt the intergenerational transmission of the deleterious sequelae stemming from historical trauma. The specific aims of this project are to: a) describe the experience of current grief among the Tribal adults, b) explore the relationship of historical trauma to traumatic grief, and c) pilot and evaluate culturally anchored grief recovery retreats.

Outcomes Achieved/Documented: To date, advisory boards pertinent to each phase of the project have provided oversight for the project components, including: a) a day-long community workshop (involving close to 200 participants) presented by Dr. Maria Yellow Horse Brave Heart on historical trauma, b) Tribal college and university student involvement, c) Tribal members' preparation for and participation in the 3-day historical trauma/grief retreats, and d) the collection of grief related phenomenology interviews. Measures of Historical Trauma, Historical Trauma Associated Symptoms, Traumatic Grief, a Grief History, and Demographics are being used to collect quantitative data.

Conclusions: As participants in the CBPR approach, which is congruent with Tribal values, community members have embraced the project and integrated the grief retreat intervention into Tribal healing ceremonies.

Funding: Grant Number P20 RR-16455-09 from the National Center for Research Resources (NCRR), a component of the NIH.

PILOTING THE NURSING COMMUNITY APGAR QUESTIONNAIRE (NCAQ)

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Purposes/Aims: The purpose of this project was to pilot and assess the utility of the Nursing Community Apgar Questionnaire (NCAQ) tool.
Rationale/Conceptual Basis/Background: In rural and frontier areas of the United States, the nursing shortage is particularly severe. There is minimal literature available which specifically addresses the unique nursing recruitment and retention issues faced by rural hospitals. What research has been done suggests that factors such as lifestyle, community environment, professional autonomy, and clinical variability impact rural nurse recruitment and retention. Drs. Baker and Schmitz previously developed a Critical Access Hospital Community Apgar Questionnaire (CAH CAQ) which identified factors that influence rural family physician recruitment and retention. The development of a parallel tool for nursing serves to provide a unique interventional package with which rural hospitals will be able to address their workforce needs. Conceptually, the project drew upon Bushy's application of the core nursing concepts of person, environment, health, and nursing to the unique aspects of rural nursing.
Methods: Phase I of the project resulted in the development of the Nursing Community Apgar Questionnaire (NCAQ). The goals of Phase II focused on pilot testing the NCAQ at twelve critical access hospitals in Idaho. Based on expert input, five hospitals that had historically struggled with recruitment and retention (betas), and six that had historically done well (alphas) were selected and completed NCAQs. Surveys outlining recent recruitment and retention activities were also completed by each participant. The survey results will serve to validate the alpha or beta designations.
Results: Data are being analyzed to identify those factors that rural communities and hospitals can utilize to optimize results of their recruitment and retention efforts. The analysis will also include comparisons among the respondents and contrasts with literature.
Implications: In conjunction with the CAH CAQ which was developed to address rural physician recruitment and retention, the Nursing Community Apgar Questionnaire (NCAQ) can be utilized by rural communities and hospitals to impact their unique workforce issues. This tool may serve to decrease rural nursing vacancies and improve access to care for rural populations.

Funding: The Idaho Office of Rural Health and Primary Care and the Boise State University College of Health Sciences.

FAITH COMMUNITY NURSING: A PILOT STUDY

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Purpose and Rationale: Older adults comprise the largest group of medication consumers: 30% of prescription and 40% of over-the-counter (OTC) medications. Polypharmacy, concurrent use of multiple medications, is a serious concern for this population. Older adults with multiple chronic and acute conditions encounter issues when more medications are prescribed than clinically indicated. This can result in overlapping use of medications for similar therapeutic effects or treatment of side effects with additional medications. One public health approach to the management of medications in older adults is the pharmacy "brown bag", a method of medication review where consumers bring all of their prescription and OTC medications and supplements in a "brown bag" for review with a pharmacist and nurse. The purpose of this study was to explore the impact of extended faith community nurse (FCN) follow-up contact after Brown Bag Medication Review events on reducing problems associated with and improving self-care related to medication use.
Methods: This was a pretest-posttest time series design study with multiple faith communities participating in various community locations over a three month period. Flyers, newsletters, and verbal announcements presented the opportunity for participating in the brown bag events. Each event consisted of obtaining a health history, a focused nursing assessment, private consultation with a pharmacist, and an exit interview with a FCN based in the respective faith community. The exit interview collected data on an investigator-developed survey regarding common medication complications, sources of information and support for managing medications. FCNs followed-up with participants via telephone call or personal interaction to offer referrals, answer questions, or provide support. Additionally, FCNs collected 3-month and 6-month surveys.
Results: 67 participants were enrolled into the study at time 1, with 49 still enrolled at time 2 (73% retention rate), and 22 completing the study at time 3 (33% retention rate). The extremely low retention rate results in reporting of time 2 data only. The sample mean age was 75.8 ± 8.9 years, was predominately female (73%), and at time 1 took an average of 9.7 ± 5.1 medications daily. After the intervention, time 2 data reveals a significant decrease in the number of medications, (6.7 ± 5.5, $t_{(66)} = 3.83$, $p < .001$), with 32% of the sample reporting a positive change in their medication behaviors. Unexpected findings were a decrease in both the quality of life ($t_{(66)} = 3.54$, $p < .001$) and the quality of health ($t_{(66)} = 4.44$, $p < .001$).
Implications: This pilot study revealed the importance of including a FCN for sustained follow-up in the brown bag medication review concept. These preliminary findings suggest that the inclusion of FCN expertise in the management of medications in the community-dwelling older adult result in improving medication management behaviors. The limitation of a small sample size and a low retention rate need to be addressed in future studies to fully interpret the current findings. However, this study serves as a foundation for supporting the importance of the FCN role in the care of older adults.

PUBLIC HEALTH BUDGET CUT IMPACTS ON MATERNAL/ CHILD HEALTH OUTCOMES IN WASHINGTON STATE

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Purposes/Aims: This abstract describes an in-progress PhD student research project to explore relationships between local health department budget levels in Washington State from 2005-2010 with key maternal/child health outcomes, including: teen pregnancy rate, pre-term birth rate, timing of initiation of prenatal care, and WIC enrollment.

Background/Rationale/Conceptual Basis: Since 2007 the state of Washington has experienced a serious and ongoing financial upset. State and local government revenues have declined significantly and difficult policy and budget decisions have been made across the board impacting public services. Public health departments have not escaped cuts and these have included maternal/child health programs at the county level. During the 1970's budget cuts of a similar scale in New York City were correlated with a syndemic of HIV, tuberculosis, and murders that disproportionately affected the poor (Freudenberg, N., Fahs, M., Galea, S., & Greenberg, A., 2006). We do not yet know the impacts of the current cuts on maternal/child health outcomes and who they may disproportionately impact but understanding these relationships is critical to policy making.

Methods: Descriptive statistics and correlational techniques will be used to explore relationships between datasets reflecting public health funding levels and maternal/ child health outcomes.

Results: Preliminary results will be presented in poster form at the 2011 WIN Conference.

Implications: Results of this study will be useful in identifying preliminary correlations between public health department funding levels and maternal child health outcomes in Washington State counties. It will lay the groundwork for continued research into relationships between ongoing, worsening budget cuts and maternal/ child health outcomes. In addition, public health nurse staffing levels in Washington State have been, and will continue to be, tied to public health funding and maternal/ child health services. Documentation of hypothesized relationships between public health department funding and services and health outcomes can be used to help guide budgetary and programmatic decision making in difficult budget environments.

Works Cited:

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WHAT'S UP IN CUBA? A VIEW OF THE CUBAN PUBLIC HEALTH SYSTEM

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Background: While countries of the world struggle with fragmented and inefficient health systems, the Cuban approach to public health integrates primary and secondary prevention strategies within their health system. Cuba has been able to achieve some things that few Western countries have been able to achieve: equal access to health services for the entire population and equity in health status. Cuba's exclusively public health system has been quite unique in pairing limited resources with excellent results.

Purpose: The purpose of presentation is to introduce the Cuban public health system, describe the primary and secondary prevention methods, and discuss the prioritization of services and program delivery.

Methods: Site visits and interviews with key informants to the National School of Public Health, the Center for the Prevention of STIs/HIV-AIDS, and the National Center for Nutrition and Hygiene.

Outcomes: The information for this presentation is based on a visit to Cuba in November 2010 as a member of the American Public Health Association's delegation to the country. The focus of the delegation will be on program and service delivery, as well as policy development.

ISSUES IN THE CARE OF CHILDREN

THE EFFECT OF ABUSIVE HEAD TRAUMA PREVENTION ON CHILDREN UP TO 24 MONTHS OF AGE

Kathy Lopez-Bushnell

SCHOOL PE ACTIVITY PARTICIPATION: DIFFERENCES IN GENDER PERCEPTIONS

Diane L. Thomason

DEFINING CNS INJURY IN CHILDREN WITH BRAIN TUMORS TREATED WITH CHEMOTHERAPY

Mary Baron Nelson, Peggy Compton, Paul Macey, Sharon H. O'Neil, Eufemia Jacob, Sunita Patel, Ronald M. Harper

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SYMPTOM MONITORING, DEPENDENT CARE & CANCER TREATMENTS OF THAI CHILDREN

Phoebe D. Williams, Ubolrat Piamjariyakul, Arthur R. Williams

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TRANSITIONING THE 'DRAW-AND-TELL CONVERSATION' TO A COMPUTER PLATFORM

Martha Driessnack

THE UTILITY OF A PEWS SCORE TO IMPROVE TRIAGE ACCURACY IN THE EMERGENCY DEPARTMENT

Donald W. Mitchell

PEDIATRIC NURSES' USE OF THE FLACC PAIN SCALE: A Q.I. STUDY

Roxie Foster, Kristine Wolter-Warmerdam, Jan Grantham, Beth Hasse, Debra Quackenbush, Marilyn Scheck

THE EXAMINATION OF CHARACTERISTICS
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ATTENTION-DEFICIT HYPERACTIVITY DISORDER:
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SEX EDUCATION DECISION MAKING AT THE
INDEPENDENT SCHOOL DISTRICT OF BOISE
Annabeth Elliott

THE EFFECT OF ABUSIVE HEAD TRAUMA PREVENTION ON CHILDREN UP TO 24 MONTHS OF AGE

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Purpose/Aims: To measure the effect of "Preventing Abusive Head Trauma among Infants and Young Children: A Hospital-Based, Parent Education Program" on the incidence of abusive head injuries among infants and children up to 24 months of age at UNMH.

Rationale/Conceptual Basis/Background: The rational is that an estimated 750 to 3,750 babies suffer from "preventable abusive head trauma", also known as "Shaken Baby Syndrome". {{2771 Azema, B. 2010:}} {{2788 Jacobi, G. 2010;}} . This type of head trauma is 100% preventable. Prevention through parent, caregiver, and community-wide education programs is the only option for infants who are at risk for SBS {{2768 Talarowska, M. 2010;}}. The conceptual basis for this research is the Nightengale patient-centered, outcomes-driven, holistic approach to patient care.

Background: The only research study on preventing abusive head trauma was conducted by Mark Dias, MD, FAAP, and colleagues. Results of the program during the first six years demonstrated the incidence of abusive head injuries decreasing by 47%, from 41.5 cases/100,000 live births to 22.2 cases/100,000 live births in the study region. Annual rates of SBS decreased from an average of 8.2 cases per year to 3.8 cases per year; this reflects a 53% reduction (Dias, M.S. 2005).

Methods: This is a replication study of Dias at the University of New Mexico Children's Hospital with approximately 300 parents. The intervention includes having the nurse have the parents view the video, receive educational material, sign a commitment statement, and have a follow-up phone call seven months post-discharge. The ultimate goal is to expand the program to all the hospitals in New Mexico that deliver babies and are willing to participate. We have enlisted the help of the NM Hospital Association and the NM Public Health Department to encourage this participation. UNMH has developed or purchased the materials for the program (pamphlets, posters, videos, etc) and has developed a website to share these materials and process with all participating hospitals. A statewide data depository on the incidence of "Preventable Head Trauma" diagnoses will be established so that the effect of the educational intervention can be measured on the incidence of Head Trauma.

Results: There have been over 70 parents who have viewed the video, received the written educational materials, talked with the nurse and signed the consent letter. We will be calling them back in February, 2011 and asking what they remember from the video. The web site is being updated to include all the materials for duplicating the study in New Mexico and includes all the educational materials, scripts for the nurses and other information for the replication study.

Implications: The implications for completing this study are to measure the effect of family education and follow up on reducing the incidence of preventable head trauma in New Mexico.

SCHOOL PE ACTIVITY PARTICIPATION: DIFFERENCES IN GENDER PERCEPTIONS

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Purpose/Aims: The purpose of this study was to determine and describe perceptual differences between male and female high school students' attitudes about factors influencing participation in school physical education (PE). Six domains were measured: Self-efficacy, PE Enjoyment, Personal Factors, Behavioral Control, Barriers, and Social Norms.
Background: Physical activity plays a critical role in the health and development of youth, while schools have traditionally provided American youth with physical activity opportunities. Recent studies report a decline in adolescent school PE activities. One explanation for decreasing levels of physical activity during adolescence is the number of perceived deterrents that make it difficult to participate in PE activities. However, the factors deterring PE participation are likely to be somewhat different for males and females.
Methods: Results of *t* tests from the Physical Education Activities Scale (PEAS), a 41 item scale (α= .89) using the Ecological framework, was utilized to describe perceived differences between the genders in a sample of high school adolescents (N=439) from two Pacific Northwest urban high schools in each of the six domains.
Results: There were significant differences in gender perceptions of what influenced PE activity participation overall ($p < .001$) and in each of the six domains ($p < .05$). Females perceived fewer overall positive environmental influences in school related to PE participation (M= 7.89) compared to males (M= 8.56). In the six domains, female's perceived deterrents to PE participation included perceptions of less skill and competency to perform activities (Self-efficacy); PE as not being fun, but boring (Personal Enjoyment); not being offered activities they liked, not being able to use new equipment (Behavioral Control); not being able to choose the activity (Personal Factor); being embarrassed with their bodies, not liking the teacher choosing the activities (Barrier), as well as parents and peers negative attitudes towards PE (Social Norms).
Implications: Results suggest that strategies to address specific intrapersonal, interpersonal and social-environmental deterrents to PE activity participation should be considered in PE activity programs for adolescent girls.

DEFINING CNS INJURY IN CHILDREN WITH BRAIN TUMORS TREATED WITH CHEMOTHERAPY

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Purpose: To determine whether treatment of childhood brain tumors with high-dose chemotherapy causes unintended structural changes in white and gray matter, and whether such changes are associated with neurocognitive deficits and decreased quality of life (QOL).
Aim 1: Using diffusion tensor imaging (DTI) magnetic resonance imaging techniques, assess gray and white matter tissue injury in children treated for brain tumors with high-dose chemotherapy compared to age- and gender-matched healthy controls.
Aim 2: Evaluate the relationship between gray and white matter tissue injury and functional outcomes (cognitive, QOL) in children treated with high-dose chemotherapy.
Background: Brain tumors are the second most common type of cancer in children. For survivors, neurocognitive deficits are common, and are linked to poor educational attainment and behavioral and social difficulties, which may contribute to poor QOL. High-dose chemotherapy with autologous hematopoietic stem cell rescue (AuHCR) has become more common as frontline treatment for brain tumors in young children, in an attempt to avoid deleterious effects of cranial radiation. There is evidence that chemotherapy contributes to cognitive effects in adults, but there is little research on these effects in children from such intervention for brain tumors. Cognitive deficits, especially memory aspects, appear with chemotherapy, and do not always resolve after therapy completion. Damage to progenitor cells that play a key role in white matter integrity and memory may be involved in the processes underlying cognitive effects after cancer treatment.
Methods: To evaluate the degree of neuronal injury caused by high-dose chemotherapy in childhood brain tumor survivors, we will use a two group quasi-experimental design to compare the structure of white and gray matter volume in key areas (frontal and prefrontal cortices, hippocampus, fornix) in brain tumor patients to healthy age-and gender-matched controls (drawn from the NIH MRI Study of Normal Brain Development). Brain tumor survivors ages 5 - 12 years who were treated with high-dose chemotherapy with AuHCR, off-treatment for at least 6 months, will comprise the patient sample recruited from a large children's hospital in the southwestern U.S. Age at diagnosis will be a covariate. To evaluate the correlation between degree of white and gray matter loss in regions of interest in the brain and measures of neurocognitive function (California Verbal Learning Test® – Children's Version; Behavior Rating Inventory of Executive Function [BRIEF™] Parent Report; Behavior Assessment System for Children [BASC II]; NEPSY II Memory for Designs; and NEPSY II Inhibition test) and QOL (PedsQL™4.0 Generic Core), a survey design will be used to evaluate outcomes in the brain tumor survivor group only. Specifically, white and gray matter structural changes in brain areas controlling cognitive function as measured with DTI will be explored as predictors of memory and executive functioning, and QOL.

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SYMPTOM MONITORING, DEPENDENT CARE & CANCER TREATMENTS OF THAI CHILDREN

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Aims/Conceptual Framework: Examined (a) symptom occurrence/severity as monitored/ reported by parents/caregivers of children/adolescents during cancer therapy; (b) how symptom occurrence/severity and child functional status are inter-related; (c) what the caregiver/child report they do to help alleviate symptoms, including self-care/ dependent care, during cancer therapy; and (d) what self/dependent/complementary care categories are reported. Used Orem's self-care/dependent care concept.
Methods: Cross-sectional, descriptive study; 100 parents/children ages 5-17 years: 71 males; 75 were 5-11 years old; 25 were ages 12-17. Cancer diagnoses: 63% Leukemia; 12% Nervous system tumors; 10% Solid tumors, such as Wilm's tumor, rhabdomyosarcoma; 6% Lymphoma, such as Hodgkin; 9% Other including cancer of liver, ovary, kidney, retinoblastoma. Used the 34-item Therapy-Related Symptom Checklist for Children (TRSC-C) to record patients' symptom occurrence/severity (0, no symptom; 4, "A whole lot"; and Symptom Alleviation: Self-Care Methods (SA:SCM) tool, to identify methods parents used to alleviate chemotherapy-related symptoms. The Nurse Clinician rated the child's condition and activity (functional status) with the Lansky scale (if 5-15 years old) or the Karnofsky scale (if 16-17 years old). Reliability, content, and construct validity of all tools have been established.
Results: A. Over 45% reported 17 symptoms, mean severity "Quite a bit": hair loss, nausea, vomiting, fever, dry mouth, loss of appetite, weight loss, irritable, cough, sore mouth, pain, sweating, feeling sluggish, depression, afraid, constipation, and headache.
B. TRSC-C scores (symptom occurrence and severity) and Lansky/Karnofsky (functional status) are significantly related. **C.** Of six categories of self/dependent-care methods/ complementary therapies, all found useful; first two most common. **D.** Examples of methods: ***a***. *Diet/nutrition category*, includes providing more variety, offering child's favorite foods, and changing meal frequency; ***b***. *Mind/body control*, includes providing encouraging words, massage, allowing more rest periods, more activities, and sponge baths; ***c***. Biologic treatment, e.g.,: taking vitamins and minerals; ***d***. Herbal treatment, e.g., applying ginger herbal solution, violet flower, and coconut oil; ***e***. "Other" category, e.g., following up with doctor and mouth care; ***f***. Prescribed medications, e.g., anti-emetics for nausea, Xylocaine (sore mouth), inhaler (shortness of breath), Paracetamol (fever), and laxatives for Constipation.
Implications: Assessing patient/parent-reported symptoms and use of dependent/self care may help Thai families cope during pediatric cancer treatments.
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TRANSITIONING THE 'DRAW-AND-TELL CONVERSATION' TO A COMPUTER PLATFORM

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Background: Self report remains the gold standard when researching pain. Yet, the majority of pediatric self-report tools used in pain research were originally developed with and for adults, not children. Adding child-friendly pictures and/or language does not eliminate the adult-centered and –biased origins or nature of existing tools. To improve the accuracy of research with children, there is a critical need to develop child-sensitive tools that capitalize on children's processing capabilities. One child-sensitive approach to self-report is the Draw-and-Tell Conversation (DTC).
Purpose: The purpose of this study was to explore transitioning the DTC to a computer platform.
Methods: Using a cooperative inquiry approach, 16 children completed a DTC using both paper/pencil and multi-touch tablet PC applications. Each DTC was video-taped. To focus the study, children between 7-12 years of age with primary headache were recruited. These children were purposefully selected because headaches are common and on the rise, intrusive, interfere with learning, and the majority of self-report tools used to assess these children were first developed with and for adults and only later adapted for children.
Findings: While the children in this study advocated for both the traditional paper/pencil DTC and the computer application, the narratives that accompanied the drawings using a multi-touch PC provided new insights into headache pain and the ability of children to communicate these insights in detail. Using the multi-touch PC, children created personalized pain communication tools, inserting their own self-portraits or photos. Of particular interest was the categorical (no headache, its coming, its here), rather than scaled, approach to the children's self-report of headache pain.
Implications: Headaches are one of the top five health problems for young children and there are indications that existing rates are on the rise. Headaches currently account for over a million lost school days each year. Further, 70% of children with chronic headaches continue to experience headaches into adulthood, leaving to question whether or not existing measures and intervention efforts are adequate. The development of child-sensitive approaches to self-report may provide insight into personalized assessment and/or tailoring of interventions, not only for children with headache pain, but also for other health-related phenomena. The ability to transition the DTC to a computer platform may also be helpful for children with limited mobility.

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THE UTILITY OF A PEWS SCORE TO IMPROVE TRIAGE ACCURACY IN THE EMERGENCY DEPARTMENT

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Aims: 1) To assess accuracy of the Emergency Severity Index (ESI) 5-level triage tool in the clinical ED setting with a pediatric population 2) To compare scores on a modified Pediatric Early Warning Score (PEWS) with triage levels to establish validity and utility.

Background: The Emergency Severity Index (ESI, version 4), the dominant 5-level triage instrument, has established reliability and validity but has shown disagreement among providers during the assignment of a pediatric triage level. Among other criteria, the ESI recommends use of the "pediatric assessment triangle" (PAT) technique. This consists of three areas of assessment: general appearance, work of breathing, and circulation to skin. The PAT is intended as an "across the room" assessment, and leaves considerable room for subjective variation in assessment.

The Pediatric Early Warning Score (PEWS) was developed as a trigger tool to activate Rapid Response team to intervene with hospitalized children whose physiological state was deteriorating. The PEWS score is generated primarily in three categories: behavior, cardiovascular, and respiratory. Because the PEWS and the PAT are conceptually similar, using the PEWS to supplement pediatric triage assessments should result in improved consistency in assigning triage levels.

Methods: 100 ED patients aged 0-17 years are triaged and assigned an ESI level and PEWS score by the triage nurse. When placed in an exam room, a second nurse performs an independent assessment, and records and ESI level and an ED-modified PEWS score. Children are assigned an anonymous serial number. Age and gender of patient are recorded, as well as disposition (discharge, acute admission, or admit to ICU).

Statistical analysis consists of calculating Cohen's *kappa* between ESI scores and PEWS scores recorded by each nurse to measure inter-rater reliability, as they are criterion-referenced measures. Correlation analysis will be performed between the ESI and PEWS scores to determine strength of relationship. Disposition will be used to establish criterion-related validity for both scores.

Results: Research in data collection; no results for report at this time.

Implications: Triage is a vital process in emergency care provision. Improving accuracy to ensure the sickest patients are seen first, by extension improves quality of care in the Emergency Department. This supplemental score may be of particular help in general ED's, where clinicians are less familiar with pediatric patients. In addition to improving triage accuracy, the PEWS may help determine which patients may be more safely placed in the waiting room, versus those children requiring closer nursing observation.

PEDIATRIC NURSES' USE OF THE FLACC PAIN SCALE: A Q.I. STUDY

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Purposes/Aims: This quality improvement project was designed to: (a) identify how pediatric nurses obtain FLACC scores in daily practice, (b) identify resources nurses report they need for accurate use of the instrument, and (c) through rapid cycle improvement methods, implement and evaluate resources to assist nurses in accurate assessment.
Rationale/Background: The last two decades have witnessed widespread adoption of pain assessment tools in healthcare institutions. Adoption, however, may not be synonymous with accurate use. This study is the first of its kind to study the actual use of a widely-adopted behavioral scale for pain assessment in children. The FLACC scale has five categories (face, legs, activity, cry, and consolability) each of which are scored on a 0-2 scale and summed for a total score of 0-10. This study was prompted by a preponderance of clinical reports that nurses tend to use the scale as a visual analogue scale, estimating the pain score based on their overall observation or gestalt of the child versus scoring each FLACC category. Improper use invalidates accuracy and challenges the safety of using such assessments to titrate potent analgesics.
Methods: This QI study employs Institute for Healthcare Improvement's (IHI) Plan-Do-Study-Act (PDSA) method to develop, implement, and evaluate the improvement initiatives. The design specifies recruitment of up to 130 nurses across 8 intensive care and medical-surgical units in a large western children's hospital. Baseline data, including demographics, were gathered across all eight participating units. Within 30 minutes of a FLACC assessment, nurses were asked to describe how they arrived at the pain score, the adequacy of their training with the tool, and what additional resources would be helpful in using the tool. Audiotaped responses enhanced accurate data entry and response coding. Correct use of the FLACC scale was operationalized as use of all five categories to achieve a total score. Successive PDSA cycles, which will be completed in December 2010, are implementing additional resources requested by nurses and evaluating the ability of these resources to improve correct use of the tool.
Outcomes Achieved: Baseline data from 27 nurses across eight hospital units revealed that nurses had used the FLACC scale for pain assessments for an average of 2.75 years (SD = 1.75) and 69% of them indicated their training on the tool was adequate. Of these respondents, 63% failed to correctly assess and sum the tool's five categories to achieve a pain score. Nurses who accurately administered the FLACC had used the tool for fewer years (M = 1.73, SD = 1.75) in comparison to nurses who did not use the tool correctly (M = 3.*35, SD* = 3.26). Nurses requested visual reminders about the tool, further training, and charting aids in the electronic medical record.
Conclusions: Although 69% of nurses said their training on the FLACC scale was adequate, only 37% described appropriate use of the instrument in practice. Safe and effective treatment requires accurate assessment. Results of this study promise hypotheses for future translational research in the clinical use of this pediatric pain assessment instrument.

THE EXAMINATION OF CHARACTERISTICS OF CHILD SEXUAL ASSAULT CASES IN IDAHO

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Purpose: Explore data from multiple agencies and child advocacy centers in Idaho, to determine pertinent variables associated with child sexual assault (CSA).
Background: Child sexual assault is a tragic experience in a child's life. Nurses can be instrumental in moderating the trauma of such an event and assisting the child with the recovery process. Nurses play a vital role in the collection of evidence, referral and treatment of children who have been sexually assaulted. According to the National Child Abuse and Neglect Data Systems (2008) 9.1% of US reported cases of child maltreatment were identified as CSA (70,252 cases). In Idaho 7% of 6,783 cases of maltreatment reported, were identified as CSA. Idaho counties range in population from 1000 to 391,000. As a sparsely populated state, ranked 39th, with multiple frontier counties, examination of the differences in data collected is imperative to the welfare of CSA victims in Idaho. Agencies differ in the data they collect and how the data is recorded. Consistent data collection methods would help to elucidate the experience of a child victim and assist in identification of risk factors and potential early intervention methods.
Methods: Quantitative analysis will include descriptive statistics and correlations to determine if relationships exist between the variables. Chi square, Mann Whitney U and t-tests will be used to determine differences in variables across counties and agencies. Expected variables will be: age of child, disposition of child, composition of family, report sources, perpetrator characteristics, physical location of the assault, length of the sexual abuse and if the case was referred for prosecution. A draft tool has been developed to aid in the extraction of the data and will be revised based on the information available in the CSA data. Ten to fifteen case reports will be utilized to determine the consistency of available data and suitability of the developed data extraction tool. Tool revisions will be made as indicated by this initial review.
Implications: Trends and patterns identified during data analysis will begin to demonstrate the scope and characteristics of CSA in Idaho. Information garnered from this study will inform local and regional policy development to enhance the identification and treatment of CSA victims and aid in the successful prosecution of perpetrators. This statewide data may be used to compare regional differences in Idaho and to compare national data as we examine the implications around child advocacy centers, forensic nurse examiners and policy. Variables collected from this study will inform CSA concept and theory development.

Funding: School of Nursing, Boise State University.

CHILDHOOD OBESITY

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Background: The incidence of childhood obesity is a significant health problem in the United States. As health care providers, we often identify children who are obese or overweight, yet find it very challenging to access culturally appropriate interventions that address weight management. Childhood obesity is linked with health problems including diabetes, asthma, joint problems, hyperlipidemia, and hypertension. The Ways to Enhance Child Activity and Nutrition (WECAN) program was developed by the National Heart, Lung, and Blood Institute (NHLBI, 2007) to educate parents and caregivers on overweight and obesity prevention with an emphasis on increasing parenting capacities to affect family health. Low income Latino families have unique stressors in their everyday lives. These families are more likely to have limited resources to address obesity prevention (no health insurance, and incomes below the poverty level). The program must be accessible to local participants, and within walking distance because many of the families have no transportation and rely on waking or bus to get where they need to go. A logical place to offer a program is at the local elementary schools.

Aim/Purpose of the Project: Evaluate the acceptance of the program by mothers. At the conclusion of the 6 week program, evaluate reported change in the daily intake of fruits and vegetables, the intake of sweetened beverages, and reported change in family activity levels.

Design: Quantitative data will be collected using a WECAN pre post survey. Qualitative data will be collected through informal discussions after each meeting to assess clarification of materials and need for additional information. Mothers will be recruited whose children attend the local elementary school in San Diego. Meeting will last 1 ½ hours and will be led by two pediatric nurse practitioners and one family nurse practitioner.

Results and Outcomes: Descriptive statistics will describe the study sample and the ranges of responses to the WECAN survey. Inferential statistics will evaluate differences between pre- and post-intervention responses. T-tests and Pearson correlation will be used for continuous variables and Chi-square tests will be used for categorical variables. A summary of qualitative data will be reported to measure acceptance and guide future program modification.

Implications and Conclusions: It is expected that families will show positive trends toward reaching their goals with the tools used in this WECAN project. We have an opportunity to learn Latina womens' perceptions of their ability to be significant role models for their families which may affect propensity for childhood obesity.

ATTENTION-DEFICIT HYPERACTIVITY DISORDER: EXTENSIVELY RESEARCHED & MISUNDERSTOOD

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Background: Attention-deficit/hyperactivity disorder (ADHD) affects an estimated three to five percent of school-aged children in the mental health setting and four to twelve percent in community settings making it one of the most prevalent mental health problems in children. The American Medical Association's Council on Scientific Affairs (Goldman, Genel, Bezman, and Slanetz, 1998) commented, "Overall, ADHD is one of the best-researched disorders in medicine, and the overall data on its validity are far more compelling than for many medical conditions. The diagnosis of ADHD constitutes up to 50 % of the child psychiatry population but at least 50% of them are not treated by a mental health specialist (Leslie, Weckerly, Plemmons, Landsverk, and Eastman, 2004). ADHD is one of the most debilitating disorders of inattention, impulsivity, and hyperactivity (Biederman & Faraone, 2004) and affects several aspects of a child's life, including parent-child relationships, academic performance, social skills, and self-esteem (Biederman, 2004). Children are also at increased risk for academic failure, social isolation, and involvement with deviant peer groups (Biederman & Faraone, 2004). In 2009, the American Academy of Pediatrics (AAP) reaffirmed their policy statements concerning the importance of prevention, detection, and management of pediatric behavioral health disorders. In a community setting pediatricians diagnosed ADHD but the treatment regime varied. To assist the community pediatricians, a structured intervention was developed that focused on recognition, treatment, and referral of children with behavioral health problems. Referrals were made, in part, due to black box warnings and mental health reform (Williams, Klinepeter et al., 2007).
Aim/Purpose of the Project: The clinical problem is that there is no guideline in place in the investigator's outpatient clinic setting to assess ADHD. The purpose of this project is to implement and evaluate a valid and standardized assessment tool to improve the accuracy of diagnosing attention-deficit hyperactivity disorder in an outpatient clinic setting for children between the ages of six and twelve years old at risk for ADHD. The assessment tool is the Vanderbilt rating scale. Post-implementation staff satisfaction will be measured.
Design and Methods: ADHD diagnoses data was collected from November 2009 through April 2010 prior to the implementation of a valid and reliable ADHD assessment tool and each month after implementation from November 2010 through April 2011. Data is being collected and analyzed utilizing a Pre and Post Quasi-experimental Time series design.
Results: Data analysis is in progress.
Conclusions and Implications: To be determined following the review and analysis of results. It is expected that introducing the AAP approved Vanderbilt assessment tool will improve the accuracy of diagnosing ADHD.

HEALTH OF RURAL FOSTER CARE YOUTH: CHALLENGES IN COMPLETING REFERRALS FOR HEALTH ISSUES

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Purpose: The purpose of this study was to examine the type and frequency of diagnosed health issues seen in children and adolescents coming into foster care in a 6-county rural area of a northwestern state. Additionally this study examined the referral needs of these children and the frequency of actual follow-up care following initial evaluation by nurse practitioners.
Background: At any one time, there are around 500,000 children and adolescents in foster care. More than half of these children have acute and/or chronic medical problems and most of them have significant health-related issues. Yet many studies have shown that these needs go unmet. While there has been great improvement in diagnosing these issues when children come into care, there is still a large gap in getting these children needed services or referrals after their health needs are identified.
Methods: An extensive retrospective chart review was completed on a large sample of children seen in a rural clinic specializing in evaluation of children and adolescents coming into foster care. Individual health issues were identified and then an extensive search of centralized state databases was done to identify all completed referrals and follow-up care that was done for these children while they were in foster care.
Results: Of the 114 records analyzed, 60.5% (n=69) of these children had significant health issues that had been identified by the nurse practitioner. These issues ranged from failed vision screenings to developmental delays to acute health issues requiring immediate treatment. Further investigation showed that only 48% (n=33) of those children with an identified health problem had documentation of requested follow-up health care or evaluation after initial diagnoses. There were no significant correlations between ethnicity of the children or the amount of time spent in foster care in relation to getting or not getting needed services.
Implications: This study helps to clarify access issues for this population of rural foster care youth. While there have been significant improvements in identification of health issues in this population, much work remains to deliver needed services to this group. Despite having access to funding sources, the complexity of foster care placements and various system breakdowns continues to plague this group. New models of health care delivery and an improved efficiency of current systems are needed to improve the overall health of this group of children and adolescents.

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SEX EDUCATION DECISION MAKING AT THE INDEPENDENT SCHOOL DISTRICT OF BOISE

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Purpose: To cultivate an in-depth understanding of the influences on sex education policy decisions at the Independent School District of Boise (ISDB) and to add to the body of knowledge which may facilitate the adoption of evidence-based sex education programs.
Background: In a 2008 community needs assessment, key informants agreed that comprehensive sex education was the best strategy for reducing pregnancy, abortion and sexually transmitted diseases in Boise teens. Because the ISDB had an abstinence-only policy, the strategy could not be implemented.
Design: A qualitative case study design was used to collect descriptive information about the ISDB health education policy implemented in 2010. The Communities Coping with Change Model was used as the theoretical framework to guide data collection and analysis of the case (Kelly & Steed, 2004).
Methods: Unstructured, one-on-one interviews were conducted with two Board of Trustees and five ISDB employees. Archival records, documents and the 2008 sexual health community needs assessment were also reviewed.
Results: Four primary categories of influence on sex education policy emerged: Conflict from the past, adherence to an abstinence-only sex education policy, the values of the Boise community and communication / bureaucracy. Sex education policy development had been contentious in the past and the Trustees and staff avoided conflict by strictly adhering to an abstinence-only philosophy. ISDB decision makers perceived a strong community value of sexual abstinence until marriage which superseded teaching comprehensive sex education. A bureaucratic organizational structure and competing priorities for education prevented communication between the ISDB Trustees, staff and the community. The ISDB Trustees and staff were unaware of the current research on the growing problem of poor teen sexual health in Boise, evidence of effective regarding sex education curricula or current research on parental support for comprehensive sex education. The community was unaware of the procedure for bringing sex education policy issues to ISDB Trustees and the vast majority of parents, teachers and nurses had not participated in the process since 1986.
Implications: Strong community support is essential to persuade the ISDB Trustees to adopt an evidence-based sex education policy. Nurses, teachers, parents and other community members must collaborate to present the ISDB Trustees with the data needed to fully inform their decisions regarding sex education. Additional research is needed on the barriers to participation in policy development, strategies to improve communication about sexuality and strategies to find common ground with abstinence-only supporters. More research to understand teen's perceptions of sex education and precisely gauge community support is also warranted.

METHODS ISSUES AND APPLICATIONS

FROM QUALITATIVE DATA TO THE WOMEN'S BREAST CONFLICT SCALE

Eileen Thomas

DEVELOPMENT AND VALIDATION OF AN INSTRUMENT MEASURING OCCUPATIONAL INTIMACY

Margo A. Karsten

ASSURING ACCURACY IN DATA TRANSLATION: THE PROCESS OF BACK-TRANSLATION

Audrey Russell-Kibble, Marylyn Morris McEwen

STOP BANG TOOL USEAGE TO DETECT OBSTRUCTIVE SLEEP APNEA FOR THE ANESTHESIA PROVIDER

Robin Tyler, Joseph F. Burkard

REFINING AN OUTDOOR ENVIRONMENT ASSESSMENT INSTRUMENT

Grace A. Kline, Barbara B. Cochrane

HUMAN-CANINE INTERACTION: RESPONSE PATTERNS OF SALIVARY CORTISOL & IMMUNOGLOBULIN A

Cheryl A. Krause-Parello

PROMOTING VERBAL PROCESSING IN NATURALISTIC DECISION MAKING RESEARCH

Katherine Y. Moore, Katie M. Baraki, Allen Hanberg, Alexa K. Doig

GPS-DIRECTED INTERVIEWING: A TECHNOLOGY-DRIVEN QUALITATIVE APPROACH

Shannon Petz, Dori Rosenberg, Basia Belza

COMBINING CBPR STRATEGIES & CASE STUDY METHODS: LESSONS LEARNED FROM LIBBY

Charlene A. Winters, Kimberly Rowse, Sandra W. Kuntz, Clarann Weinert

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COGNITIVE INTERVIEWING TECHNIQUE: VALUE AND CHALLENGES IN ITS USE

Shigeko (Seiko) Izumi, Sandra Benavides-Vaello, Roxanne Vandermause

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THE REALITY AND BENEFITS OF REAL-TIME BLOOD GLUCOSE DATA

Charles C. Reed, Andrea Berndt, Susan Gerhardt, Randy Beadle

USING A WORKSHOP TO SUPPORT NURSING SCHOLARSHIP IN TOBACCO CONTROL IN CHINA

Linda Sarna, Stella Bialous, Sophia Chan

FROM QUALITATIVE DATA TO THE WOMEN'S BREAST CONFLICT SCALE

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Purpose/Aims: To describe the initial development of the Women's Breast Conflict Scale, a predictive instrument designed to identify women who may be least likely to follow recommended mammography screening guidelines.

Background: A large percentage of breast cancer cases occur in women with no identified risk factors or no early symptoms of the disease, therefore the primary way to control breast cancer mortality is with early screening, diagnosis, and treatment. However, researchers report mammography screening rates have been declining over the past five years (Chagpar, Polk, & McMasters, 2008). Study results suggest that many women are initiating mammography later than recommended, not having mammography screening at recommended intervals, or not receiving appropriate and timely follow-up of positive screening results (Cokkinides, Bandi, Siegel, Ward, & Thun, 2007; Hahn et al., 2007).

Conceptual Basis: *Breast Conflict*, the framework upon which this instrument is based, provides insight into reasons many women may not follow established mammography-screening guidelines. The Breast Conflict Model and subsequent Women's Breast Conflict Scale (WBCS), was developed from qualitative data collected from African American, American Indian, Hispanic/Latina, and White women over a five-year period. Breast conflict, is described as *intrapersonal* conflict where the condition for conflict arises during adolescence and is the direct result of early teasing, family norms and values, and media or societal influence resulting in an altered self/body image. Data from the initial phase of instrument development (Scale mean and weighted content validity index (S-MCVI/S-WCVI) was 0.91 and 0.90, respectively) provided evidence of the content validity and clarity of the WBCS.

Implications: The psychometric properties and the value of the WBCS will be assessed across diverse racial/ethnic groups in a future study with 330 White, Hispanic/Latina, and African American women. The next phase in the development of this instrument will focus on further evaluation of validity and reliability of the instrument by combining traditional psychometric methods and building on that foundation by using an innovative analytic technique - *measurement invariance analysis*, a technique that is a necessary requirement for appropriate across population group comparisons. Exploration of women's life experiences related to their breasts and their current mammography screening behaviors has revealed other important factors that may influence a woman's decision regarding mammography screening. In addition to racial or ethnic differences and socioeconomic status, disparity in the use of mammography screening can be related to breast conflict, which is an internal an unrecognized conflict. The WBCS may ultimately prove useful regarding *all* aspects of breast cancer care, from screening to diagnosis and treatment.

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DEVELOPMENT AND VALIDATION OF AN INSTRUMENT MEASURING OCCUPATIONAL INTIMACY

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Purpose: To develop and validate an instrument that measures the concept of Occupational Intimacy.
Background: According to Boverie and Kroth (2005) there is not an instrument developed to empirically measure the concept of Occupational Intimacy which includes three components: Meaningful Work, Love of Work and Nurturing Environment. This void in job satisfaction research impacts independent professionals including: professors, nurses, physicians, teachers, anyone for whom the traditional job satisfaction theory, may not apply.
Sample Size: The sample is of 380 actively practicing physicians.
Methods: The survey design was create to measure and verify the components of Occupational Intimacy. A three-step process established content validity of this instrument. In addition, a pilot test was conducted to ensure understanding and readability of the instrument. Lastly, the Occupational Intimacy instrument was assessed by the original authors Boverie and Kroth, the two theorists who developed the concept of Occupational Intimacy.

The preliminary expert preview resulted in a thirty-six (36 item) Occupational Intimacy instrument. Factor analysis was completed to assure construct validity. The factor analysis examined the degree to which the items within the instrument measured the three components of Occupational Intimacy.
Results: Evidence supported the construct validity of the Occupational Intimacy instrument. The internal consistency alphas for the Occupational Intimacy scales confirmed that the thirty-six Occupational Intimacy instrument was reliable.
Implications: This study is the first to develop an empirical tool to measure the emerging concept of Occupational Intimacy. This new instrument can assist in measuring the intrinsic components of passion for one's work, finding meaning in one's job, and working in a supportive environment. This instrument is one of the first in a decade to measure this aspect of job satisfaction.

ASSURING ACCURACY IN DATA TRANSLATION: THE PROCESS OF BACK-TRANSLATION

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Purpose: The purpose of this poster is to describe the process of back-translation and apply the process to qualitative research data collected during interviews with monolingual Spanish-speaking participants.

Background: The recruitment of non-English speaking participants into studies should not prohibit nursing researchers from conducting qualitative research because of language differences. Accurate translation of interview data can be assured by using Brislin's translation model that provides a process and guidelines for back-translation of cross-cultural research data. Brislin's translation model can assure accuracy of the language translation, preserve the cultural equivalence, functional equivalence, and sensitivity to the *emic* or insider's perspectives, thus assuring credibility of the data.

Methods: Brislin's model for translation and back-translation guides the process for assuring data accuracy by the use of a bilingual researcher translating interview data from the original language and a second bilingual researcher blindly translating the interview data back into the original language. The transcripts in the original language versions are then compared for accuracy and equivalence. If an error in meaning is found the bilingual research team members discuss the translations and the terms that are in question, and reach a consensus so that the final translation is as accurate as possible.

Results/Findings: Examplars of transcribed and translated data with back-translations to assure data accuracy will be presented. These data and preliminary analysis are from an ethnographic study currently being conducted with Spanish-speaking Mexican American adults who reside in the Arizona-Sonora, Mexico border region.

Implications: Brislin's translation model for assuring accuracy of translation of interview data in qualitative nursing research, by the use of back-translation is recommended for assuring credibility of data interpretation and research findings.

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STOP BANG TOOL USEAGE TO DETECT OBSTRUCTIVE SLEEP APNEA FOR THE ANESTHESIA PROVIDER

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Background: According to the American Heart Association, fifteen million adults are affected by obstructive sleep apnea (Sommers, 2008). The obstructive sleep apnea diagnosis is more prevalent in men that are obese and patients suffering from cardiovascular disease (Sommers, 2008). The National Sleep Foundation proposes that one in four Americans are at high risk for OSA (Sommers, 2008). OSA is a syndrome characterized by periodic, complete or partial obstruction of the pharyngeal airway during sleep (American Society of Anesthesiology, 2006). The OSA sufferer has complete cessation of airflow lasting longer than 10 seconds during sleep, despite continued respiratory efforts, resulting in hypercapnia (increased carbon dioxide levels) and hypoxemia (American Society of Anesthesiology, 2006).

The American Society of Anesthesiologist (ASA, 2006) published guidelines recommending that patients be screened for the risk of OSA prior to surgery. Obstructive sleep apnea is diagnosed by polysomnography using an apnea-hypopnea index (AHI). Polysomnography or PSG is conducted during a sleep study (Chung, 2008). The patient wears a sensor attached to the head and body to record brain waves, eye movements, muscle activity and cardiovascular activity while sleeping overnight in the sleep laboratory. The AHI is the calculated sum of apneic and hypooneic events experienced during each hour of sleep. OSA is diagnosed by the presence of a least five obstructive apneas, hypopneas, or both per hour while the patient is sleeping. OSA is graded into three levels of severity: mild (AHI greater than 5 but less than 15 events per hour); moderate (AHI 15 to 30 events per hour); and severe (AHI of greater than 30 events per hour) (Chung, 2008). PSG requires highly trained personnel and complex equipment and is costly to perform. Patients may have to wait months at a time to have this costly test performed. Chung et al. (2009) developed, piloted, and validated the STOP-BANG questionnaire in surgical patients at preoperative clinics as a screening tool. This questionnaire is to be used in surgical patients to assist the anesthesia provider with routine screening for OSA.

Aim/Purpose of the Project: Currently, we do not utilize an obstructive sleep apnea (OSA) screening tool in our clinical setting to detect undiagnosed obstructive sleep apnea in patients. The national incidence of sleep apnea is 25% for men and 10% for women. Currently at our facility the incidence of Sleep apnea is only 11%. This study was designed to evaluate the effects of implementing the STOP BANG tool, and to determine whether the use of this process increases pre-operative undiagnosed patient asleep apnea detection, thus increasing patient safety for the individual under going anesthesia for their procedure.

Design and Methods: Pre and post quasi-experimental time series design project to include three phases: Phase One, Pre-data collection: retrospective review of anesthesia charts to collect: age, gender, height, weight, blood pressure and if the patient suffers from OSA. Phase One data will be used to support the STOP-BANG questionnaire intervention. Phase Two: anesthesia preoperative clinic will identify each patient's OSA risk/ treatment profile utilizing the questionnaire and place it on the anesthesia pre-operative assessment form. The sleep apnea risks documentation will be reviewed with all anesthesia providers. Phase Three: post-data collection will occur quarterly in a time design fashion to include data sets on sleep apnea outcomes. In October 2010, a practice meeting was held to educate and inform all providers and staff on new protocols, documentation form, and patient education materials and to communicate the plan, goals, and vision for the project.

Subjects/Statistical Plan: No controls and no randomization will be required. Four hundred charts will be reviewed from our pre-operative clinic for six variables. One hundred twenty five charts will be reviewed each quarter from our perioperative site. Pre and post means will be evaluated using a student t-test.

Results: Data analysis is in progress.

Conclusions and Implications: This project should heighten the awareness of the state of the problem within our practice and impact the care we provide to patients receiving anesthesia by reducing overall health care costs, improving patient safety, decreasing hospital admissions and emergency department visits and reduce mortality related to obstructed sleep apnea related complications.

REFINING AN OUTDOOR ENVIRONMENT ASSESSMENT INSTRUMENT

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Aim: To refine the Access to Nature Outdoor Evaluation Tool (ANOET) for future research on older women with osteoarthritis pain.

Rationale: Outdoor environments (often conceptualized as neighborhood environments) are a current focus of study because of the potential for community-based environmental approaches to health promotion. Outdoor environment instruments most often measure features that support physical activity (e.g. "walkability'); however, health effects of other features have also been studied. As a contextual variable in the Theory of Symptom Management (Dodd et al., 2001), the physical environment is relevant to the study of pain. Distraction, provided by multisensory stimuli in the environment, may be an effective pain management strategy. However, this relationship is typically tested in controlled indoor environments, rather than outdoor environments where more engaging and fascinating multisensory stimuli of nature can be experienced. Although research on multisensory stimuli of nature holds promise for extending knowledge regarding the impact of the physical environment on persistent pain in older women with osteoarthritis, a reliable and valid instrument to measure the outdoor environment is needed to scientifically test this relationship.

Methods: In this pilot study seven retirement communities agreed to participate in an assessment of their outdoor environments. The assessments were done using the ANOET (Rodiek, 2008), a 63-item instrument developed for use in senior congregate housing settings. A multisensory addendum (MS-add) was developed by first identifying items in the ANOET that refer to sensory stimuli related to nature. Most of these items measured visual stimuli. Additional items relating to non-visual sensory stimuli (auditory, olfactory, tactile, and gustatory) were then created based on ANOET items, expert consultation, and a review of relevant literature. The tool was initially tested in three retirement communities using standard ANOET instructions. The instructions and MS-add were then revised and used at the four remaining retirement communities.

Results: Findings from this pilot study demonstrated that the ANOET, developed for use by consumers (residents, family, and administrators), needed to be adapted for use in research regarding multisensory stimuli of nature. The MS-add subscale of this ANOET-R adaptation includes 14 new items, which when combined with selected ANOET items, provide a balanced measurement of different types of sensory stimuli from nature. A manual with administration protocols and increased precision in item response descriptors is needed to establish test-retest and inter-rater reliability of the ANOET-R in future research.

Implications: Environment is a core concept of nursing science, which although complex, is essential to studying person-environment relations that can contribute to pain management. The ANOET-R holds promise as a scientific measure of the outdoor environment in research on pain; however, further work is needed to establish its reliability and validity.

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HUMAN-CANINE INTERACTION: RESPONSE PATTERNS OF SALIVARY CORTISOL & IMMUNOGLOBULIN A

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Purposes/Aims: The purpose of this study was to examine physiological response patterns of salivary cortisol and IgA after a human-canine interaction.
Rationale/Conceptual Basis/Background: Animals have been used for centuries to enhance human health outcomes. In 1792, the "York Retreat", an asylum established in England, incorporated animals in the care of psychiatric patients. Florence Nightingale observed that small animals are wonderful companions for the sick, especially for long term chronic cases. Relationships with companion animals can play a significant role psychosomatic health of humans. Salivary biomarkers cortisol and IgA are biological indicators of stress. Stress hormones and proteins such as cortisol and immunoglobulin A can be influenced by human-canine interaction. Moreover, stress as measured by biological indicator response, may have detrimental effects on human health and interventions are needed to lower daily stress levels.
Methods: The rights of human subjects were protected by obtaining approval from the Institutional Review Board of the university, prior to data collection. A repeated measure design with an intervention was used in this study to determine if response patterns of salivary cortisol and IgA change after a 20-minute interaction with a canine in a group of pet owners and in a group of non-pet owners. Saliva samples before and after the interaction were collected.
Results: Salivary cortisol and IgA levels were measured by using a commercially-available saliva collection device, enzyme immunoassay (EIA) technique, and spectrophotometry. Data were analyzed using SPSS software and a repeated-measures ANOVA was conducted. The Pre/post main effect and Canine exposure x pre/post interaction effect were tested using the multivariate criterion of Wilks's lambda (Λ). The Pre/post main effect was not significant in pet owners or non-pet owners. The Canine exposure x Pre/post interaction effect was significant in non-pet owners, Wilks's $\Lambda = .57$, $F(1,16) = 11.86$, $p = .003$. The univariate test associated with Canine exposure was not significant in pet owners or non-pet owners. Changes in IgA levels were not found to be significant.
Implications: Several studies have shown the beneficial effects of pet ownership in human health and well being. Incorporating canines into our daily lives may help reduce stress and the biological effects of stress hormones. Further studies with larger sample sizes are necessary to support these results.

Funding: This study was funded in part by Kean University and Sigma Theta Tau Mu Theta-at-Large Chapter.

PROMOTING VERBAL PROCESSING IN NATURALISTIC DECISION MAKING RESEARCH

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Purpose/Aim: To investigate the impact on participants' verbal processing during Naturalistic Decision Making research by introducing a nursing "student confederate" into simulation research scenarios.

Rationale/Conceptual Basis/Background: Human performance arises from what a person perceives in the environment, their prior beliefs or experiences, and how they process these pieces of information. Naturalistic Decision Making (NDM) is a human factors theory that provides a framework for studying the cognitive aspects underlying human behaviors in the natural work setting. Unfortunately, researchers who study nurses during NDM are not always able to witness or understand the underlying cognitive processes and rationale behind decision-making when observing nurses due to lack of verbal communication and processing. Talk aloud protocols to assess decision making in the simulation laboratory are also limited because 1) clinicians often won't verbalize thought processes until they are certain of their conclusions and 2) when patient acuity and time pressures increase verbalization often decreases. By introducing a student confederate into the scenario, we hope to augment the nurse's verbal communication throughout the simulation—particularly during assessment, decision-making and intervention.

Methods: Ten acute care oncology nurses with 2-4 years experience will be observed as they participate in three simulation scenarios. An initial scenario will introduce the student confederate role (played by a Research Assistant) to familiarize the participant with this approach. Nurses will then participate in two more scenarios, one with a student confederate and one without. Nurses will be randomly assigned to have the nursing confederate present in the second or third scenario. Group and individual comparisons will be performed utilizing a weighted subscale for measuring decision-making (based on a weighted assessment score and a weighted intervention score) as well as word counts.

Results: Expected outcomes surround increased overall verbalization, evidenced by an increase in total word counts when the student confederate is present. We also anticipate higher decision-making scores for groups and for individual nurses during the scenarios when the student confederate is present.

Implications: By promoting verbal processing during research studies, there is a greater potential for researchers to understand, intervene and improve upon nurse's decision-making in the work setting. By introducing a student confederate who can act as a sounding board and who can prompt the nurse to voice thought and decision-making processes in a naturalistic setting, the ability to obtain information regarding underlying cognitive process will be enhanced.

Funding: The 2009 Board Research Grant from the National Patient Safety Foundation.

GPS-DIRECTED INTERVIEWING: A TECHNOLOGY-DRIVEN QUALITATIVE APPROACH

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Purpose/Aims: To describe the use of Global Positioning Systems (GPS)-directed interviews for better understanding the facilitators and barriers to daily mobility around one's community.
Background/Rationale: Promoting physical activity (PA) among persons aging with mobility disabilities is a public health concern. Features of the built environment likely impact PA in this population. However, measures specific to those aging with mobility disabilities are lacking making it difficult to study relationships and build effective interventions. The purpose of the overall study is to better understand facilitators and barriers to PA among 50-75 year olds with mobility disabilities using in-depth interviews with the target population. Specifically, BEAMS (Built Environment, Accessibility and Mobility Study) was funded to modify the Neighborhood Environment Walkability Scale (NEWS) for use among persons aging with mobility disabilities.
Methods: Twenty-four participants between ages 50 and 70 with mobility disabilities (defined as use of an assistive device such as a cane, walker, or wheelchair to ambulate) are currently being recruited. Data collection will occur December 2010-March 2011. Participants will wear a GPS device for three days to generate maps of their movement around their neighborhood environment. The highly detailed objective data collected by the GPS will serve as a prompt during in-depth interviews conducted in their homes.
Results: Preliminary benefits and challenges of GPS use and interviewing methods among persons aging with mobility disabilities will be described.
Implications: GPS-directed interviews with aging adults with mobility issues will help to improve our understanding of how far from home this population ventures. This has important implications for the nursing discipline as we must understand the everyday experiences and challenges of our patient populations in the environments they regularly interface. Greater understanding of the PA patterns of these individuals will help us to create environments that increase the accessibility of neighborhood resources and make everyday tasks such as travel to errands and medical appointments as accessible as possible. The innovative approach of using GPS-gathered information will facilitate discussion of its possible use in place of traditional self-reported description. Appropriate integration of technology-based approaches, such as GPS, is important for the advancement of nursing science, and ultimately enhances our ability to advocate for health-promoting environments.

Funding: The University of Washington Health Promotion Research Center, a CDC Prevention Research Center (PI: Belza).

COMBINING CBPR STRATEGIES & CASE STUDY METHODS: LESSONS LEARNED FROM LIBBY

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Purposes/Aims: Describe lessons learned from community-based participatory research strategies and case study research methods used in a study of rural victims of a technological slow-motion disaster.
Rationale/Background: The combination of community-based participatory research strategies and case study research methods is an ideal strategy for understanding complex, contemporary social phenomenon. In the study reported here, CBPR strategies were combined with case study research methods to explore "how" and "why" rural residents exposed to asbestos and living within a Superfund site choose to participate or decline participation in research. Case study research is consistent with CBPR principles since each phase of the case study, from identifying multiple data sources via a community assessment and linking theory, to validating the final results, depends on input from community members.
Methods: The researchers for this study utilized CBPR strategies, and an embedded, single-case study design, and three principles of data collection. First, multiple sources of quantitative and qualitative evidence including documentation, archival records, direct observation, interviews, and a survey of residents were collected and analyzed to begin building the case during the first year of the project. Second, a case study database was created to organize and document the evidence and contribute to outcome reliability, the project evaluation, and the final report. Finally, construct validity and an enhanced quality of design was achieved when a chain of evidence was maintained. A study protocol and feedback from a community advisory board guided each phase of the project and provided the structure for the evaluation of project inputs (e.g. research & process data), formative outputs (e.g. data analysis), and summative outcomes (e.g. final case study).
Results: CBPR strategies and case study methods were successfully used to conduct a study within a Superfund site of rural residents' knowledge, acceptance, and participation in research.
Implications: Lessons learned by nurse researchers working with community partners and using case study methods can assist other researchers when developing studies of complex social phenomena.

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COGNITIVE INTERVIEWING TECHNIQUE: VALUE AND CHALLENGES IN ITS USE

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Purpose: The purpose of this presentation is to describe the process of conducting and analyzing cognitive interviews and to discuss the value of such interviews in improving instrument design.

Background: Cognitive interviewing is a technique increasingly used to enhance the reliability and validity of an instrument during its development process. The cognitive interviewing process commonly includes one or two verbal report methods: *think-aloud* and/or *verbal proving.* Founded on cognitive theory, the procedure for the cognitive interview is heavily theory driven. However, methods to evaluate effectiveness of cognitive interviews to detect and correct question flaws are lacking. Two authors (SI & SBV) have used the cognitive interviewing techniques to validate newly developed or translated instruments in different studies, and have similar challenges obtaining meaningful responses from interviewees. In this presentation, we will discuss difficulties and challenges we faced while conducting and analyzing cognitive interviews, and examine the use of such interviews from affective and linguistic standpoints.

Method: Cognitive interviewing and analysis has been used as part of an on-going research project to refine question items in an instrument that measures quality of nursing care as perceived by patients with advanced illness. Our experiences analyzing study results are presented.

Results: An examination of forty-five items developed from 16 qualitative interviews and selected by expert panel reviews will be used to discuss the use and value of cognitive interviews to measure quality of nursing care for hospitalized patients with advanced illness.

We will present: 1) Examples of how questions are asked in the cognitive interviews, 2) Examples of responses from the interviewees, 3) The process of analysis of cognitive interviews, and 4) Our conclusion regarding the value of cognitive interviews in nursing research.

Implications: Generating question items that are clear for future respondents and collecting information that researchers seek is critical to developing a valid and reliable instrument. This analysis will provide examples of the cognitive interviews process and considerations for the use of such interviews in survey question validation.

Funding: Part of data used in this presentation are collected through studies partially funded by NINR grant (F32NR010644-01), Sigma Theta Tau Beta Psi Chapter Research Award, and Sigma Theta Tau International Small Grant.

THE REALITY AND BENEFITS OF REAL-TIME BLOOD GLUCOSE DATA

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Purpose/Aims: The purpose of this study was to evaluate nurses' perception of their ability to maintain their patients' blood glucose (BG) level within a tightly controlled range of 80-110mg/dL. Secondly to evaluate the impact of access to real-time BG data and its effect on patient glycemic control in an Intensive Care Unit (ICU).
Background: Hyperglycemia and insulin resistance occur frequently in the ICU with contributing factors including pre-existing diabetes, acute injury, medications, hypothermia, and stress. Research suggests that extreme hyperglycemia in critically ill patients is maladaptive and associated with an increased rate of complications and mortality. Controlling patients' BG is complicated and nurses face many barriers when attempting to maintain it in a specified range; if done improperly could lead to increased incidences of hypoglycemia.
Methods: Nursing staff were asked to complete a 12 question survey to assess knowledge, perceptions, and behaviors towards barriers to achieving tight glycemic control (TGC) a BG range of 80-110mg/dL in intensive care unit patients. A data management software program (RALS-TGCM) was installed that allowed real-time access to point of care BG results. Clinicians accessed various reports that aggregated BG results by patient, unit, and nurse during desired time periods. At implementation, physician and nurse champions were identified and given access to the program. Training included written instructions and a hands-on approach for 25 nurses, 1 pharmacist, 3 physicians and 1 physician assistant. Reports were run daily, and posted on the non-public bulletin boards within the ICU, and e-mailed to clinical staff. Glucose values were reviewed during four consecutive quarters spanning pre-implementation (2/2/06-8/1/06) through post-implementation (8/2/06-2/1/07) of the RALS-TGCM.
Results: A participation rate of 89.4% was achieved by nurses completing the survey. Sixty-eight percent perceived they maintained their patient's BG in the target range ≤60% of the time. This high percentage had a moderate correlation (.438) with those stating they had read literature supporting glycemic control. Those reading literature had a weak inverse correlation (-.281) with fear of hypoglycemia. The actual percent within the range of 80-110 mg/dl for the pre-implementation was 39% and post-implementation 51% ($p < 0.000$). A total of 70,933 BG results were collected. The mean BG pre-implementation was 121 mg/dL, and post-implementation was 112 mg/dL ($p < 0.000$). A mean BG was calculated for each patient and aggregated, pre-implementation was 132 mg/dl, and post-implementation was 119mg/dL ($p<0.000$). Mean BG for diabetic patients pre-implementation was 142 mg/dl and post-implementation was 135 mg/dL ($p=0.60$). There was no difference between periods in the percentage of severe hypoglycemic episodes (BG 0-40 mg/dL) 0.2%.
Implications: Reading literature may have an impact on the barriers nurses experience while controlling a patient's BG; however it has no impact on accuracy of their perception of how well they are able to control a patient's BG. Utilizing a data management program that provides real-time display and trending of BG data to those caring for patients significantly improved glucose control during implementation of this technology. Presentation of prospective glucose data improves nurse, physician and pharmacist decision making, thus facilitates implementation of better glycemic control.

USING A WORKSHOP TO SUPPORT NURSING SCHOLARSHIP IN TOBACCO CONTROL IN CHINA

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Purpose/Aims: To increase nursing collaboration in tobacco control research via a workshop focused on nursing research and best practices in China.

Background/Rationale: Tobacco continues as the leading cause of preventable death worldwide and is a leading contributor to non-communicable diseases (cancer, cardiovascular disease, chronic respiratory disease and diabetes) of which 80% of the 34 million deaths occur in low and middle income countries. Given the public health impact, nursing research in this area is woefully inadequate and urgent efforts are needed to stimulate and support nursing science. With approximately 350 million smokers, China has the largest population of smokers in the world and only 6% of smokers have quit. Previous research demonstrated that nurses in China did not have the necessary knowledge and skills to help smokers quit. With the increase in doctoral education in China, the growing numbers of nurse scholars provide an opportunity for growing science to decrease tobacco-related morbidity and mortality. This workshop built upon the authors' experiences in holding a workshop for nurses as part of the World Conference on Tobacco Or Health, Mumbai, India, 2009. Workshops are one strategy for providing a forum for budding and experienced scientists to network and build partnerships.

Approach: In collaboration with the International Society of Nurses In Cancer Care (ISNCC), the investigators hosted a nursing research conference prior to the UICC World Cancer Congress in Shenzhen, China, August, 2010. Using the ISNCC, UCLA and University of Hong Kong networks, announcements on the Tobacco Free Nurses website, as well as the authors' contacts, nurse scholars were invited to participate. In order to facilitate communication, all materials were translated into Chinese and all presentations were delivered with simultaneous English and Chinese Power Point slides.

Outcomes: Approximately 90 healthcare professionals attended the workshop, including over 70 nurses and the evaluations were very positive with many viewing this as an opportunity to build relationships and link with experts in the field. Presentations included descriptive studies of nursing research in tobacco control including knowledge, attitudes, and clinical nursing performance in smoking cessation, as well as experimental trials of nursing interventions to help smokers quit. As a result of the conference, plans for future collaborations and research initiatives were developed and a minimum of one grant has been submitted.

Conclusions: This international workshop provided a forum for nurse scientists to present their work on tobacco control, to network with other interested scientists, and to plan for future collaborative research endeavors. It is a model for showcasing and supporting collaborative international nursing research efforts and growing a much needed community of scholars.

Funding: UCLA School of Nursing Lulu Wolf Hassenplug Endowment and the Hong Kong Department of Health.

NURSING CARE ISSUES

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EVIDENCE-BASED DESIGN: PRE/POST OCCUPANCY EVALUATION OF THE NEW CHILDREN'S HOSPITAL

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Background: The United States is engaged in an unprecedented healthcare building boom. Some of the reasons for this include: replacement of aging facilities; an understanding of the impact of the built environment on quality and safety; incorporation of rapidly emerging technologies; and enhancement of patient and family centered care. Perhaps most importantly, there is heightened attention to creating optimal physical environments to achieve the best possible outcomes for patients, families, and staff. Through nursing and architecture collaboration in evidence-based design, decisions about the built environment can be based on credible research and sound architectural design principles to create the most healing healthcare environments.
Purpose: The purpose of this study was to evaluate and compare the impact of an existing and newly-built hospital environment on patients, families, and staff.
Methods: Using a pre-post descriptive survey design, all nursing staff, social work, therapy services, and families on selected inpatient units were invited to participate. A brief demographic form along with a Family and Staff Satisfaction Survey were developed and administered prior to moving to the new facility and at 6 months post-occupancy. Data were collected to assess family and staff satisfaction with light, noise, temperature, aesthetics, and amenities; family use of overnight facilities; and family and staff perceptions of safety, security, and privacy. In addition, findings from the Press Ganey Inpatient Pediatric Survey were analyzed pre and post occupancy as well as noise and light readings on the inpatient units. Also collected were staff turnover data pre and post move.
Results/Outcomes: Pre/post results showed the mean score for staff satisfaction improved on all survey subscales across all units with one exception: way finding for the ICU staff remained the same. Items showing the most improvement were layout of the patient room, amount of natural light, placement of sinks, and overall comfort and appeal. Family satisfaction findings pre/post occupancy also confirmed improvement on all subscales especially in the areas of natural light, quiet space, parking, and the child's room as a healing environment. Press Ganey inpatient parent satisfaction surveys showed improvement pre/post in all categories relevant to the built environment. Hospital turnover remained stable or declined since relocation to the new campus.
Implications for Practice: Our children's hospital is in the process of constructing a new 10-story medical/surgical tower to include a maternal-fetal/neonatal medicine program. It is our intent to use the knowledge gained from this research and feedback from families and nursing staff in the design and construction of the new facility. Additional research studies will be generated to further demonstrate the critical role the physical environment plays in shaping healthcare outcomes.

LIBRARIAN-NURSE PARTNERSHIPS SUPPORT AND SUSTAIN A MAGNET CULTURE

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Background: Nurses in Magnet-designated hospitals are involved in clinical research and evidence-based practice (EBP) by finding and using the best evidence from clinical knowledge and expertise, patient-family preferences and values, and peer-reviewed literature. Librarians are uniquely qualified to partner with nurses to support high-quality, safe patient care and the best possible health outcomes.
Purpose: In order to support hospital staff nurses in their everyday clinical practice and research, the librarians at the Clinical and Research Library have developed tailored services to get the best possible information to nurses in a timely manner, while minimizing nurses' time away from their patient-care responsibilities.
Methods: The following initiatives were developed and implemented to encourage nurses at all levels to use library services as well as to support their efforts to use best evidence in their practice:

- BERT (Best Evidence in Real Time)—The Clinical and Research Library will perform a literature search regarding any aspect of a patient's care and deliver the results to the requestor within 30 minutes whenever possible.
- Book a Librarian—Nurses can schedule an appointment with a librarian for one-on-one or group consultation.
- Literature searching services—Librarians will perform a search of the peer-reviewed literature on the nurse's topic of interest and deliver a list of relevant abstracts.
- Nursing Current Awareness Service—A librarian reviews the latest nursing literature and compiles a list of the most noteworthy articles along with links to the full text. This is emailed to the nurses.
- Bibliographies for Nursing Grand Rounds—A librarian compiles a list of resources for further learning on the presented topic.
- Displays at conference events attended by nurses.
- Librarian membership on the Nursing Research Council.
- Librarian membership on the hospital Continuing Education Council.

Results/Outcomes:

- Literature search requests from nursing increased 128% from 2005 – 2008 after the librarian joined the Nursing Research Council.
- The library currently averages 9 BERT requests per month, an increase of 233% from 2009; 84% of the requests come from the nursing staff.
- The library held instructional sessions for 116 nurses in 2009, a 729% increase since 2007.
- Over 200 nurses are signed up to receive the monthly Nursing Current Awareness.

Implications for Practice: Librarian-nurse partnerships within the organization help to strengthen the research and evidence-based practice programs as well as support and sustain our Magnet culture. This collaboration maximizes staff's limited time and resources and utilizes the unique talents and expertise from each discipline.

STRESS AND COPING MECHANISMS USED BY MENTAL HEALTH NURSES IN ACUTE PSYCHIATRIC SETTINGS

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Background: Occupational stress, also known as job stress or workplace stress has been studied intensively in industrial organizations. Health care is a stressful occupation, mental health nurses often have low morale, increased absenteeism or may leave the profession which results in increased staff turnover. Acute mental health nurses face challenging and unpredictable situations while caring for some of the most dangerously ill individuals in need of mental health care. However, research is scarce regarding the levels of stress and coping mechanisms used by psychiatric nurses working in acute psychiatric care facilities.
Purpose: Examine the stressors and coping mechanisms utilized among mental health nurses in an acute psychiatric unit.
Methodology: A quantitative, exploratory, descriptive study asked two questions: (1) What are the stressors identified by mental health nurses in an acute psychiatric unit, and (2) What are the coping mechanisms used by mental health nurses in an acute psychiatric unit. The study was explained at a psychiatric unit meeting by the researcher and invited subjects to participate. Once the consent form was signed, a demographic form, the Nursing Stress Scale (NSS) and Ways of Coping questionnaires were distributed to the mental health nurses to complete. Completed questionnaires were deposited in a sealed box at the nurse's station.
Results: There were 14 (out of 15) full time registered nurses and licensed vocational nurses that answered the questionnaires. The most common stressor identified was workload and uncertainty concerning patient treatment. The mental health nurses without children were more stressed as compared to those with children. There was no significant difference found between male and female mental health nurses as well as those with extra-curricular activities. The coping mechanisms used most among this group of nurses were self-controlling and planful problem solving, closely followed by positive reappraisal. Twelve (86%) of the 14 subjects answered yes to having extra-curricular activities outside of work. The most common extra-curricular activities that subjects listed were gardening, spending time with friends, going to church, and going to the gym.
Nursing Implications: If the mental health nurses were educated about the coping skill set of self controlling, planful problem solving, and positive reappraisal with the goal of helping the acute mentally ill client to also learn these coping skills, then the mental health nurses would expand their own understanding and benefit from coping with their own stress. In-service training for the mental health nursing staff including beneficial coping mechanisms could help reduce stress levels. Formation of a staff support group could assist with relieving stress and could be an effective coping method. Encouraging extra-curricular activities or forming different recreational activities may help decrease stress. It is important that there is a way that stress is dealt with, especially stress occurring at the work place especially if not effectively coped with, it could lead to a decline in the mental health nurse's quality of life which could affect their physical and mental health.

THE LIVED EXPERIENCE WITH DIRECTLY OBSERVED THERAPY FOR TUBERCULOSIS: A CASE STUDY

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Introduction: The rate of tuberculosis (TB) is 4.2 in 100,000. The majority of those patients with TB are managed by directly observed therapy-short course (DOTS). DOTS is a program developed to improve medication adherence by have a nurse monitor each dose of medication. Over 100,000 people are currently being treated for tuberculosis using DOTS. However, directly observed therapy has not been shown to be more effective than self-monitored therapy. The majority of participants of DOTS are between the ages of 24 and 55 years olds. The DOTS program could be tailored to improve effectiveness if we understood the experience from the patient's point of view.
Method: This case study was evaluated using the phenomenological approach. Heidegger's work on fear was used as a philosophical framework. A case study was chosen to investigate feasibility. Heidegger states that if there is nothing wrong with a tool then there is nothing to discuss. The tool becomes and extension of the body. There would be no reason to conduct a full research project without first finding out if the tool of DOTS works for the participants. The investigator asked about the subject's experience with DOTS. The dialog was analyzed using bracketing, critical reflection, and colleague consultation.
Results: The subject described accumulating aggravation. Her daily life was interrupted with appointments and negative side effects. She had to wear a mask that made her feel isolated. She felt ignored by her doctors due to the threat of imprisonment for non-adherence. Though she the opposite feeling of overly observed, the informant began to feel like she was always being watched. The patient described herself as paranoid.
Heidegger described fear as the uncertainty of an event. It may happen and it may not. The knowledge that it may not happen does not give relief. The participant was never sure if she truly had TB, the fear that the chest x-ray was actually cancer and not TB added to the stress of DOTS. Once the nurses were able confirm that the participant had TB and that the medication had worked, the fear resolved. The fear and the accumulating aggravation made the DOTS experience a difficulty and stressful experience.
Discussion: This subject's DOTS experience was both physically and psychologically demanding for the patient. The fear of the disease and the stress of the experience causes Further support by the medical team may reduce the stress induced by DOTS. A larger study is deemed necessary at this time.

NURSE SURVEY ON VENOUS THROMBOEMBOLISM RISK ASSESSMENT AND PREVENTION

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Background: Venous thromboembolism (VTE) is a major healthcare risk affecting thousands of Americans annually. Over half of these individuals develop VTE in the hospital or within 30 days post hospitalization. A concerted effort to enhance skills and knowledge by both service providers and nurse educators is particularly important as the extension of nurse roles includes this important area of patient safety. Still, it is not known how knowledgeable hospital nurses are of early VTE risk assessment. One key group is bedside nurses who may be the first to recognize risk factors for VTE. A range of teaching and learning approaches are needed to ensure that nurses are adequately prepared to evaluate patients' risks for VTE.
Purpose: The purpose of the study is to identify bedside nurses' knowledge, practices, and perceived barriers to risk assessment and prevention of VTE.
Methods: We will report on the results of a web-based survey of bedside registered nurses' knowledge of VTE risk assessment and prevention. Bedside nurses in a major academic medical center, including part-time and floating nurses were asked to complete the survey. Registered nurses who are not directly involved in bedside patient care were excluded from this study (e.g. unit managers, nurse educators, registered nurses who handle administrative tasks). Reminding emails have been sent to the bedside nurses at the medical center each week to increase participation rate to the survey.
Results: The nurse survey questionnaire on VTE risk assessment and prevention was developed by experts in VTE and instrument development. It has 22 items to determine nurses': 1) Exposure to in service and/or educational programs on VTE risk, 2) Current performance of VTE risk assessment, 3) Perceived barriers to performing VTE risk assessments, 4) Knowledge of basic principles, concepts, and specific knowledge of inherit/acquired risk factors for VTE, signs and symptoms of deep vein thrombosis (DVT) and pulmonary embolism (PE), and appropriate VTE prevention strategies, and 5) Weaknesses and strengths as a function of educational background, years of practice, and practice specialty. Survey findings will be presented at the conference.
Implications: Despite the Joint Commission mandated emphasis on VTE risk assessment in all hospitalized patients, there may be a gap between current evidence-based recommendations for VTE risk assessment and prevention and daily practice in nursing. The findings from this study will be expanded to include nurses in other community hospital settings. Data of this kind may be useful in the development of a focused educational program for bedside hospital nurses.

EXPERT TEAMS TO THE BEDSIDE: NURSES' ATTITUDES ABOUT RAPID RESPONSE TEAMS

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Purpose and Aims: The purpose of this study is to compare a multiple parameter early warning scoring system (EWSS) for assessing patients at risk of deterioration with the current standard of single indicator trigger criteria for calling the rapid response team (RRT). **Aims:** 1) Describe nurse's satisfaction in using each approach and their sense of empowerment; 2) Describe RN characteristics and their rating of the nursing practice environment as a reflection of nurse surveillance capacity; 3) Compare patient outcomes when a single parameter trigger system is used versus a multiple parameter early warning scoring system (EWSS) for initiating a RRT intervention; 3a) Identify EWSS indicators that are significant predictors of potential or impending decline in a patient's clinical course.

Background: Research has identified that routine observations often reveal abnormalities hours or even days before an adverse event such as cardiac arrest (Schein et al. 1990; Goldhill et al. 1999). According to Hravnak (2008), "The mean advanced detection time prior to human crisis recognition is 6.33 hours." Early warning scores (EWS) are designed to facilitate nurse-physician communication and prompt intervention when a patient's condition first becomes apparent (Gardner-Thorpe, 2006). Clinicians may be alerted earlier as small changes among multiple parameters together may be detected sooner than more obvious changes in a single parameter (Subbe et al., 2006) Use of an aggregate weighted scoring system can be a tremendous aid for the RN as it provides a threshold for intervention and predefined actions to take. Understanding the RN's satisfaction and empowerment in using each approach, the RN's capacity to carry out surveillance, and the characteristics of their practice environment that may influence attitudes and behaviors are key to determining clinical usefulness of a scoring system. This research will contribute to the body of knowledge regarding EWSS in detecting the development of clinical deterioration and add the voice of the nurse regarding the usefulness of an EWSS in their clinical practice.

Methodology: This quantitative descriptive study uses repeated measures from RN surveys to investigate satisfaction, empowerment, and nurse characteristics among RNs on two medical-surgical units in an acute care hospital that has used rapid response teams for over 3 years. Patient data from 54 RRT interventions on these units using the trigger criteria will be compared with RRTs using an early warning scoring system. Analysis includes descriptive statistics, correlation and T-tests for independent groups for significant differences.

Results: Data analysis will be completed by February 2010**.** Findings will be presented.

Implications: Determining the usefulness of clinical tools such as an EWSS can enable timely recognition of signs/symptoms of impending decline among medical-surgical patients in non-ICU settings and may save patient lives. Understanding the perspectives of RNs about the usefulness of such systems is a critical step toward optimizing the use of RRTs to achieve patient safety. Results from this study can be used to contribute to decisions about the best standard for early detection of patients at risk.

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LECTURE VS. SIMULATION, EDUCATING EMERGENCY DEPARTMENT NURSES ABOUT SEPSIS

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Purpose/Aims: The purpose of this study is to research the effects of simulation in the classroom, promoting increased knowledge and skills in providing nursing care to patients experiencing septic shock.

Rationale/Background: As many as 500,000 patients per year admitted to hospitals with septic shock come through the Emergency Department (Wang, 2007). According to Dr. Rivers original study (Rivers et al. 2001) a difference in delaying fluid boluses for septic shock patients increases mortality by 17%. Emergency Department Nurses have to be well educated on screening and managing this patient population. Although many nurses have taken sepsis classes in the past decade, these lecture style courses do not always translate into nurses' ability to manage these patients and comfort level with the complex bundle order set. Knowles' adult learning theory states that the andragogical teacher creates an environment for learning by providing processes and resources for learners to acquire information and skills (Knowles, 1973). Therefore, a sepsis class that involves multi-modality teaching with simulation, could lead to higher post- test scores of knowledge and comfort level in dealing with septic shock patients as compared with pre-test scores.

Methods: Emergency Department nurses who have attended a four hour lecture on sepsis and its treatment will attend an advanced sepsis class that will incorporate Knowles' theories of andragogy. The class will start with a pretest that will include sepsis pathophysiology and application of sepsis treatment bundles. The class will include a review of the latest sepsis guidelines (Dellinger, 2008), case studies, and simulation with video and ScVO2 monitoring equipment. The class will incorporate the facility policy and bundle order set in order to increase bundle compliance. A pre-test and post-test will assess knowledge gained during the course.

Discussion/Potential Implications: This poster presentation will describe how to educate hospital based nurses in rapid screening and initiating treatment for septic patients and how to analyze the value of the education. This researcher hopes to show that by utilizing simulation style learning in a non-threatening learning environment, bundle compliance will increase and sepsis mortality will decrease. Information learned will add to the existing knowledge that interactive learning for practicing nurses is beneficial in achieving better patient outcomes.

APPLYING THE EVIDENCE: USING RESEARCH BASED GUIDELINES IN PRACTICE

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Background: Diabetes is a growing issue in primary care medicine. In 2007, the prevalence of diabetes was estimated to be 23.6 million people. This figure represents almost 8% of the total population that had diabetes or one out of every 12 people. This project implemented the 2009 type 2 diabetes consensus algorithm between The American Diabetes Association and the European Association for the Study of Diabetes guidelines into clinical practice. This algorithm gives providers a specific decision tree tool for both the initialization and titration of medication therapies. Using an algorithm enables providers to spend money efficiently and get proven results while avoiding clinical inertia. The U.S. spent $116 billion dollars in direct costs to treat diabetes in 2007. Often the money spent is to treat preventable complications such as blindness, amputations and dialysis. To prevent devastating complications patients need to be treated aggressively to get to the American Diabetes Association goal of a hemoglobin A1C of 6.5 or less. The A1C is a lab test that demonstrates the patients have had good control of their blood sugars in the previous 3 months.
Aim/Purpose of the Project: By implementing the consensus guidelines we are hoping to show a reduction of A1C in the ambulatory clinic.
Design and Methods: The design for the data will be a pre and post Quasi-experimental with no controls and no randomization. The time interval for the post intervention data collection will be at 3-4 months. The patients were seen at a busy internal medical practice in Orange County, California. A total of 10 patients were evaluated and treated for diabetes along with any other conditions they presented with. No special diabetes educator or support staff were assigned to care for these patients. They were treated and educated regarding diet, lifestyle and medication changes by the primary care provider at the time of the visit.
Results and Outcomes: There are a total of 10 patients. The demographics are adult men and women ranging from ages 44-70. The initial range of A1C lab values for patients at the start of the study was 6.8-13.7%.
Implications and Conclusions: Treating patients with the standards of care is both efficient and cost effective. Long term complications such as heart disease, dialysis and blindness are expensive to society in both health costs and loss of productivity. This diabetes treatment program will improve A1C values for patients treated with the consensus algorithm.

NURSING KNOWLEDGE AND ATTITUDES OF HEALING TOUCH IN THE ACUTE CARE SETTING

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Purpose/Aim: The purpose of this study was to describe how nursing knowledge of and attitudes towards Healing Touch (HT) in the acute care setting changed six months after the implementation of an HT program.
Background: A Healing Touch program to provide HT for patients in the acute care setting was to be implemented at the study site. It was determined that high levels of nursing knowledge and attitudes of HT were integral to the success and sustainability of the program.
Methods: This was a prospective, non-randomized descriptive study using a pre-post web based survey. The study received expedited Institutional Review Board approval. All study site staff member with a RN license were eligible to participate. Survey responses were collected before and 6 months after implementation of an HT program at the study site. After the initial survey was complete, informational flyers and brochures were distributed on all nursing units, HT volunteers provided HT on nursing units for staff and patients, an article was printed in the employee newsletter and information shared at nursing management meetings. The 18-item survey was developed by the study team and included respondent demographics. Questions about knowledge, experience and attitude towards HT used a 7-point Likert-type scale ranging from zero (not at all) to 7 (very much so). Data was analyzed using SPSS version 12. Descriptive statistics, student's t-test, correlations and ANOVA were used with statistical significance was set at .05.
Results: 305 nurses responded. There were no differences between the pre- and post survey groups in regards to demographics. Respondents were mostly female, had a baccalaureate degree, and worked 37-40 hours/week. Respondent's average age was 45 years old, had 18 years in nursing and 11 years working at the study site. There were no differences between the pre and post survey scores for willingness to refer, knowledge of HT and perception that HT was effective however, scores did trend up in each of these variables. It was noted that increased age, years as an RN, increased knowledge of HT, willingness to experience HT, perception that HT was evidence-based (EB) and confidence in its effectiveness was positively correlated with an increased likelihood to recommend HT for patients ($p<.05$). Additionally, higher nursing education correlated with more knowledge of HT, higher HT knowledge positively correlated with perceptions that HT was EB and higher EB scores correlated with an increased willingness to experience HT (all with $p<.05$). Willingness to experience HT strongly correlated ($r^2>.52$) with knowledge of HT, perception HT is EB, likelihood of recommending HT, confidence in HT effectiveness, and benefit of HT for patients and staff.
Implications: Findings suggest that nurses who have more knowledge and confidence in HT and are willing to experience HT themselves are also more likely to recommend HT for their patients. Thus, intervention to increase the number of nurses who personally experience HT may be a more effective intervention to ensure the sustainability of the HT program.

RURAL NURSE LIFESTYLE PREFERENCES AND EDUCATION PERCEPTIONS

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Purposes/Aims: The aim of the study was to explore the relationships among rural lifestyle preferences, educational preparedness perceptions, and the intent to move.
Background: There is a lack of information about why nurses choose rural generalist roles. The lack of information about why nurses choose a rural generalist role complicates the tasks of recruiting and retaining new employees. Administrators report new graduates are unprepared for the role, but new employee perceptions are unknown. Since the literature reports turnover rates for the first year of practice can reach 65%, employer understanding of rural nurse perceptions and preferences is needed.
Methods: The study employed a descriptive, correlation design. Both qualitative and quantitative responses to an online questionnaire were analyzed.
Results: The 106 participants represent both novice and expert nurses from 22 of the United States who were beginning a rural nurse residency program. Past rural lifestyles were associated with retention. Participants perceived their education as ineffective preparation for the rural generalist role. Nurses felt most prepared in geriatrics and pharmacology. The majority of nurses did not intend to move but all with intentions to move worked reported fewer than 12 months experience. Leaving employment was weakly associated with both lifestyle preferences and educational preparation.
Implications: Many factors contribute to the intent to move. Novice nurses seeking a first job chose a community rather than a specific employer or position. Findings suggest recruitment strategies that highlight community recreation, climate, and cultural opportunities; along with professional and social relationships can increase nurse recruitment and retention. Nurse administrations will want to explore other factors during the interview such as, rural background, nearness of extended family and friends, and spousal employment. Involving community leaders in the hiring process would align nurse hiring practices with those of other health care providers and may enhance employee integration in the neighborhood. Community leaders can share information about volunteer and recreation opportunities while demonstrating support for the facility and nurses.

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OPTIMIZING TYPE-2 DIABETES MANAGEMENT IN PRIMARY CARE

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Background: Type 2-diabetes has become a public health pandemic. In the U.S., the prevalence of diabetes has increased from 4.9% of the population in 1990 to 7.9% in 2001 and this prevalence is projected to rise to 30 million Americans in 2030. (Phillips et al., 2005) The current death rate attributed to diabetes is approximated at 2.9 million deaths per year. (Goderis et al., 2009) Primary care and internal medicine offices solely manage a large percentage of the diabetic population. In 2002, visits to the primary care physicians accounted for 62.7% of all office visits in the Unites States, and diabetes ranked third, accounting for 3.1% of illness-related diagnoses. (Spann et al., 2006) National diabetic standards are created by organizations such as the American Diabetic Association (ADA) and the American Association of Clinical Endocrinologists (AACE) to guide clinicians on the management of the diabetic patient. Unfortunately these standards are often not met in the clinical setting. An analysis by researchers at the Center for Disease Control and Prevention suggested that < 5% of patients with diabetes receive care that conforms with ADA guidelines. (Kirkman, Williams, Cafferey, & Marrero, 2002) In a research study by Hahn, Ferrante, Crosson, Hudson, & Crabtree, 2008 , it was shown that using a guideline in the form of a flow sheet can improve diabetic guideline adherence in the practice setting.

Aim/Purpose of the Project: This study was designed to evaluate type-2 diabetic management in an internal medicine office before and after the implementation of an evidence-based diabetic flow sheet into the diabetic patient chart. Fourteen measures will be used to assess the provider adherence to national standards including testing frequency, recommended medication and treatment guidelines.

Design and Methods: The flow sheet created, using evidence from the ADA and AACE, will be filled out with baseline data and placed in the chart before the patient visit. The chart will then be reviewed at 3, 6, and 9 months to assess the degree of adherence to national standards. There will be 14 measures evaluated for each patient. The data analysis will come out as a percentage of measurements. The data will be studied from baseline to follow-up using a paired students t-test. A descriptive pre/post design will be used to evaluate the intervention.

Results: Data analysis in progress.

Conclusions and Implications: To be determined following review and analysis of results. It is expected that the evidence-based diabetic flow sheet placed in the patient chart will improve provider compliance with national standards and in turn, optimize type-2 diabetic management.

A SURVEY OF FATIGUE COUNTERMEASURES OF NURSE ANESTHETISTS

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Background: The past 10 years has produced increasing evidence that extended shift length is correlated to patient error and negative effects on the health care worker. The call to study the human factor of fatigue and its relationship to medical error was accelerated by the Agency for Healthcare Research and Quality report 'Making Healthcare Safer' (Shojania et al., 2001). Nurses working >12 hours encounter decreased vigilance, a nearly 2-fold chance of a patient care error, and have an increased risk of a needle stick (Scott et al., 2006; Trinkoff et al., 2007). Ninety three percent of surveyed student nurse anesthetists (N=311), rated themselves as 'sleepy' on the Epworth Sleepiness Scale (Ausborn, 2010). A study in New Zealand found 23% of anesthesiologists who filed an incident report indicating fatigue as a factor, received 2 hours less sleep than baseline, while on call (N=389) (Gander & Millar 2008). Lastly, medical interns working traditional shifts of five 24-hour shifts a month, versus more frequent, 16-hour shifts, made 36% more serious medical errors and had 61% more needle sticks (Ayas et al., 2006; Landrigan et al., 2004). Anesthesia is a 'safety-sensitive' occupation, along with aviation, firefighters, military and other high-risk environments where optimal functioning at all times is critical. Nurse Anesthetists (CRNAs) typically work a 16 to 24-hour call shift and are to remain vigilant when performing anesthesia. The AHRQ and American Academy of Sleep Medicine endorse naps during long work shifts to combat fatigue (Guilleminault & Ramar, 2006); although only a few field studies exist. Scott (2010) reviewed the literature for fatigue programs in safety-sensitive industries; tactics to address fatigue were: a) education about shift length, b) scheduling, and c) fatigue countermeasures. He discovered the systematic evaluation of efficacy was limited without applicability to the healthcare setting.

Purpose of the Project: Nurse Anesthetists may become fatigued during call. The study's purpose was to determine if CRNAs use strategies before call to prevent fatigue, or once fatigued, use countermeasures against it. Information is not available.

Design and Methods: Nurse Anesthetists were surveyed using a cross-sectional, prospective quantitative, descriptive design of randomly selected members of the American Association of Nurse Anesthetists. Instrument development was by the author after review by 4 doctorally prepared nurse researchers and a renowned fatigue expert. There were 25 rated-response and open-ended questions.

Results: Data collection is in progress. Data will be analyzed using descriptive statistics to summarize variables and identify central tendency and percentages of key variables. Appropriate inferential statistical analyses will be done to examine relationships between and among variables. Open-ended responses will be analyzed for thematic repetition.

Conclusions and Implications: This project should heighten awareness of the state of fatigue within CRNA practice and analyze fatigue-avoidance strategies and fatigue countermeasures during call. Implications for all nurses and health care providers will be addressed. Further studies to address the most efficacious measures should be conducted with the final goal of increasing patient and health care worker safety.

MAGNET STATUS, NURSE-PHYSICIAN COLLABORATION AND EVIDENCE BASED PRACTICE

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Purpose: The purpose of this study was to explore the relationship between nurse-physician collaborative behavior (NPCB) and Evidence-based Practice (EBP) and examine differences in NPCB and EBP in Magnet accredited (MA) as compared to Magnet pursuing (MP) hospitals. A pilot exploration of the difference in perception between nurses and physicians regarding collaboration was also conducted.
Rationale/Conceptual Basis/Background: The degree and quality of the interface among various healthcare team members is an important determinant of the quality of patients' care delivered by critical care nurses. Another determinant of meeting the standards of quality patient care and Magnet hospital accreditation is the ability of institutions to show research and EBP embedded into both clinical and operational practices. The conceptual framework of this study was based on Donabedian's classic structure/process/outcome (SPO) model as a tool for assessing health care quality. The hypotheses proposed for this study were: (a) there is significant association between critical care nurses' perception of NPCB and EBP; (b) there is a significant difference in NPCB and EBP in Magnet accredited as compared to Magnet pursuing hospitals; and (c) there is a significant difference between nurses' as contrasted to physicians' perception of NPCB.
Methods: This study used a cross sectional, descriptive, mixed methods correlational and comparative design. A convenience sample was used to recruit nurses and physicians. The Collaborative Behavior Scale (CBS)-NP was used to measure the respondents' perceptions of the extent of collaborative behaviors in nurse-physician relationships. The EBP Implementation Scale (EBPI) was used to measure the extent to which EBP was implemented.
Results: Pearson's r was used to evaluate associations. No significant correlation was found between the total CBS-NP and total EBPI. Analysis of Variance (ANOVA) was used to measure differences among the MA and MP groups. There were no significant differences between MA and both MP hospitals on the CBS total score. The only statistically significant difference was found to be on the CBS "team" subscale $F(2, 91) = 3.908$, $p = .02$. Further analysis with Scheff˝e post hoc ($p < .05$) revealed that this significant difference was between MP1 and MP2. The ANOVA performed on the EBPI scale between the MA and MP hospitals showed a significant difference between the EBPI total score ($F(2, 84) = 11.55$, $p < .001$) and all the subscales of the EBPI. The MDs had total mean of 64.35 ($SD = 11.12$) higher than the total mean of the RNs in the three hospitals. A t test conducted between the MD and RN groups showed significant differences between the two groups on the CBS total scale ($t(123) = 4.16$, $p < .001$) and all the subscales of the CBS ($p < .001$).
Implications: This study contributes to the work of promoting a healthy work environment and supplies knowledge for nurse leaders to find new ways of nurse retention. This study also provides baseline data from which individual units may develop performance improvement initiatives to improve practice and satisfaction with the workplace.

THE PERCEPTIONS OF PATIENT SAFETY CULTURE AMONG REGISTERED NURSES AND NON-RN STAFF

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Background: Patient safety has been a topic of focused discussion among healthcare professionals since the release of the Institute of Medicine's landmark publication, *To Err is Human* (1999). The Joint Commission began including safety culture assessment in the patient safety goals in 2007 (Pronovost & Sexton, 2009).
Purpose: The purpose of this study was to determine the safety culture of two units in a suburban hospital district in central California. The responses of registered nurses (RN) and non-registered nursing (non-RN) staff were also compared and contrasted. The results of this study provide a baseline and a benchmark for future patient safety improvement.
Methodology: Utilizing the concepts of high reliability organizations (HROs) as a theoretical framework (Hines et al, 2008), a well-known survey tool from the Agency for Healthcare Research & Quality (AHRQ, 2007), the *Hospital Survey on Patient Safety Culture*, was used in this descriptive quantitative study. Consents and surveys were distributed at staff meetings and later dropped in separate envelopes into boxes left on both units.
Results: A total of 12 RNs and 12 non-RN staff from two small departments of a 400+ bed hospital district completed the survey for a response rate of 33%. The majority of staff worked fulltime and had been on their present unit under five years. The staff in both departments demonstrated a positive and common safety culture, with grades ranging from acceptable to excellent. None reported an unacceptable safety grade and 33% gave an excellent grade overall. Half the respondents gave a good grade and 17% an acceptable grade. Overall areas of strength were frequency of events reported, manager expectations /actions promoting patient safety, and finally, teamwork within units. Other areas of strength related to evaluating effectiveness after changes to improve patient safety, staff feeling that they can speak freely if they see something that may negatively affect patient care and noting that hospital management provides a work climate that promotes patient safety. Three area for specific improvement were noted: 1) help within hospital units, 2) staff worrying that mistakes are kept in their personal files, and 3) things falling between the cracks when transferring patients from one area to another. There were some differences in responses between the two groups on selected survey items, however only one area (mistakes have led to positive changes here) revealed a statistically significant difference (X^2=6.206, df =2, p =.045) with RNs rating this lower than non-RN staff. The overall results of this survey when compared to the AHRQ database and a 2007 study conducted at the University of Toronto Rehabilitation Institute revealed almost identical graphing patterns, indicating a high positive level of responses about patient safety culture.
Implications: National media and public attention have focused on healthcare safety over the last decade. Multiple organizations have recognized the need for a patient safety culture, and patient safety initiatives are increasingly addressing the impact of nursing care on patient safety. This small research study provides information upon which to base further interventions and research.

PEER-RATED INDICATORS OF NURSE EXPERTISE USING THE BENNER NOVICE-TO-EXPERT MODEL

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Background: Determining the level of expertise of the bedside staff nurse is an important factor in the analysis of quality outcome measures. The staff nurse provides the most intimate, direct patient care and has the opportunity to observe and intervene to prevent error and promote positive patient directed healthcare outcomes. Staff nurses also possess intimate knowledge of the nursing skill levels of their peers based on day to day interaction and collaboration. Indicators of clinical nurse expertise have been suggested to include education and certification, years experience as a registered nurse (RN), years experience in a specialty care area, and extent of leadership experiences. Benner's novice to expert model of skill acquisition is commonly referenced as an accepted descriptor of nurse expertise. Nevertheless, currently no valid and reliable instrument for nurse expertise based upon the Benner model has been published.
Purpose: The purpose of this study was to compare indicators of RN expertise to peer perceived assessment using the novice to expert scale, as part of a larger study to explore nursing presence in relation to bedside nurse expertise.
Design: A descriptive prospective survey was conducted.
Sample: A convenience sample of 20 nurses from a single medical/surgical unit in a university medical center in Southern California volunteered to participate.
Methods: Nurses completed a survey to elicit the extent of their nursing experience, educational levels, role on their nursing unit and leadership experiences. In a second survey, they were asked to rate their perception of each other's nursing expertise based on Benner's stages of skill acquisition.
Findings: Participants have been RNs for a mean of 11.41 years (range 0.125 to 36 yrs) and worked in the specialty care area for a mean of 8.5 years (range 0.125 to 30 yrs). 65% have unit leadership responsibilities. 35% hold related specialty certifications and 100% of them have unit leadership responsibilities. 80% are female. The mean age is 39.4 years (range 23.75 t0 39.42 yrs). Findings from the peer reviewed perception of nurse expertise are pending.
Conclusions: Analysis of the comparison of nurse expertise indicators to peer perceived levels of expertise will be presented.
Implications: Pending.

IMPLEMENTING BAR CODE MEDICATION ADMINISTRATION: NURSE SATISFACTION AND ACCEPTANCE

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Background: Medication errors are all too common–it is estimated that 1.5 million people are harmed and hospital medication-related injuries cost $3.5 billion annually (IOM, 2006). Electronic prescriptions and bar code medication administration systems have shown promise in decreasing rates of medication errors (IOM, 2006; Poon et al., 2010). However, nurse acceptance and satisfaction must be considered in order to ensure compliance and avert workarounds that compromise patient safety (Fowler, et al., 2009; Halbesleben et al., 2010; Koppel et al., 2008).

Purpose: The purpose of this study was to assess nurses' acceptance and satisfaction with a new bar code medication administration (BCMA) system on one pilot unit prior to hospital-wide conversion. Another aim was to determine nurses' preference for hardware choices between in-room devices, computers-on-wheels, or portable tablet devices with handheld scanners.

Methodology: After IRB approval, a convenience sample of nursing staff on one renal-medical unit in a 500+ bed medical center was surveyed prior to piloting BCMA and 10-weeks after implementation. The 18-item *Medication Administration System-Nurses Assessment of Satisfaction (MAS-NAS)* scale was used to compare satisfaction and identify potential problems related to efficacy, safety and access (Hurley et al., 2006). Surveys were anonymous and matched only by the use of a sum (birth year plus last four digits of phone number).

Results: A total of 75 nurses completed surveys---68 pretests and 35 post-tests were collected. A total of 28 matched pairs were used for statistical analysis. For the total sample, over 74% were female, with the majority between the ages of 31 and 40. Almost 70% had an associate degree in nursing, Over 46% had been employed as a nurse for less than 5 years, and all but one worked more than 24 hours a week. Over 60% rated their computer skills as 'average', and 92.4% reported using a computer at home. On rating their skill at obtaining patient information using the hospital computer system, 60.6% were 'good' and 19.6% were 'excellent'. Paired t-tests indicated higher total means on *MAS-NAS* after BCMA (t=6.8, p=.000), as well as on subscales (Efficacy t=2.4, p=.023; Safety t=8.5, p=.000; Access t=6.3, p=.000). Post-implementation, the items with the highest means noted better knowledge about drug reactions, assistance with checking for the '5 Rights', and helpfulness of the drug alert feature. The majority of nurses preferred in-room devices rather than the other two options.

Implications: Higher scores on the *MAS-NAS* indicate that nurses' satisfaction with the BCMA system is higher than for the previous system. This is consistent with prior research showing greater nurse satisfaction with bar-code technology (Anderson & Wittwer, 2004; Hurley et al., 2007). This small pilot study provides information upon which to base further implementation of BCMA across the hospital.

JOB, CAREER, OR CALLING: CAN THE DISTINCTION BE USEFUL FOR THE NURSING PROFESSION?

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Background: When nurses are asked the question "Why did you enter the nursing profession" the answer often includes the term "calling." But what does "calling" really mean? Wrzesniewski, McCauly, Rozin, and Swartz (1997) argue that there are three distinct relations people can have to their work: as jobs, as careers, and as callings. People who view their work as jobs perceive working as a way to receive material benefits while people who view their work as a career are deemed to have a more personal investment in their work and mark their achievement not only through direct material benefits but also through advancement within their organization. Finally, people who perceive their work to be a calling find deep personal fulfillment by doing their work. Unfortunately, there has been little research that explores the relationship among the job-career-calling distinctions and demographic, professional, or organizational attributes and outcomes in the nursing context and whether these distinctions are stable over time.

Purpose: This study explores the following questions: 1) What demographic, professional, and organizational features of staff nurses and their work environment are related to the job-career-calling distinctions? 2) Are the job-career-calling distinctions of nurses stable over time and are they linked to nurse or organizational outcomes?

Methods: A total of 1,151 travel nurses from a large nationally based travel agency responded to an anonymous online survey as part of an IRB approved study in the Spring of 2009. The survey included items that captured the job, career, and calling distinctions utilizing the definitions offered by Schwartz (1986, 1994). Nurses were asked 83 additional questions which covered various demographic and professional attributes, organizational features, and outcomes such as work satisfaction, intent to leave, and burnout. Analysis of variance techniques were utilized to explore the relationships among the nurse attributes and outcomes found for each of the job, career, and calling distinctions.

Results: Nurses with a calling distinction were found to be less likely to intend to leave their employment and were less likely to be burnt out personally, by their work, or by their patients. In addition, the calling nurses tended to be more satisfied with their jobs, be married, and have an associate degree while the career nurses tended to be single and have a baccalaureate degree. More importantly, nurses who shifted from a calling distinction to a more career or job oriented distinction were found to have baccalaureate degrees, have greater intentions to leave their employment, less job satisfaction, less organizational support, and more job demands. In addition, these nurses had higher levels of personal, patient, and work burnout.

Potential Significance: This study offers initial support for the importance of viewing nursing work according to the job, career, and calling distinctions. Further, in response to the present and future nursing workforce shortages and the high costs associated with nurse turnover, the results of this study may help nurse managers begin to develop recruitment and retention strategies that take into account how individual nurses relate to their work.

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EVALUATING THE IMPACT OF A PROFESSIONAL PRACTICE MODEL ON NURSES' SATISFACTION

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Purposes/Aims: The purpose of this project was to evaluate nurses' satisfaction with the evolving shared governance professional practice model in a Children's Hospital.
Rationale/Background: The benefits of a shared leadership/governance models have been well established in the literature. Nurses' involvement in decision making regarding clinical practice and work life has been demonstrated to improve retention, employee satisfaction and improved patient outcomes. Structures and processes to support shared governance are critical to creating an environment of participative leadership. Fundamental to creating a participative leadership culture is nursing leadership, particularly at the executive level, who ascribe to this philosophy of leadership. In addition, sustaining this culture requires ongoing focused attention and support. Creating an environment of shared governance is a journey.

Shared governance was implemented in this organization over a decade ago and while there is evidence of structures and processes to support this professional practice model resurgence in this work and recommitment to this professional practice model began with the new Chief Nursing Officer and restructured leadership team.
Brief Description of the Undertaking/Best Practice, including the Approach, Methods, or Process Used: The annual Employee Opinion Survey (EOS) was completed in August 2009 and a separate employee survey regarding the decision making processes was completed in June 2010. The results of these two surveys were used to provide the baseline information regarding overall satisfaction with Nurses' involvement in decision making at the unit, department and organizational levels. A core team of nursing staff and leaders created a coaching/mentoring program to support individual unit/development of structures and processes to facilitate, advance and support shared decision making at the various levels. Nursing leaders were provided education on shared governance and teams of nursing leaders and staff served as unit based coaches and individual coaching was provided to teams requesting support. The annual EOS is being completed October 2010 and a unit based follow-up survey will be completed to evaluate the impact of these strategies on Nurses' satisfaction with involvement in decision making.
Outcomes Achieved/Documented: The results of these surveys are pending and will be reported out at this conference.
Conclusions, Emphasizing Implications for Clinical or Educational Practices, and Recommendations for Research or Future Interventions: The outcomes of these surveys will provide information regarding the impact of the interventions (education, coaching and one on one support) on Nurses' perceptions of involvement in decision making at the unit and organizational level.

NURSES WITH DISABILITIES: A PILOT TEST OF THE NANDS

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Aims of this pilot study were to describe registered nurses' attitudes toward nurses with disabilities in the hospital nursing work force, explore factors contributing to these attitudes and explore the concept of disability climate in the hospital workplace.

The web-based 37-item NANDS was administered to a convenience sample of 131 RNs working in three urban tertiary care hospitals.

Respondents with experience caring for patients with disabilities indicated a significantly more positive perception of accessibility in the workplace and more positive attitudes toward the capability of nurses with disabilities than those without patient exposure. They had significantly more positive attitudes than the group with no exposure regarding the capability of nurses with disabilities. Respondents with higher levels of education indicated a higher level of ADA Awareness. Disability climate was significantly more positive in outpatient clinics than in ICU environments.

Nurses with physical and sensory disabilities may feel more welcomed in areas serving patients with lower acuities. Greater exposure to individuals with disabilities positively impacts attitudes toward this population. The NANDS may be useful to assist employers and nursing administrators in assessing and creating healthy, disability-friendly work environments that promote positive disability climate and improve the work experience for nurses with disabilities.

Funding: Supported in part by a grant from the National Institute of Occupational Safety and Health.

COMPARISON OF NURSE STAFFING MEASUREMENTS

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Aims: The purpose of the study was to determine the best method to use to measure nurse staffing when describing the relationship between nurse staffing and patient outcomes.

Background: Previous studies using hospital administrative data have measured nurse staffing in various ways. Using only the productive hours of providers with direct patient care responsibilities is logically the best choice and has been used to calculate accurate nurse staffing levels in relation to patient outcomes. However, little is known about which method provides the most sensitive approach to nurse staffing measurements.

Sample: The study sample included 54 acute care hospitals from University HealthSystem Consortium (UHC) members in the US, including data for four quarters in 2005 (N=206). The sample reflected nurse staffing for a total of 971 adult nursing care units and patient outcomes for about 1.02 million adult inpatients.

Methods: The study modeled the effects of nurse staffing on failure to rescue, adjusting for patient severity of illness and hospital technological complexity while using mixed-effects linear regression methods. Akaike's Information Criterion (AIC) based on the log likelihood statistic was examined to select the model that best explained the effect of nurse staffing on failure to rescue. The study compared the AIC values of eight models including different candidate sets of nurse staffing measures and selected the model with the smallest AIC value as being the best. Nurse staffing was measured as hours provided by registered nurses per patient day (RN HPPDs) or RN skill mixes, which were derived from various combinations of nursing care hours (productive vs. non-productive hours for direct or indirect patient care providers). The patient outcome of failure to rescue was measured by using the Agency for Healthcare Research and Quality (AHRQ) algorithms.

Results: All the models examined in the study were significant (p <.001). Higher RN skill mixes and greater RN HPPDs were significantly associated with lower rates of failure to rescue for general units and for ICUs. For general units, the model using nurse staffing measured by RN skill mix generated from productive hours by direct and indirect providers showed the smallest AIC value, indicating it is the best model. For intensive care units (ICUs), the model using RN HPPD calculated from all hours by direct care providers was best.

Implications: The strongest effects of nurse staffing on failure to rescue were obtained when nurse staffing was measured as RN skill mixes for general units and RN HPPDs for ICUs.

EMBRACING THOSE WHO SUFFER: SUPPORTIVE CARING PRACTICES

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The purpose of this phenomenologic, interpretive study focused on exploring the essence and meaning of the lived experiences of persons who have endured diverse types of life-impacting suffering. Suffering is a frequently unacknowledged and complex phenomenon despite its centrality to health care. Nurses face their own vulnerability through encounters with suffering, and tend to ignore or minimize how suffering experiences influence patients and their families. The investigation, grounded in human caring sciences, utilized a purposive intensive sampling design. Open-ended interviews were conducted in natural settings with eight participants to explore their deep reflection of experiences of suffering and enduring. Additional study aims included: perceptions of healing, alterations in self-perception, assessment of enduring and suffering, and supportive and non-supportive care interventions for suffering clients and their families.

Study findings indicated how suffering is sometimes drama, sometimes intense work, but it leaves a lasting and holistic imprint on individuals who suffer. The distinct yet entwined nature of enduring and suffering was reinforced. Five major themes emerged through hermeneutical data analysis: the nature of suffering, enduring, care and support from family and professional caregivers, family issues, and "beyond suffering" to recovery and healing. Implications for caring practices recognized the need for sufferer-led holistic, family-centered assessment and education for patients experiencing enduring or suffering cycles. Teaching nursing students to ask in-depth and reflective questions related to suffering was vital. Promotion of effective engagement with those who suffer has the potential to make a difference that limits both the toll of suffering and burnout for nurses.

LEADERSHIP DEVELOPMENT FOR NURSE MANAGERS: CURRENT PRACTICES IN EVALUATION

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Purposes: To examine current practices in evaluating the effectiveness of leadership development for front-line nurse managers in hospitals.
Rationale/Background: The context of healthcare in the hospital setting is constantly dynamic and is becoming progressively more complex. In this environment, nursing leadership is more critical than ever to ensuring the quality, accessibility, and affordability of healthcare. Simultaneously, a multitude of historical and organizational factors are contributing to a severe shortage of front-line nurse managers who are well-prepared to meet this leadership need. The current literature describes several initiatives to facilitate leadership development for front-line nurse managers, yet the evaluation methods used to evaluate these innovations are often unsophisticated. Little is known regarding national trends in the evaluation of leadership development for nurse managers.
Methods: A researcher-designed, web-based survey was used to collect data from a national sample of hospitals (n=164). A stratified random sampling approach was used in this descriptive study. Bed-size was used as the criterion for stratification, ensuring the sampled Magnet-designated hospitals (n=118) reflected a similar bed-size distribution as the population of Magnet-designated hospitals. Hospitals without Magnet-designation (n=46) were selected through a matched sampling method. Matching was based on bed-size, geographic location, governance structure, and status as a teaching hospital. In each hospital, the survey was completed by the individual who oversaw or facilitated leadership development for the nurse managers. Survey subscales related to evaluation methods used were: 1) Reaction/Planned Response, 2) Learning, 3) Behavior Change, 4) Business Results, and 5) Return on Investment.
Results: The methods most commonly used to evaluate the effectiveness of leadership development for front-line nurse managers in hospitals fall within the lowest level of evaluation (i.e. Reaction/Planned Response). The next most common methods fall within the level Business Results. Evaluation at the intermediary levels of Learning and Behavior Change were relatively rare, with evaluation of Return on Investment used the least frequently. Results will be discussed in more detail in this presentation.
Implications: Hospitals commonly use the lowest levels of evaluation to determine the effectiveness of initiatives to facilitate leadership development for front-line nurse managers. Although evaluation also occurs at the level of Business Results, the intermediary data regarding whether the participant learned or changed behavior as a result of the development is collected less frequently. These evaluation methods are unable to provide hospitals with useful and reliable information regarding the effectiveness of their leadership development initiatives. Further work must be done to improve the methods used to evaluate leadership development for front-line nurse managers.

ATTITUDES AND MOTIVATIONS OF TRAVEL NURSES

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Background: What factors contribute to a nurse's decision to become a travel nurse? Often travel nursing is depicted as an exciting adventure that may be more about seeing the country than developing as a nurse. This idea is only speculation since to date there has been no research reported that examines travel nurses. Travel nurses occupy a small, but growing segment of the hospital workforce. In 2007 during an industry peak, there were approximately 18,000 travel nurses in the United States (Osborne, Calvi, & Hessinger, 2007). Since travel nurses are likely to continue to be utilized in hospital staffing, and there is no existing published research exploring travel nurses, it is important to learn more about this unique type of temporary employment for nurses and especially how it impacts a nurses' skills and experience.

Purpose: This IRB approved study explored a segment of the nursing population that has not been previously studied through an examination of the experiences and perceptions of travel nurses. The primary aims of the study were: a) to describe the factors that motivate nurses to become travel nurses, b) to explore particular challenges faced by travel nurses, and c) to gain a broader understanding of the experiences nurses have as travelers and how those experiences serve to impact their nursing knowledge and practice.

Methods: The study used an ethnographic design with content analysis as the approach to data analysis. It was part of a larger mixed methods study undertaken in the spring of 2009. Telephone interviews were conducted with a convenience sample of 17 travel nurses. The interview transcripts were coded by the authors during a reading and re-reading process. Ultimately 146 total codes were consolidated into 2 general themes; a) lessons learned: travel nurse; and b) lessons learned: hospital.

Results: Travel nurses expressed a desire to learn more, gain varied experiences in nursing practice and with differing peoples and cultures as primary motivators for selecting travel nursing. Improvement in such individual factors as flexibility, self-confidence and learning varied skills and procedures were cited often as contributors to professional growth and development.

Potential Significance: A diversity of nursing experience may contribute to improving individual nursing skills, flexibility, and tolerance of others more so than nursing experiences that are limited to a single or even a very few different hospital experiences. Travel nursing is also a mechanism for nurses unhappy in a job, to experience a variety of employers prior to selecting an institution for more permanent employment.

USE OF BEST PRACTICE MODELS AND EVIDENCE TO RESTRUCTURE A NURSING RESOURCE TEAM

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Purposes/Aims: The purpose of this project was to redesign an existing nursing resource team based upon best practice models, evidence in the literature and customer needs.

Rationale/Background: Nursing resource or float teams have evolved in organizations to provide qualified staffing for surges in volume/acuity and staffing needs created by inadequate resources. Additional rationale for creating organization based staffing resources is to reduce the use of external agency support which are often expensive and difficult to mobilize in a timely manner and to provide consistency in the skills and competencies of nursing staff to ensure the best possible care to consumers.

Brief Description of the Undertaking/Best Practice, including the Approach, Methods, or Process Used: The redesign of the nursing float or resource team was to assess the current supply and demand. Focus groups were created to gather information from nursing leaders and staff who worked with the existing Float Team. A review of the requests for staffing by area and competencies was reviewed for the past 1 year. An analysis of those requests that were fulfilled versus those that were not was completed. A literature review on this topic was completed to understand the history and current state of Float/Resource teams as documented in the literature. A survey was created to gather information on Float/Resource teams in other organizations. The data from these activities was used to develop strategies to revise the existing Float/Resource team.

Outcomes Achieved/Documented: Currently the existing Float/Resource team model is not able to meet the staffing needs for the critical care, ambulatory and satellite services. A task force has been formed to create a plan for revisions in this team that will be implemented in early 2011. This plan and preliminary outcomes will be presented at this meeting.

Conclusions, Emphasizing Implications for Clinical or Educational Practices, and Recommendations for Research or Future Undertakings: The implication of this project will be to provide one organizations process for assessing, planning and implementing models of staffing resources to support the staffing needs of an organization.

NURSING PERCEPTIONS OF PAIN MANAGEMENT IN THE PEDIATRIC CARDIAC INTENSIVE CARE UNIT

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Purpose: The goal of this project was to examine nursing perceptions of pain assessment and management in the cardiac intensive care unit.
Background: Patient satisfaction scores on rating management of pain for third quarter 2009 in the cardiac intensive care unit (CICU) were only 62%. The target range for pain management in the CICU was 78.7%. Pain assessment for all inpatient units is documented in the electronic medical record. Nurses are compliant with documenting a pain score every four hours, but concerns have arisen that pain assessments are not accurately reflecting the patient's pain. The review of daily goals during medical rounds was initiated in May of 2009. Pain management was addressed as part of the daily goals for each patient in the CICU. Staff nurses voiced concerns regarding pain assessment and management, which prompted the CICU to form a task force to examine nursing perceptions in regards to pain assessment and management. A developmentally appropriate pain scale is utilized for pre and post opiod administration according to the pain management procedure.
Methods: This was an IRB approved quality improvement project that consisted of a survey that was developed and administered to CICU nurses regarding their perceptions of pain tools and pain management in the CICU. Chart reviews were completed by the clinical nurse specialist and pharmacist examining the amount of opiod administration given in the first twenty four hour postoperative period following congenital heart surgery.
Results: Forty-one out of forty-four nurses were interviewed in the CICU. The average number of years as a RN was 10.51 years. The minimum number years of experience were less than one year, while the maximum number years of experience were thirty four years. An overwhelming response from eighty three percent of nurses felt there was a need for enhancing nursing education related to pain assessment and management in the CICU. Only twenty percent of nurses believed that CICU nurses practiced pain management tools and assessment efficiently. The chart review showed that pre and post pain assessment scores were done with the administration of an opiod only sixty percent of the time.
Conclusions: Staff requires re-education of the FLACC and NIPS observational tool for pain assessment. The nurse manager was able to approve two staff nurses from the CICU to attend Pain Resource Training (PRN) to assist with staff education. A unit based educational program will be developed for all staff nurses in CICU. The CICU developed a unit based committee to address pain assessment and management issues. Pain assessment and management will be included as part of new hire orientation to the CICU. The same survey will be re-administered to CICU staff once education has been completed to compare results. Patient satisfaction results will be reviewed in 4th quarter 2010 for any improvement in the management of pain. A chart review will be performed for pre and post pain assessment following opiod administration after re-education has been completed with the staff.

META-NARRATIVE TO EXAMINE THE PURPOSE OF THE ELECTRONIC HEALTH RECORD

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Purpose: The use of technology to increase patient safety has become part of the national agenda. The electronic health record (EHR) is considered one mechanism for reducing medical errors and increasing patient safety. As a result of this and the challenge put forth by the federal government, hospitals are spending millions of dollars implementing the EHR. Little is known or understood regarding the purpose of the EHR. The goal of this presentation is to introduce an adaptation of the meta-narrative research method and its application to determine the purpose of the EHR.
Background: Do experts consider the EHR a communication device? My research has put this into question. Greenhalgh and colleagues (2004) developed a method of systematically reviewing and examining publication sources that appears to have potential for this type of question.
Methods: The meta-narrative method for performing systematic literature review was developed by Greenhalgh and colleagues (2004) and adapted to explore the question "do experts consider the EHR a communication device?" This research method encompasses six phases: planning, search, mapping, appraisal, synthesis, and recommendations. The planning phase is where the question emerged and strategy for the literature review took place. The search phase involved a comprehensive literature search using key databases using terms "value" or "purpose" of the EHR. Each article was then organized by research method (quantitative, qualitative, mix-method), key actors by specialty (nursing, medicine, pharmacy, radiology, for example), and then the "story line" or language used to explain the work were separately mapped. Each paper was then appraised for its validity and application to the review question. Those that were determined to lack application to the question were rejected. Results were then grouped by comparable studies and specialties. A synthesis of the literature was then performed whereby for each research method a narrative account will be constructed describing the contribution of each to the question. The recommendation phase includes a review and summarization of the narratives. This phase includes dissemination of results and recommendations for future work.
Results: This presentation will include an overview of the adapted meta-narrative research method and results from the study.
Implications: Preliminary results suggest that of 700 articles, 10% of the articles address use of the EHR as database development, decision support, and only one specifies communication as a purpose of the EHR.

Reference:
Greenhalgh, T., Robert, G., Macfarlane, F., Bate, P., Kyrikidou, O., & Peacock, R. (2004). Storylines of research in diffusion of innovation: a meta-narrative approach to systematic review. *Social Science & Medicine*, 61, 417-430.

PHARMACOLOGY APPLICATIONS IN PATIENT CARE

EFFECTS OF ST. JOHN'S WORT ON PHARMACOKINETICS AND PHARMACODYNAMICS OF LEVONORGESTREL

Patricia Aikins Murphy, Brandon Bellows, Steven E. Kern

EXPLORING THE IMPACT OF OPIOID AVAILABILITY ON NURSE MORAL DISTRESS

Virginia T. LeBaron

LONG ACTING INJECTABLES TO IMPROVE MEDICATION ADHERENCE IN PSYCHOTIC DISORDERS

Tarry Wolfe, Karen Skerrett

PSYCHOTROPIC MEDICATION PATTERNS AND MENTAL HEALTH REFERRAL NEEDS IN RURAL FOSTER CARE

Meghan Cunningham, Max Veltman, Karen Godard

EFFECTS OF ST. JOHN'S WORT ON PHARMACOKINETICS AND PHARMACODYNAMICS OF LEVONORGESTREL

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Purposes: This preliminary study evaluated interactions between St. John's Wort (SJW) and emergency contraceptive dosing of levonorgestrel (LNG) with and without SJW.
Rationale/Background: St. John's Wort *(Hypericum perforatum)* is a commonly used herbal supplement that has been implicated in induction of the CYP450 enzyme system. It may cause increased metabolism of certain drugs, including oral contraceptive steroids. Previous studies have demonstrated increased potential for contraceptive failure with oral hormonal contraceptives. There are no data about the risk of emergency contraceptive failure if concurrently using St. John's Wort, or other similar drugs.
Methods: In a randomized trial, 36 women had pharmacokinetic studies after taking one dose of 1.5 mg levonorgestrel between days 9-12 of a normal menstrual cycle. They were then randomized to 1 of 4 groups that included treatment with St. John's Wort or placebo. After 6 weeks of herbal treatment, participants repeated pharmacokinetic studies following a dose of levonorgestrel between days 9-12 of their cycle. In both study cycles, participants returned at weekly intervals for a serum progesterone level, until they experienced a bleeding episode. Treatment groups were: *1: Placebo herb followed by a 1.5 mg LNG dose; 2: SJW 900 mg daily followed by a 1.5 mg LNG dose; 3: SJW 900 mg daily followed by a 2.25 mg LNG dose; 4: SJW 1500 mg daily followed by a 1.5 mg LNG dose.* LNG samples for pharmacokinetic studies were drawn at 0, ½, 1, 1½, 2, 3, 4, 6, 8, 12, 16, and 24 hrs of dosing and analyzed by radioimmunoassay. Presumptive ovulation was defined as an elevated progesterone level within two weeks of mid-cycle.
Results: Pharmacokinetic modeling revealed that clearance of levonorgestrel increased between the two dosing sessions and with increasing amount of SJW. The trend was consistent but not statistically significant. Presumptive ovulation occurred infrequently in both cycles in all groups; there were no significant differences between or within groups.
Implications: Dosing with St. John's Wort has effects on bioavailability of levonorgestrel. There is no clear clinical evidence that this translates into an increased risk of emergency contraceptive failure. Larger studies will be needed to determine if there is any increased risk of emergency contraceptive failure when using P450 enzyme inducers. Nurses prescribing emergency contraception should be aware of this potential.

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EXPLORING THE IMPACT OF OPIOID AVAILABILITY ON NURSE MORAL DISTRESS

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Purposes/Aims: Opioid availability at the distribution level between physician and patient may influence the perspectives and distress of nurses providing palliative care to patients with advanced cancer in India. This dissertation research aims to examine nurse advocacy for pain control using the theoretical framework of Moral Distress (MD) and the qualitative methodologies of critical ethnography and narrative inquiry to explore: 1) how is MD experienced by oncology nurses in India? 2) how does opioid availability influence nurse MD? and 3) how do nurses providing palliative care advocate for patient pain control?

Background: Morphine is an inexpensive, gold-standard opioid drug for cancer pain denied to millions of dying people around the world. Lack of access to opioids is a global public health crisis that affects patients who suffer needlessly in pain, as well as nurses who concurrently suffer when they cannot adequately manage their patients' pain. As the global cancer burden increases exponentially, so does the need for quality palliative care. This is particularly relevant in low- and middle-income countries, where 80% of patients present with late-stage disease and have few viable treatment options. Nurses are most commonly the front-line providers of palliative care, and are in a unique position to advocate for patient pain control at the bedside. However, nurses may also have little autonomy, and encounter ethical dilemmas and constraining factors that impact how they are able to care and advocate for seriously ill and dying patients. When nurses are aware of patients' needs but are unable to meet them, they can experience profound negative psychological, physical, and social consequences—collectively termed Moral Distress (MD). Understanding MD is vitally important as the ramifications of MD are far-reaching: for nurses, the profession, institutions, and most importantly, for patients.

Methods: Data will be collected in Hyderabad, India at the MNJ Institute of Oncology and Regional Cancer Center. 20 nurses will be recruited using purposive sampling. Inclusion criteria: 1) English speaking; 2) age 18 or older; 3) at least 3 months experience working as an oncology nurse; and 4) spending at least 50% of clinical duties providing direct care to cancer patients. Data will be collected through the use of participant observation and semi-structured interviews that are anticipated to occur over an approximate 9-month timeframe. Participants will be observed in various aspects of their day-to-day delivery of palliative care to cancer patients. Specifically, communication between physicians and nurses will be observed with an emphasis on that which relates to pain control advocacy. Data will be analyzed using both narrative analysis and interpretation of ethnographic fieldnotes.

Results: To be analyzed pending data collection.

Implications: This novel critical ethnography will address gaps in the literature by exploring: 1) the experience of MD with oncology nurses in India, 2) the potential impact of opioid availability on nurse MD, and 3) the ways in which nurses in India advocate for optimal patient pain control. The long-term goal of this research is to inform effective policy and educational interventions that will reduce nurse MD, enhance opioid availability, and lessen the suffering of patients dying from cancer.

LONG ACTING INJECTABLES TO IMPROVE MEDICATION ADHERENCE IN PSYCHOTIC DISORDERS

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Background: Medication is the most important part of treatment, eliminating or significantly reducing psychotic symptoms. Psychotic symptoms can be exhibited as delusional thinking, extreme mood state, auditory and visual hallucinations. Oral atypical antipsychotic agents have improved outcomes, although clinical advantages have been limited due to partial adherence to treatment. The most common reason for relapse in patients with psychotic symptoms is failure to take medications as directed or at all. Patients treated with oral atypical antipsychotics may be missing their medications approximately one third or 110 days a year (Mahmound, RA, Engelhart, L, Janagap, 2004). It is problematic that patients prescribed appropriate medications fail to receive the full benefits due to inadequate adherence. Adherence is a complex behavioral process strongly influenced by the environment in which people live, the health care providers' practice, and the health care delivery system. Non adherence to medications is greatest when patients are symptom free. It is necessary to assess the patient's understanding of the disease treatment plan and ability to follow the treatment plan to simplify the medication regimen.

Aim/Purpose of the Project: This project was designed to determine whether the use of long-acting injectables (LAIs), professionally administered monthly or twice monthly, increases adherence, and manages symptoms.

Design and Methods: This pilot project evaluated outpatient participants identified with Axis I psychotic disorders of bipolar, schizo- affective, or schizophrenia who have had a history of non-adherence to oral medications, multiple hospitalizations, or who have elected to receive the injectable medications for the convenience of not taking an oral medication daily. The study included thirty six patients who received either risperdone consta injection administered every two weeks or paliperidone palmitate injection administered monthly. Each participant received a global assessment functioning (GAF) and twelve survey questions at time intervals of baseline, three and six months. Each participant received an open label, evidenced-based discussion on injectable atypical antipsychotics including black box warning and side effects profile. Prior to receiving LAI's participants were prescribed oral Risperdone or paliperidone for minimum of seven days to access for sensitivity. Participants were assigned to medication groups as determined by their insurance approved medication formulary. A quasi experimental time series design will be used to evaluate the project. The analysis of data using chi-square test of association for categorical variables of adherence verses non adherence.

Results and Outcomes: Data analysis in progress.

Implications and Conclusions: To be determined following review and analysis of results. It is expected that patient adherence to long acting injectables will be associated with improved GAF scores and improved compliance. Future studies are needed to assess patient satisfaction of injectable atypical antipsychotics compared to adherence.

PSYCHOTROPIC MEDICATION PATTERNS AND MENTAL HEALTH REFERRAL NEEDS IN RURAL FOSTER CARE

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Purpose: The purpose of this study was to examine the levels of prescribed psychotropic medications in the children and adolescents who come into foster care during a one year period in a 6-county, primarily rural area of a northwestern state.
Background: Recent research has shown that there is a significantly higher use of psychotropic medications by children and adolescents who are in foster care when compared to those children not in foster care. There are also questions about the use of these medications as related to the actual mental health needs of these children. While this population has a much higher amount of psychiatric diagnoses when compared to non-foster children, there is little research related to the prescribing of these medications in rural areas. Additionally, there is a lack of consistent non-pharmacologic mental health services and follow-up evaluation of these children after initial screening.
Methods: A retrospective chart review was performed on the health records of children who were evaluated in a rural clinic specializing in foster care evaluation. During a one-year period, the records of all children coming into foster seen at this clinic were analyzed and their prescribed medications were documented. An analysis was then performed. A search of the statewide database was also undertaken to determine whether the prescribed mental health referral was initiated and services were provided.
Results: Of the 111 records reviewed of children coming into foster care, 14.4% (n=16) were taking at least one prescribed psychotropic medication. Of these children, 31.25% (n=5) were taking multiple medications. This compares very similarly to national statistics of children in foster care who are prescribed psychotropic medications. Of the children who were referred for additional mental health services (n=14), there was documentation that only 14% (n=2) actually received those prescribed services.
Implications: These findings can aid nurses, health care workers and social workers who work with foster youth needing mental health services. An understanding of the current status of the use of psychotropic medications in rural foster children and the gaps in needed follow-up care can improve the quality of care and make better use of the scarce resources available for these children.

Funding: Boise State University School of Nursing.

PHYSICAL ACTIVITY AND OBESITY

THE RELATIONSHIP BETWEEN OBESITY AND PATTERNS OF DRUG USE IN PATIENTS ON METHADONE

Rana Halabi Najjar, Lorraine Evangelista, Karabi Sinha, Peggy Compton

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A COMMON VARIATION IN THE IL6 PROMOTER GENE IS ASSOCIATED WITH PHYSICAL ACTIVITY LEVEL

Leah FitzGerald, Zhnogqi Weng

PHYSICAL ACTIVITY IN PERSONS WITH INTELLECTUAL AND DEVELOPMENTAL DISABILITY

Leah FitzGerald, Joan Earle Hahn, Joanna Macalalad

THE RELATIONSHIP BETWEEN OBESITY AND PATTERNS OF DRUG USE IN PATIENTS ON METHADONE

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Objective: Data indicate significant parallels between obesity and addiction to alcohol and drugs. However, the relationship between obesity and patterns of drug use in patients with substance abuse disorders is poorly understood. A secondary analysis of data collected from a larger clinical trial with Methadone maintenance patients was conducted to 1) describe the prevalence of obesity; and 2) compare patterns of drug use between normal weight, overweight, and obese patients.
Method: Fifty-four patients (29 males and 25 females), were categorized into three groups of body mass index (BMI) indices using the CDC's nomenclature (BMI 18.5 – 24.9 kg/m^2= normal weight; 25 – 29.9 kg/m^2 = overweight; and ≥ 30 kg/m^2 = obese). Patients were all on Methadone and in a substance abuse treatment program for opioid addiction. Urine toxicology was done weekly for 6 weeks to establish patterns of drug use.
Results: Overall, 31.5% and 42.6% of the sample were overweight and obese, respectively. The most commonly used drug across weight groups was benzodiazepine. There were no significant correlations between the amount or type of drug use and BMI. Interestingly, data showed that participants with higher BMI had fewer addiction indicators, as evidenced by toxicology, than those with lower BMIs.
Discussion: Our findings reveal a higher than expected rate of overweight and obesity in a cohort of patients with substance abuse disorders. Future research is warranted to better understand the relationship between problematic substance use and eating behaviors.

A COMMON VARIATION IN THE IL6 PROMOTER GENE IS ASSOCIATED WITH PHYSICAL ACTIVITY LEVEL

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Purposes/Aims: The aim of this study was to compare allelic and genotypic frequencies of the Interleukin-6 (IL6) -174 G>C and -572 G>C polymorphism and baseline plasma IL6 values between endurance athletes and healthy controls. We hypothesized that the pleiotropic inflammation-responsive cytokine IL6 would be influenced by allelic and genotypic frequencies, such that endurance athletes would have lower IL6 values.

Background: Several studies report exercise intervention programs reduce systemic low-level inflammation in patients with coronary vascular disease (CVD) and in healthy controls, suggesting regular exercise mediates suppression of the inflammatory response. Alternatively, enhanced plasma levels of IL6 represent a strong risk marker in chronic disorders associated with systemic low-level inflammation, an independent predictor of CVD. In certain environments or in concert with other genetic alterations, various genes may influence physical aptitude. Two functional variants in the promoter have previously been associated with IL6 expression, human exercise performance and health-related phenotype. IL6 promoter SNPs seen more frequently in IL6 -174 G/C and -574 G/C polymorphism are associated with fitness-related phenotypes and performance as well as with elevated cytokine expression in response to exercise and physical stress.

Methods: 61 serious endurance athletes and 90 healthy controls (aged 18 – 65 years old), were recruited targeting cycling and triathlon clubs. Cross-sectional assessments data included anthropometric measurements including body mass index (BMI) and blood sample for DNA isolation and IL6 measurement.

Results: Controls were significantly younger 30.9$\pm$9.7 vs. 38.7$\pm$12.6 yrs ($p<0.05$). No BMI group differences. The allele distribution was in Hardy-Weinberg's equilibrium. Endurance athletes had significantly lower plasma IL6 levels (0.57pg/ml$\pm$0.46 vs. 0.97pg/ml$\pm$1.1, p <0.01). In the −572C > G, 3 (5%) with the C/C genotype, 12 (20%) with the C/G genotype and 45 (75%) with the G/G genotype were observed in endurance athletes; and −572C > G, 11(12%) with the C/C genotype, 22(25%) with the C/G genotype and 56 (63%) with the G/G genotype were observed in controls. Linear regression with logIL6 as the dependent variable and age, BMI, gender, and SNP's -174 and -572 as covariates and group (endurance athlete vs. control) as a fixed factor supports age, ($p = 0.04$) BMI ($p = 0.02$), SNP -572 ($p = 0.02$), group ($p < 0.01$), (-)572*group interaction ($p= 0.03$) significant in predicting logIL6. Further analysis of allele found while -174 was of little predictive value, endurance athletes with -572 G>C allele had significantly lower logIL6 values ($p<0.01$) compared to controls.

Conclusions: Higher levels of physical activity are associated with reduced levels of peripheral inflammatory mediators compared with a more sedentary lifestyle. Our findings suggest the -572C allele may have an effect on the higher baseline plasma IL6 levels in healthy controls as well as age, BMI and activity level. This suggests there may be a genetically determined difference in the degree of the IL6 response to exercise stimuli between individuals. An exercise-induced reduction in the proinflammatory burden may explain in part, the influence of regular physical activity and prevention in chronic disorders associated with systemic low-level inflammation.

PHYSICAL ACTIVITY IN PERSONS WITH INTELLECTUAL AND DEVELOPMENTAL DISABILITY

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Purposes/Aims: The aim is to examine whether exercise knowledge, self-efficacy and social support predict time spent in moderate and vigorous physical activity (measured by accelerometer technology Personal Activity Monitor –PAM) in persons with intellectual and or developmental disabilities (I/DD).

Background: Prevention of disease, promotion of health, and maintenance of functional independence require such behaviors as regular physical activity, sports participation, and active recreation. Social supports, self-efficacy and knowledge of exercise influence health behavior. Knowledge of facilitators and barriers to exercise and correlates of physical activity among persons with I/DD, while growing, is limited, and research calls for more precise measurements of activity.

Methods: Twenty-two (10 female/12 male) participants with I/DD aged 18 – 65 (mean 33.1 $\pm$ 11.8 yrs) who were part of a larger study using PAM, to describe PA patterns 24 hours of the day for a 28 day period and determine if the use of a PAM increases physical activity in adults with I/DD. Baseline assessment included completion of the Exercise Health Education Self-Assessment Packet for Adults with Developmental Disabilities and anthropometric measurements. Physical activity levels were determined using the PAM, which detects acceleration, vibration, rotation, changes in posture for a maximum 14-day baseline period.

Results: Low knowledge was negatively correlated with higher amounts of low activity minutes per day (R=-.55, p=.05). Social support strongly correlated with high physical activity (R=0.84, p<.01). Self-efficacy did not correlate with low or high activity levels. Results of ANOVA model indicate that exercise knowledge (p = 0.04) and social support (p = 0.05) were both significant predictors of high activity levels. Gender and age did not predict activity.

Conclusions: Our findings indicate that low activity is correlated with low exercise knowledge in persons with I/DD wearing PAM. Alternatively, exercise knowledge and social support predicted high activity levels in persons with I/DD wearing PAM. Intervention programs aimed at increasing exercise knowledge coupled with social support in persons with I/DD should be part of primary prevention strategies.

RESEARCH IN FAMILY ISSUES

LESSENING THE DISTRESS WHEN RECEIVING THE NEWS OF MISCARRIAGE: WOMEN'S PERSPECTIVES

Christina McConnell

UNDERSTANDING SOMALI FAMILIES' BARRIERS TO EFFECTIVE PARENTING IN THE USA

Bonnie H. Bowie, Danuta Wojnar, Lauren Carlson

PARTICLES OF LIFE: A FAMILY OF A TEEN WITH SCHIZOPHRENIA

Hyun Jung Kim, Karen G. Schepp

FINDING THEIR WAY BACK IN: FAMILY REINTEGRATION FOLLOWING GUARD DEPLOYMENT

Deborah C. Messecar

LESSENING THE DISTRESS WHEN RECEIVING THE NEWS OF MISCARRIAGE: WOMEN'S PERSPECTIVES

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Purpose: The purpose of this study is to describe the experiences of women when receiving the news of miscarriage and to suggest ways of compassionate delivery of miscarriage news for practitioners consistent with the women's desires.

Background and Significance: Conservative estimates suggest that one in four pregnancies end in miscarriage, an unexpected pregnancy loss prior to the point of fetal viability. It is well documented that the majority of women suffer great amount of anguish from both the emotional and physical experience of miscarriage. Research studies also indicate that many women today are undergoing the same lack of empathy and psychological implications of miscarriage today as they did in the past. There is also evidence that women remember the lack of practitioners' compassion for many years and experience recurrent emotional distress. Yet, models helpful for delivering the news specific to miscarriage do not exist. The research study proposed here will attempt to fill the gap in knowledge about this important clinical issue.

Methods: Swanson's (1993) Caring Theory and the Theory of Traumatic Loss (Kauffman, 2002) will serve as a theoretical framework to guide data collection and analysis. The steps of Directed Content Analysis Method, as described by Hsieh and Shannon (2005), will provide direction for organizing and interpreting data. *Sample:* A convenience sample of 10-20 participants who meet inclusion criteria will be recruited. Data collection will stop when no new conceptual information emerges from the interviews.

Results: Data collection in process.

Implications: Describing the experience of receiving the news of miscarriage and the desired ways to receive the information from the women's perspective will enable the practitioners with insights on how to be the most compassionate immediately after the loss to lessen the women's distress.

UNDERSTANDING SOMALI FAMILIES' BARRIERS TO EFFECTIVE PARENTING IN THE USA

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Purpose: The aim of this study is to gain an understanding of the particular challenges specific to first generation immigrants from Somalia around transition to school and child rearing.

Background: Since 1991, U.S. Homeland Security (2008) estimates that over 100,000 Somali refugees have resettled in the United States, with the majority residing in large cities. Family and children are highly valued within the Somali culture; however, participation in formal preschool education for children, particularly girls, is not a common expectation for children (Morland, 2002). Other western practices around childrearing that are foreign to Somali refugees and may enhance school readiness are purposeful play and reading with young children. Based on an initial needs assessment in partnership with the Head Start preschool and local public kindergarten staffs, a need for better preparation for school readiness was identified for the Head Start children born to first generation Somali immigrant families. If these children do not assimilate successfully into school, they are at risk for poverty, homelessness, truancy and gang membership (Adan, 2007).

Methods: This study is part of a larger Community Based Research study involving an interdisciplinary team of faculty from a private, urban university. The community partner is an inter-city Head Start preschool, with 77% of families served originally from East Africa. Following IRB approval, interviews with Somali mothers and fathers are being conducted using a descriptive phenomenological method. Inclusion criteria are first generation Somali immigrant parents with a child enrolled in the Head Start program. Recruitment of subjects began by word of mouth through the Family Support Workers and has continued using a snowball technique. Parents are asked about the challenges of entering school and parenting in a Northwest American city as a recent immigrant. In appreciation for their participation, participants are given a $50 gift certificate to a local store.

Results: Data collection and concurrent data analysis are in progress.

Implications: The data from this study will be used to design culturally relevant programs aimed at easing the transition from preschool to kindergarten for children of first generation immigrants from Somalia.

PARTICLES OF LIFE: A FAMILY OF A TEEN WITH SCHIZOPHRENIA

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Purpose: The purpose of this presentation is to present research study findings that look back on the life of a family with an adolescent with schizophrenia, specifically during the first fifteen months after the onset and discuss how the strength of the family lessens the impact of the illness.

Background: First episode of schizophrenia is most commonly experienced among young people in their late teens through early 20's, often creating confusion within a family. A family experiences significant difficulties from recognizing the signs of the illness to coping with the illness while trying to obtain a certain level of normalcy and balance in life. Although there are several studies that address the needs and experiences of patients with schizophrenia and their families, it is relatively less studied what impact the first couple of years after the onset of the illness in the family member has on the life of the family as a unit.

Methods: This research study used case study method based on secondary data analysis from a two-group longitudinal RCT. The case being presented in this abstract consisted of a family with a 16-year-old adolescent male with schizophrenia, his aunt, and maternal grandmother. To examine the family's life in-depth, multiple sources of data were analyzed. Qualitative data from videotapes of 12 2-hour intervention sessions from the RCT for family, parent, and teen groups were analyzed to identify common themes amongst family members. Quantitative data were obtained from self-administered questionnaires including structured diagnostic instruments, outcomes measures of coping, family functioning, symptom management, and early signs of symptoms. These data were submitted by family members at 4 different time points and compared for similarities and discrepancies between members.

Results: One common theme from the qualitative data was grieving the loss of a family member experienced by all family members. In spite of the adolescent's low level of functioning and cognitive impairment, he was still able to maintain emotional sensitivity and grieve the loss of his mother. Diverse issues involved concerns around the hereditary trait for mental illness in future generations of the family, the positive family history for mental illness, and stigma associated with mental illness. From the quantitative data, unlike other cases in the study, this family did not show significant differences in the scores for family's cohesion, adoptability, attitudes toward the illness, and coping effort. They also responded similarity to perceptions of the illness and how they managed the symptoms of the illness over time. The presentation will include the mean scores and t-test results for these variables among family members and the highly correlated pattern of responses by family members.

Implications: Each family is unique in the way they experience schizophrenia. This family's uniqueness comes from their shared view on many aspects of the illness, which in turn affects their way of coping with the illness. When family members perceive the illness in a similar manner, the ill family member may be more motivated to participate in the treatment and be compliant with treatment regimen.

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FINDING THEIR WAY BACK IN: FAMILY REINTEGRATION FOLLOWING GUARD DEPLOYMENT

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Purposes/Aims: This session presents findings from a Department of Defense funded project to describe veterans and families perception's of their experience with family reintegration and the challenges reintegration presents among Guard members deployed since the start of the Afghanistan and Iraq conflicts.
Rationale/Background: The military operations in Iraq and Afghanistan have required more frequent and much longer deployment rotations among National Guard units than any previous US conflict. Repeated, lengthy deployments put Guard members at risk for problems with family reintegration, which in turn can create a sense of failed belongingness and of being a burden to one's family (Brenner, et al., 2008).
Methods: The researcher conducted in depth focus group, couple, and individual interviews with a total of 45 participants (26 Guard members, and 19 family members) to assess needs and maximize input from military families regarding deployment-related experiences and reintegration issues. Qualitative coding and analysis of data has just been completed.
Results: There are several skills that members develop while deployed, that then interfere with their ability to resume family life when they return home. These skills included: seeking safety, getting things done in a hurry, expecting unilateral decision making, ensuring predictability in the environment, and stuffing emotions in order to get the job done.
Implications: Conclusions are that individual returning from deployment are often still experiencing the stressful effects of deployment and this can interfere with family life and put the member at risk for serious alienation and a sense of not fitting back in to the family. Suggestions for strategies to screen for these kinds of problems will be provided. Implications for the development of preventive interventions that support Guard member populations throughout the deployment cycle will be discussed.

Reference:
Brenner, L.A., Gutierrez, P.M., Cornette, M.M., Betthauser, L.M., Bahraini, N., Staves, P.J. (2008). A Qualitative Study of Potential Suicide Risk Factors in Returning Combat Veterans. Journal of Mental Health Counseling, 30(3): 211 – 225.

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SYMPOSIUM: SIMULATION WITH STANDARDIZED PATIENTS FOR FORMATIVE LEARNING IN AN UNDERGRADUATE CURRICULUM

OVERVIEW: USING STANDARDIZED PATIENTS FOR FORMATIVE UNDERGRADUATE LEARNING

Joanne Noone, Stephanie Sideras, Glenise McKenzie

DESIGNING SIMULATIONS FOR USE WITH STANDARDIZED PATIENTS

Stephanie Sideras, Michelle Frazier

USING STANDARDIZED PATIENTS TO PROMOTE UNDERSTANDING OF MENTAL ILLNESS TRAJECTORIES

Glenise McKenzie, Stephanie Sideras, Donna Markle

USE OF ADOLESCENT STANDARDIZED PATIENTS IN A HEALTH PROMOTION COURSE

Joanne Noone, Stephanie Sideras, Maggie Sullivan

SIMULATION WITH STANDARDIZED PATIENTS FOR FORMATIVE LEARNING IN AN UNDERGRADUATE CURRICULUM

Overview: Using Standardized Patients for Formative Undergraduate Learning

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Purpose/Aims: This presentation presents how undergraduate faculty and clinical partners in the new Oregon Consortium for Nursing Education (OCNE) developed high fidelity standardized patients to directly observe student work and structure both the content and situational complexity of the experience to meet student learning needs.
Rationale/Background: Nursing faculty face the challenges of limited clinical placements and variable likelihood that students will encounter specific patient populations that provide essential learning experiences.
Description: In this undergraduate curriculum, simulation is a component of every clinical course with students typically participating in 10 hours per quarter. In an effort to provide high fidelity experiences, opportunities were explored to use standardized patients to support student learning. Standardized patients were developed to augment and complement clinical learning as an essential component of assuming the role of a professional nurse and to provide an effective, safe environment for developing clinical judgment needed for practice.
Outcomes: Standardized patients were developed for use in both a health promotion and assessment course and two chronic illness courses. Using standardized patients, all students were able to perform a sexual health history on an adolescent in the health promotion course. In the chronic illness courses, all students were able to interview, assess, and evaluate three standardized clients (and their family members): one as dementia progressed, one with a client with alcoholism and one with a client with schizophrenia through the trajectory of illness.
Conclusions: Use of simulation ensured specific clinical experiences which all students could experience and which supported the course outcomes. The scenarios allowed for consideration by students of a range of age groups in addition to continuum of care issues related to chronic illness and health promotion. Debriefing was essential for the integration of comprehensive learning outcomes. Standardized patients can provide a rich clinical experience. Community clinical partners can assist in this clinical case-based learning by identifying participants for standardized patients, developing the script for the learning experience and, providing a simulated environment for the clinical experience.

SIMULATION WITH STANDARDIZED PATIENTS FOR FORMATIVE LEARNING IN AN UNDERGRADUATE CURRICULUM

Designing Simulations for Use with Standardized Patients

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Purpose/Aims: The purpose of this presentation is to discuss the elements involved in designing a simulation practice case for use with standardized patients.
Rationale/Background: While the use of simulation in nursing education is a rapidly expanding teaching strategy, manikin-based simulation alone is insufficient to meet the learning goals associated with nursing practice. The use of standardized patients, brings body language and a level of interactivity between nurse and patient that is missing from manikin-based simulation.
Description of the Undertaking including Approach/Method/Process: Simulation scenarios designed for the practice of clinical judgment require flexibility as clinical judgment occurs in situations of ambiguity. With manikin-based simulation the primary points of contact between the nurse and patient are the patient physiology and the patient voice, which is typically under the direct control of the nurse educator. The advantages of using standardized patients are the layers of data that can be provided to the nurse. Through body language, eye contact, nuance of phrase timing and tonality, standardized patients bring a level of realism that manikins cannot. However, these advantages come with the design challenge of how to meet specific learning objectives in when the actions of the nurse participants cannot be anticipated. Two options for scenario design for use with standardized patients have been developed and trialed effectively in our program. One option, useful when the numbers of active participants in the scenario are limited, chunks the content by topic. Then within each topic a clear delineation between possible patient dialogue and the actor's notes that provides the rationale for what the standardized patient can specified. A second option, useful when the standardized patient is functioning with larger groups, uses the actor dialogue to structure the flow of topics with the other participants listening for key words that trigger their participation. Other design considerations include locating and training actors and addressing the environmental fidelity needed in the simulation. Partnerships to locate actors can take a variety of forms but all potential actors need to be comfortable with improvisation. Accessing nursing content experts to train actors is mutually beneficial to the ongoing development of the actor as well as the fidelity of the patient character. Environmental fidelity is also a high priority. To maximize the effectiveness of a standardized patient, issues of movement and physical flow through the scenario need to be plotted and supporting moulage and set props need to be identified.
Outcomes Achieved: Standardized patient simulations in our program have allowed students to gain practice in clinical judgment, providing relationship-centered care, exploring their role as a nurse, maintaining patient safety, and working in teams.
Conclusions: Simulations using standardized patients are an essential adjunct teaching strategy. Standardized patients are useful in situations where body language and physical movement are important aspects of the clinical judgment process. Standardized patients can consistently provide students with essential learning activities that would be unsafe, impractical or impossible for to experience during clinical.

SIMULATION WITH STANDARDIZED PATIENTS FOR FORMATIVE LEARNING IN AN UNDERGRADUATE CURRICULUM

Using Standardized Patients to Promote Understanding of Mental Illness Trajectories

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Purposes/Aims: The purpose of this project was to develop dynamic opportunities for undergraduate students to build clinical skills in interviewing, assessing and evaluating adults with a range of mental disorders.
Rationale/Background: Nursing faculty face challenges of limited clinical placements and variable likelihood that students will encounter specific patient populations that provide essential learning experiences (such as individuals with mental disorders). Simulation experiences augment and compliment clinical learning and provided an effective, safe environment for developing clinical judgment needed for practice.
Description of the Approach: Development of high fidelity standardized patients was undertaken in two chronic illness courses to provide essential learning about dementia, alcohol addiction and schizophrenia over the trajectory of each disease. The standardized patient cases were constructed in collaboration with content experts and simulation design experts. The first step was to identify course outcomes to be addressed with each case and then to develop specific learning objectives. Diverse care environments were selected in order to better focus on concepts relating to the trajectory of these chronic mental illnesses (i.e.: progression of physical and psychological disabilities, increasing need for supportive services, care transitions and caregiver stress). Dialogue was then developed to present and integrate clinical competencies and key learning objectives. The content expert and simulation expert met with live actors in order to ensure accurate understanding of dialogue and appropriate demonstration of symptoms. During the simulation 'ear mikes' were also utilized in order maintain fidelity to the script and to assist when modifications to script were needed in response student questions and behaviors. Debriefing was completed with students, faculty and the live-actors and included guided discussion of key learning outcomes related to each case.
Outcomes Achieved: During the simulations, students developed their assessment and therapeutic communication skills. In debriefing discussions students engaged in thoughtful exchanges related to their initial anxiety regarding interviewing someone with mental illness, the value of therapeutic communication skills, strategies for facilitating transitions and client self care with client who have a mental illness.
Conclusions and Recommendations: Standardized patients can provide a rich clinical experience. The scenarios allowed students to experience continuum of care issues related to chronic illness in a variety of settings and at progressive points in the trajectory of three mental illnesses. Debriefing was essential for integrating comprehensive learning outcomes within course curricula. Engaging and supporting faculty with diverse clinical backgrounds is essential to successful debriefing experiences for students. Including the standardized patient to participate in the debriefing improved the depth of feedback to the students.

SIMULATION WITH STANDARDIZED PATIENTS FOR FORMATIVE LEARNING IN AN UNDERGRADUATE CURRICULUM

Use of Adolescent Standardized Patients in a Health Promotion Course

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Purpose/Aims: The purpose of this presentation is to share how faculty and clinical partners developed opportunities to use adolescent standardized in a health promotion course.
Rationale/Background: The first nursing course in the Oregon Consortium for Nursing Curriculum (OCNE) curriculum is Health Promotion and Assessment throughout the lifespan. Clinical opportunities existed to gain experience with health screenings and assessments with various age groups, except in the adolescent age group.
Description: Faculty decided to explore and develop opportunities to use adolescent standardized patients so students can develop skill in 1) performing an adolescent risk assessment; 2) practicing therapeutic communication techniques in the performance of the health assessment including talking about sexuality and other charged topics in a professional manner 3) developing therapeutic rapport, 4) understanding confidentiality issues related to adolescent assessment and the legal limitations and 5) counseling for health promotion and risk reduction.
Outcomes: A two-step clinical practice opportunity using adolescent standardized patients developed. During the first part of the experience, the students all participate in their clinical group in a simulation in our simulation theater where our students play the role of a high school nurse interviewing a fourteen year old freshman female in order to complete an initial wellness assessment. The second step of this learning experience then takes place using teen adolescent standardized patients in a community health clinic after hours when the clinic is closed. Our nursing students then become the "intake nurses" using the clinic spaces and mock charts to complete a sexual health history and assessment.
Conclusions: This experience was developed in partnership with the clinic's health educator who recruits the teens, obtains parental permission to participate, and assists them in character development of a teen seeking reproductive health care. Students provide positive feedback about these experience and many times request additional experiences working with standardized patients to hone their interview skills. It has been so successful that three other schools of nursing have adopted a similar experience in their health promotion course.

THEORY AND POLICY ISSUES

APPLYING PERSONAL KNOWING RESEARCH TO WATSON'S THEORY OF HUMAN CARE

Barbara Plovie

AMERICAN NURSES FOUNDATION (ANF) SCHOLARS BECOME POLICYMAKERS

Patricia R. Messmer, Margarete L. Zalon

TOBACCO POLICY: DEVELOPMENT OF A NURSE DIRECTED COLLABORATIVE IN ND

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A CONCEPTUAL ANALYSIS OF SOCIAL CAPITAL AND HEALTH OUTCOMES

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PERFORMANCE OF ARMY NURSES IN A COMBAT CASUALTY STRESS SCENARIO

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EXTENSION OF MISHEL'S RUIT: INTEGRATION OF EMOTIONAL AND SOCIAL CONTEXT

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TAKING INNOVATION FROM CONCEPT TO PRACTICE: IT'S MORE THAN A BUZZWORD

Dan Weberg

RESILIENCE AMONG PARENTS OF YOUNG ADULTS WITH INTELLECTUAL DISABILITIES

Alison Eldredge, Lauren Clark

ENHANCING MOTIVATION FOR PHYSICAL ACTIVITY TO REDUCE FALLS: INTERVENTION DESIGN

Siobhan K. McMahon, Julie Fleury

APPLYING PERSONAL KNOWING RESEARCH TO WATSON'S THEORY OF HUMAN CARE

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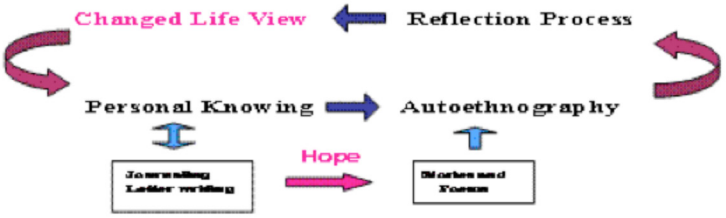
Purpose: The purpose of my research was to describe my personal knowing and lived experience of breast cancer through prospective autoethnography. My specific aims were to: 1) utilize Chinn and Kramer's Personal Knowing Model to develop my prospective autoethnography design and methods, 2) develop a concept map of my autoethnography process, 3) apply my personal knowing research to nursing theory.
Concept Development: Carper identified personal knowing as one pattern of nursing knowledge. I utilized Chinn and Kramer's Personal Knowing Model and preparation processes to develop Phase I and II of my prospective autoethnography methods. In Phase I, I maintained a personal journal while I wrote eight stories in prose and poem. In Phase II, I reflected upon each story and referred to my personal journal to substantiate my reflections. I maintained field notes of my reflective process and within these field notes developed a concept map of my prospective autoethnography process. I concluded that my process was personally transforming and, therefore, affected my personal knowing. See concept map below.



I placed my concept map within Chinn and Kramer's personal preparation process and, by extension, to Chinn and Kramer's Personal Knowing Model.
Application to Watson's Theory of Human Care: Watson maintained that a nurse's experience and personal knowing of that experience was integral for the nurse to bring his/her whole self to the transpersonal caring moment. I concluded that my prospective autoethnography process was personally transformative and directly affected my therapeutic use of self according to Chinn and Kramer's Personal Knowing Model. My research affected my phenomenal field as described by Watson. And, because my research affected my phenomenal field, it was more than casual past.
Conclusions: Autoethnography has been described as egocentric and, as such, not relevant to nursing practice. When autoethnography design and methods are based on personal knowing models, the transformative effect of the autoethnographic process can directly affect the actual patient-nurse caring moment. By applying personal knowing research to Watson's Theory of Human Care, I demonstrated that autoethnography is integral to nursing knowledge and, as such, should be included in post graduate research courses.

AMERICAN NURSES FOUNDATION (ANF) SCHOLARS BECOME POLICYMAKERS

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Background: Since 1955, the American Nurses Foundation (ANF) has provided grants for nursing research. ANF's purpose is to provide national leadership in health philanthropy, develop nurse scientists with programs of research, invest its financial resources and infuse diversity into promoting nursing science.
Aims: 1) Systematically review research conducted by ANF Scholars; 2) Identify important policy initiatives emanating from ANF-funded research & 3) Understand how grant "seed" funds impacts the research trajectory of ANF scholars.
Methods: Archival records (Boston University History of Nursing, *Nursing Research, AJN, Undine Sams collection*) and websites were used to develop a comprehensive ANF-funded research database. NIH CRISP database determined if ANF Scholars received federal research funding. Studies were categorized according to topic, sample, setting and affiliation by decade. The ANF mission identified nursing research exemplars who had an impact on health policy.
Results: Over 900 ANF Scholars have primarily focused their efforts on clinical research. Nursing services research was more predominant in the early years of funding and primarily conducted in acute care settings. Strengths include research related to the management of chronic illness and research conducted with disadvantaged populations. Nearly 1/3 ANF Scholars have received federal research funds. Most high profile nurse researchers influence policy thru application of findings to practice. Over 50% are involved in policy activities related to their research, most notably in interdisciplinary groups. Selected WIN policy exemplars will illustrate the wide-reaching and diversity of nursing research's influence through health care legislation, regulation and standard development.
Conclusion: The focus of ANF-funded research parallels the historical development of nursing research, providing focused snapshots of research development, influencing policy. Many ANF scholars have high profile leadership roles in policy development. ANF Scholars' track record regarding continuation of their research with federal funding, and health care policy exemplars speaks to seed money value for research and its impact on the development of nursing science.

TOBACCO POLICY: DEVELOPMENT OF A NURSE DIRECTED COLLABORATIVE IN ND

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Aims: The aim of the Tobacco Policy and Environmental Change Collaboration (Collaborative) is the development of partnership between the Department of Nursing and the North Dakota (ND) Center for Tobacco Control and Prevention Policy (Center) to advance tobacco policy in ND.

Background: The Center was established in July 2009 by ND voters through passage of an Initiated Measure to designate tobacco settlement dollars to tobacco prevention and control (TP&C). Policy and environmental changes have proven the most effective methods for preventing and reducing tobacco use.). Lack of knowledge and skills in developing and implementing policy creates a barrier to accomplishing the state plan goals. Ongoing training, technical assistance, and research in policy and environmental change to the Center's grantees are needed in order to succeed in policy implementation efforts. Based on CDC's Best Practice (2007) documents, priority areas are smoke-free air and tax policy approaches. The Center's Executive Director and Board's Chairperson approached the PI to develop a collaborative to address these needs.

Brief Description: The Collaborative will address the Center's needs by provision of 1) technical assistance and training on Best Practice policy interventions to state and local TP&C programs; 2) leading/coordinating statewide TP&C policy planning efforts; 3) development of educational resources and tool kits for policy planning, implementation and evaluation; 4) dissemination of best practice policy approaches to grantees and partners; 5) synthesizing research and evidenced-based literature into summary documents for education of partners and the public; 6) investigate the development of online TP&C policy documents library; 7) evaluating the implementation of best-practice policy approaches in ND; 8) submit for publication research on TP&C policy efforts in ND; 9) gathering and share information of emerging local, state and national tobacco control policy efforts with state and local tobacco control programs. In addition to the PI, a full time project assistant and part time administrative assistant will be hired.

Expected Outcomes of Year One: 1)Facilitate a statewide policy planning process 2) Develop an annual policy-training calendar to include one statewide training and two local coalition trainings; 3) Develop a list of potential policy trainers; 4) Convene one statewide policy training; 5) Develop and convene two local coalition policy trainings; 6) submit summary reports on potential policy approaches for ND based on attendance at national conferences/trainings; 6) Disseminate information and resources on current Best Practice policy applications to the Center; 7) Development at least one report/study based on policy approaches implemented in the state; 8) Prepare and submit monthly progress reports.

Conclusions: The Collaborative has implications for public health, tobacco policy, nursing's involvement in policy, and future research. This Collaborative may be the first nurse driven state level tobacco policy university collaboration in the U.S. to address tobacco policy. As the project focuses on Best Practices, evidence base, and research to inform both, the Collaborative's impact has far-reaching potential.

Acknowledgement: The author wishes to acknowledge Jeanne Prom, Executive Director and Kathleen Mangskau, Past Chair of the Executive Committee, of the ND Center for Tobacco Prevention and Control Policy.

A CONCEPTUAL ANALYSIS OF SOCIAL CAPITAL AND HEALTH OUTCOMES

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Purpose: The purpose of this poster is to explore the concept of social capital and its' contextual relationship to health since inconsistencies exist in its definition subsequent to being modified without adequate validation. Human beings have an innate propensity to develop systems of relationships that create environmental patterns discernable in the shared values, beliefs and perceptions present in a society. Societal behaviors and their impact on health have been conceptualized by the term *social capital.* The concept was originally adapted from sociopolitical studies that examined the role of civic participation and social trust in the successful functioning of local governments. Social capital also has the potential to facilitate access to resources and creates an environment that addresses health inequities.

Definition of Concept: Social capital refers to the network of social structures that exist between people and those connections that act to enhance mutually beneficial collective activities. Social capital is the totality of social resources including structural aspects of capital that includes participation in social networks and perceptions of trust. Social capital has been described as a contextual resource associated with improved population self-reported health.

Concept Analysis Approach Used: The concept analysis process was based on Walker and Avant's (2005) approach. A concept analysis explores the basic elements of a concept in order to determine its specific attributes, clarify contradictory elements, and develop a precise definition that accurately reflects its theoretical framework. The definitions of social capital were clarified by reviewing literature within several disciplines including nursing, sociology, mental health, education, economics, and governmental policy.

Logic Linking the Concept to Nursing Practice: Social capital is a concept that explores the availability and distribution of resources extant in a group. The basic elements of social capital: trust, social networks, and reciprocity are integral to the success of any intervention designed to improve community health. For nursing professionals to adequately initiate and sustain health interventions, it is important to clearly ascertain the dimensions of social capital.

Conclusion: Social capital provides a conceptual model explaining how relationships are integral to the success and sustainability of a healthy community. In order to generate improved health outcomes it is important to explore the utility of social capital by enhancing existing social resources or facilitating the emergence of new networks. Inadequate theoretical conceptualization of social capital can be identified as a problem in the operationalization of health promotion initiatives.

PERFORMANCE OF ARMY NURSES IN A COMBAT CASUALTY STRESS SCENARIO

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Purpose: The primary aim of this pilot study is to test the feasibility of using a 16-hour Army Center for Enhanced Performance (ACEP) training course as an intervention to improve performance under a simulated combat environment (Combat Casualty Stress Scenario [CCSS]) in Army Nurses. Secondary aims include exploration of relationships between performance and physiological response to the CCSS; exploration of relationships between psychosocial characteristics, physiological response, and CCSS performance; and exploration of differences in perceived stress pre- and post training between individuals randomized to the training intervention and controls.

Background: Army Nurses work in demanding, unpredictable, uncertain, complex, and dynamic environments. Soldiering and nursing are inextricably related in these individuals who are subjected to demands associated with the nursing profession and also called upon to deploy overseas, putting themselves at risk for extended periods in stressful combat situations. To date, there are no published intervention studies in military healthcare personnel demonstrating the ability to employ effective coping strategies during stressful situations that may optimize performance, improve coping skills, or enhance resiliency and adaptability in combat situations. The ACEP curriculum is based in sport psychology and modeled after the mental skills training taught by professors at the United States Military Academy. The goal of ACEP training is enhancing academic, physical, and military excellence in cadets using a systematic educational and developmental process grounded in cutting edge performance psychology and academic strategies to enhance adaptive thinking, mental agility, and self-regulation skills essential to the pursuit of overall personal strength and professional excellence. The skills taught have multiple applications for resiliency, adaptability, stress management, and coping, among other skills. Currently, 16 hours of ACEP training are provided to selected military personnel nationwide; however, it is unclear whether the ACEP training is beneficial.

Methods: A randomized, controlled, blinded study using repeated measures design is utilized to pilot test procedures, measures, and the CCSS to evaluate the effectiveness of ACEP training on nurse performance under stress. The intervention group (n=20) will receive 16 hours of ACEP training and the control group (n=20) will continue to work on their assigned units. For both groups, baseline mental skills fitness is measured using Ottawa Mental Skills Assessment Tool-3; psychosocial characteristics are assessed using the Brief Symptom Inventory, Connor-Davidson Resilience Scale, Hopelessness Scale, Rosenberg Self-Esteem Scale, PTSD Screen, and Spiritual Well-Being Scale. CCSS performance is measured using standardized checklists, and HR is measured continuously during the CCSS. Blood pressure, salivary alpha amylase and cortisol responses are measured at 5 time points before, during and after the CCSS. The Perceived Stress Scale is measured pre and post ACEP training.

Results: Data collection complete 1 NOV 2010.

Implications: The ability to apply ACEP skills training to facilitate desirable characteristics that enhance resiliency, adaptability and optimal performance may be used to harness effective coping skills and promote physical and psychological wellness. This comprehensive fitness goal is essential for the overall betterment of the individual, the military mission and the military force.

Funding: This protocol is funded by TriService Nursing Research Program grant N-09-P10.

EXTENSION OF MISHEL'S RUIT: INTEGRATION OF EMOTIONAL AND SOCIAL CONTEXT

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Purpose/Aims: Mishel's Reconceptualized Uncertainty in Illness Theory (RUIT) is extended to include meaning-making in the appraisal of uncertainty when that meaning is informed by social context and non-cognitive ways of knowing. The RUIT plus Integration (RUIT+I) considers the emotional and social domains at risk during appraisal of uncertainty in illness. The RUIT+I is discussed in the context of the uncertainty inherent in the act of disclosure.

Description of Theory: Mishel's RUIT was conceptualized as a probabilistic, cognitive schema modeling human behavioral response to uncertainty experienced during acute, chronic or potentially recurring illness events. Assessment of uncertainty is based on an individual's cognitive consideration of antecedent factors (stimuli frame, structure providers and cognitive capacity). Appraisal identifies the uncertain situation as either a threat (danger) or an opportunity. Cognitive comparison (Appraisal) to related situations is made (Inference) or a belief is constructed (Illusion) based on a multiple perspective, probabilistic view of success. The individual acts to lessen the uncertainty if perceived as a threat, or maintain the uncertainty if perceived as an opportunity. The RUIT assumes that uncertainty is a cognitive state appraised through a cognitive schema.

Internal Consistency of the Theory: The RUIT is evaluated using criteria developed by Chinn and Kramer (2008) for critical analysis and extension of substantive middle range nursing theory. Mishel and Clayton's (2008) literature review beginning with publication of the Uncertainty in Illness Scale (1981-2006) is extended by a CINAHL search from 2007 – July, 2010 (key words: uncertainty and Mishel). From the additional 53 cited papers, evidence either in support of the RUIT or demonstrating lack of support for the RUIT is compiled. Gaps in support for components of the RUIT revealed potential for theory extension to incorporate a non-cognitive process of appraisal of uncertainty, *Integration*. The RUIT+I is developed from a feminist perspective of valuing relationship and multiple ways of knowing.

Logic Linking Theory to Practice: Disclosure is a social act involving uncertainty in the level of safety felt when revealing health concerns, particularly during health events that derive meaning from social and emotional context. Critical to understanding uncertainty in disclosure and intervening to facilitate disclosure is an exploration of the appraisal of meaning and emotional impact involved in the decision to disclose.

Conclusions: An appraisal process incorporating the emotional realm and social ramifications of breaching the image of normalcy, *Integration*, is incorporated into Mishel's RUIT. *Relational Coping*, or strategies enabling a person who is facing uncertainty remain socially connected with his or her self-integrity intact, are added to the outcome frame of the model. The RUIT+I offers a theoretical framework for nurses to explore non-cognitive ways of caring and intervene in order to facilitate the danger-to-opportunity pathway when uncertainty is appraised. The RUIT+I is presented pictorially. Nursing interventions informed by the RUIT+I that may be effective in facilitating disclosure include: (a) address emotional safety concerns; (b) consider relational needs and non-cognitive ways of being with patients, and (c) explore the emotional and social context from which meaning of the disclosed event is derived.

TAKING INNOVATION FROM CONCEPT TO PRACTICE: IT'S MORE THAN A BUZZWORD

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Purpose/Aims: Innovation is a frequently used buzzword in healthcare yet the actual science of innovation provides a guide to connect practice, education, and research to improve health. This presentation will clarify the concept of innovation using complexity theory and discuss how innovation can help expand nursing leadership research. **Description/Definition of Theory/Concept:** In 2009 the first concept analysis of innovation in healthcare was published in a peer reviewed journal. The original definition stated that, "Innovation is something new, or perceived new by the population experiencing the innovation, that has the potential to drive change and redefine healthcare's economic and/or social potential." Although this definition highlights some core concepts of innovation such as newness and dramatic change, it does not include the core concepts of complexity science such as diverse networks, and self organization. Since the time of the first publication the concept of innovation has been clarified and linked to a theoretical foundation. **Internal Consistency of the Concept:** This concept analysis was completed following the guidelines suggested by Walker and Avant (2005). Using the steps of a traditional concept analysis the 2009 concept analysis has undergone an evolution linking it more strongly to complexity science principals and moving the concept of innovation from a process, product, or service to interrelationships among agents in a network. **Logic Linking Concept to Practice/Research Problem:** The concept and science of innovation provides a mental model that focuses on building diverse teams to tackle problems in novel ways and informs the leadership of change. This concept analysis and its subsequent iterations has also been used to create a shared understanding of innovation within the College of Nursing and Health Innovation and has been used as a core concept in other peer reviewed health policy research articles. Clarifying the concept of innovation and the science supporting it gives nursing a strong scientific foundation to begin measuring and leading change within the profession. **Conclusion, including Utility of Theory/Concept:** Drawing from business, economic, health, and complexity science literature the concept of innovation will be explored and clarified beginning with the 2009 article and moving to a current understanding of innovation and its impact on nursing as well as its implication for future work regarding research on innovation in healthcare.

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RESILIENCE AMONG PARENTS OF YOUNG ADULTS WITH INTELLECUTAL DISABILITIES

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Purposes/Aims: To apply the metatheory of resilience and resiliency as it relates to life disruptions (challenges, stressors, adversity, opportunity, and/or change) among parents of young adults with intellectual disabilities (ID). The specific aims are to (1) describe previous interventions and early theory for parents who care for young adults with ID, (2) explore how the metatheory of resilience and resiliency may benefit these parents, and (3) present specific tenets of the metatheory of resilience as they pertain to parents of young adults with ID, including implications for research and application to nursing intervention design.

Description of Theory: Currently, little research focuses on parents of young adults with ID; and what does exist, aims to recognize and fix their problems. Resilience offers greater explanatory power by focusing on strengths, and examining "personal and interpersonal gifts" (Richardson, 2002, p. 307) employed in the process of experiencing life disruptions. At points of disruption parents may experience feelings of confusion, guilt, depression, sadness, and so forth. According to the resiliency process, three potential outcomes can result from this state. Parents can (1) learn from the disruption and become stronger from it, (2) go back to the way they were before, or (3) become bitter and angry about the whole situation. Richardson (2002) defines resilience as "the motivational force within everyone that drives them to pursue wisdom, self-actualization, and altruism and to be in harmony with a spiritual source of strength" (p. 313). For parents of young adults with ID, resilience may promote "healing at a deeper, softer, yet more efficacious level" (Richardson, 2002, p. 307) from expected and unexpected life disruptions.

Link of Theory to Practice and Research: The metatheory of resilience and resiliency emphasizes the inherent strengths and qualities that parents already possess, and encourages their development in the resiliency process, ultimately leading to increased levels of resilience. Since all parents go through the resiliency process, we can look at the trends among parents caring for young adults with ID, and gain a better understanding of their lives and how to help them through the process of successfully managing life disruptions.

Conclusions: Specifying dimensions of applicability of the metatheory of resilience and resiliency for parents of young adults with ID will provide helping professionals with theory-driven actions to support parents through disruptions that accompany parenting a young adult with an ID. Nurses will be able to help parents anticipate life disruptions and feel more empowered to manage them successfully, coach parents through the process of successful management when disruptions occur, and refer parents to outside
sources if the process becomes too difficult to manage or extends beyond their scope of expertise. These actions will mitigate some of the negative health consequences of life disruptions and promote increased health for parents caring for children with IDs.

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ENHANCING MOTIVATION FOR PHYSICAL ACTIVITY TO REDUCE FALLS: INTERVENTION DESIGN

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Purpose: The purpose of this presentation is to describe a theory-driven approach to developing an intervention designed to increase motivation for physical activity in community-dwelling older adults at risk for falls.

Rationale: The growing number of falls and related injuries among older adults continues to be a major public health concern. The negative impact of falls on life quality and health care cost is significant. Potential consequences include fractures, fear of falling, emergency room and hospital admissions, dependence, confusion, immobilization, depression, and death. Physical activity is a proven fall-preventive strategy, yet the majority of older adults have sedentary lifestyles and the rate of falls continues to increase. The emphasis on biomechanical and kinesiology intervention effects on fall risk, without attention to behavioral determinants, limits the translation of falls prevention research from research into practice. Research suggests that motivational factors influence the adoption and maintenance of fall-preventive physical activity, yet few interventions have focused on motivational factors. Additionally, few interventions have been based on theoretical models for health promotion. Thus, developing theory-based interventions designed to prevent falls in older adults can contribute meaningfully to stemming the personal and financial costs of falls.

Methods: The wellness motivation theory (WMT) guided the development of the wellness motivation intervention (WMI), based on theoretically relevant program elements: problem definition, critical inputs, mediating processes, expected outcomes, exogenous factors, and implementation issues.

Outcomes: The WMI addresses the problem of decreased motivation to participate in fall-preventive physical activities that build leg strength and balance among sedentary adults over age 74. Consistent with the WMT, low levels of motivation for physical activity are due to a lack of social contextual and behavioral change resources. Intervention critical inputs operationalize WMT key constructs and include: (a) social network support; (b) empowering education; and (c) motivation support. Mediating processes include social contextual resources (social support, environmental factors) and behavioral change processes (self-knowledge, motivational appraisal, self-regulation). The expected outcomes of the WMI in this program are decreased fall risk contingent on increased physical activity behaviors and improved leg strength and balance. Exogenous factors, or contextual variables that may influence intervention delivery or outcomes include: (a) individual biological factors that affect fall risk, function, and comfort; and (b) prior experiences with physical activity and motivational interventions. Resources required for WMI implementation include access to space at times and locations preferred by rural community dwelling older adults. Trained interventionists and evaluation of WMI fidelity will ensure safe and consistent program delivery.

Conclusions: The WMI focuses on mechanisms that link motivational resources to fall-preventive physical activity, fostering social contextual resources and behavioral change process. Designing a theory-based intervention that promotes physical activity among older adults at risk for falls bridges the gap between research and practice by: (a) targeting primary causes of physical inactivity; (b) clarifying program critical inputs; (c) specifying links between intervention activities and outcomes; and (d) defining systematic evaluation.

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USE OF SIMULATION IN EDUCATION

NURSING STUDENTS' PERCEIVED LEVEL OF COMPETENCY IN SIMULATION

Katrina Einhellig, MaryJo Stanley

IMPLEMENTATION OF HIGH FIDELTIY SIMULATION TO ENHANCE CRITICAL THINKING SKILLS

Jennifer D. McPherson, Joseph F. Burkard

STUDENT BEHAVIORS IN A VIRTUAL REALITY-BASED CLINICAL SIMULATION: LESSONS LEARNED

Jane E. Classen, Kelley Connor, Maximilian Veltman

EVALUATION OF IMMERSIVE CLINICAL SIMULATION INSTRUCTIONAL TECHNIQUES

Allen Hanberg, Madeline Lassche, Katie Baraki, Connie Madden, Jackie A. Smith

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STUDENT DEVELOPED SIMULATION SCENARIOS: CULTURE AND LEADERSHIP

Lisa S. Zenoni, Barbara L. Cheuvront

NURSING STUDENTS' PERCEIVED LEVEL OF COMPETENCY IN SIMULATION

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Regulating agencies dictate quality and safety standards necessary for the practice of nursing. These standards, including state practice acts, provide the framework for nursing practice within the United States. Nursing colleges and hospitals in the United States have placed much emphasis on training student and graduate nurses through the use of high fidelity simulation and clinical practice experiences. With schools of nursing dedicating time and funding to various teaching methodologies, assessment of simulation learning strategy is essential to determine success of this teaching strategy over other possible influences. This research seeks to determine the attributes that relate to perceived levels of competency in senior level undergraduate nursing students' ability and skill including clinical experience, simulation and learning styles as influential components that contribute toward nursing practice learning outcomes.

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IMPLEMENTATION OF HIGH FIDELTIY SIMULATION TO ENHANCE CRITICAL THINKING SKILLS

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Background: In the past five years, the rate of Student Registered Nurse Anesthetists (SRNA) placed on remediation programs during their clinical phase at Naval Medical Center San Diego (NMCSD) has steadily increased. The most common reason for placing a student on remediation is deficiencies in critical thinking, which are typically identified by staff anesthesia providers and Nurse Anesthesia Program (NAP) faculty during clinical cases and on oral board examinations. Chipas (1995) defined critical thinking in anesthesia as the student's ability to synthesize information and transfer it from one situation to another. He went on to explain that critical thinking skills are vital to the conceptualization and analysis of information used in handling both routine and critical incidents, which do not always follow prescribed algorithms. This relates critical thinking as a key component to anesthesia patient safety and expected outcomes.
Aim/Purpose of the Project: The clinical problem identified in our facility is an increased number of students on remediation with critical thinking deficiencies. The purpose of this project is to decrease the number of students placed on remediation and ensure patient safety with a formalized simulation curriculum implemented during their clinical phase of training. Adding a simulation curriculum for these students would provide another avenue for developing and assessing critical thinking skills. Simulation has been identified as a strategy to improve and validate the sophisticated clinical judgment and advanced technical skills of anesthesia providers at all levels of training and practice (Decker, Sportsman, Puetz, & Billings, 2008). Studies done by Weller (2004) and Kuduvalli et al. (2009) showed that high-fidelity simulation-based workshops improved performance in high stress scenarios and increased retention of learned objectives for medical students and anesthesia trainees.
Design and Methods: This study is a quasi-experimental time series design. When SRNAs arrive at NMCSD they will spend three days in the simulation lab, undergoing an orientation, moving on to skill trainers and spending the final day using high-fidelity simulation for basic anesthesia scenarios. Each month thereafter for four months, students will attend a two-hour high-fidelity simulation case scenario session. Each month the scenario will increase in complexity. After each simulation scenario, the Anesthesia Non Technical Skills (ANTS) System Observation and Rating Sheet will be used to evaluate the students' performance and their scores will be compared over time. After the completion of the final scenario a t-test will be used to compare the mean score for all the students for all categories for the first month to the mean score for all the students for the last month. The results will hopefully show improvement over time. This improvement over time will show an increase in the student's ability to integrate individual components into an entire clinical scenario using critical thinking skills.
Results: Data analysis is in progress.
Conclusions and Implications: Hopefully the implementation of simulation can be incorporated into Phase II clinical training to enhance critical thinking and improve clinical performance while improving patient care and safety.

STUDENT BEHAVIORS IN A VIRTUAL REALITY-BASED CLINICAL SIMULATION: LESSONS LEARNED

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Purpose: Nursing simulations in Virtual Reality (VR) are increasingly becoming a valuable tool utilized in nursing education world-wide to enhance learning and provide additional contextual learning experiences. Although technology is becoming more user-friendly, there is still a need for technological support being provided to nursing students. This project identified student support needs that were necessary for VR nursing simulations.

Rationale: Prior to beginning simulations in Virtual Reality (VR), basic technological training can be provided to nursing students. Second Life, a virtual reality platform, is a well-developed, relatively user-friendly virtual environment that was selected for this project. Whether utilizing VR for simulations in traditional nursing programs or in distance education, the core learning objectives, scenario flow and debriefing questions remain the same. Additional support provided to students may be necessary for them to maintain focus in learning and ultimately to maximize retention.

Description: A cohort of students midway through their BSN curriculum were selected for participation in multiple virtual reality simulation activities including post-partum and bereavement scenarios over the course of one semester. The Technology Assistant (TA) assisted students in maneuvering around the clinical space, accessing medical devices and participating in debriefing. During each experience, the TA provided interventions related to helping students use the technology. Post simulations, two surveys (the Simulation Design Scale and the National League for Nursing Student Satisfaction and Self-Confidence in Learning Survey) were administered.

Outcomes: The primary outcome of this project was documenting the specific types of direct and indirect distractions that impeded learning in the VR environment. Examples of learning distractions included using headsets, maneuvering in the virtual environment and perceived unprofessionalism.

Conclusion: Distractions in simulation affect the quality of comprehension and learning. When addressed, virtual reality-based simulations can provide greater impact on clinical learning which can provide better outcomes for the nursing student. Possible options to explore that would improve the VR learning experience could include establishing group norms and standardized uniforms and setting clear expectations of professional behavior.

Funding: This project was supported by a grant from Boise State University School of Nursing.

EVALUATION OF IMMERSIVE CLINICAL SIMULATION INSTRUCTIONAL TECHNIQUES

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Purposes/Aims: The primary objective of this project was to evaluate immersive clinical simulation instructional techniques. This evaluation utilized a descriptive, type I program evaluation of highly realistic simulation experiences to measure; 1) Attitudes and perceptions of simulation as a clinical supplement, and 2) Improvement in performance of safety, communication & prioritization skills of first semester nursing students.
Rationale/Background: The University of Utah College of Nursing utilizes immersive clinical simulation to meet 25% of the clinical experiences of undergraduate baccalaureate nursing. Because of the impact this has on student time in the live clinical experience, it was imperative the simulation program be evaluated to measure the impact such extensive amounts of simulation has on pedagogy and student outcomes. Learning experiences were designed to foster the critical thinking needed to help students keep their patients safe, recognize changes early, and make appropriate clinical decisions regardless of setting or context. Each experience was grounded in methodologically sound pedagogy that actively engages and motivates the learner, without exceeding cognitive load. This cultivates experiences that closely resemble the learners' lived, clinical experiences and fosters the utilization of cognitive, psychomotor, and affective domains of knowledge.
Brief Description of the Project: Immersive Clinical Simulation utilizes a phased learning approach of pre-work, pre-brief, brief, immersion, debrief, synthesis and post-work. In this model, immersion is defined as extremely highly realistic, in-depth experiences that move the student beyond skill acquisition into formative learning. It requires the learner to make clinical decisions and take appropriate actions. These immersion experiences reflect the concepts of safety, communication, and prioritization as well as clinical judgment, caring behaviors and others recommended by national nursing organizations. They are then integrated into the simulation environment. The concepts build in complexity, become more dynamic within each semester as well as semester to semester.
Outcomes and Conclusion: Findings from this project suggest that when simulation-based learning is done right, it may be an appropriate clinical supplement/alternative, expand clinical site availability, and support increased student to faculty face time. Other benefits seem to include a significant increase in learner and faculty member satisfaction, more diverse learning experiences, the ability to enhance consistency across the curriculum, and improvements in critical thinking and clinical judgment. Critical components of immersive simulation-based learning include clear objectives, the level of realism, active engagement, repetition, video guided debriefing, and safety. Other key elements will also be discussed.

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STUDENT DEVELOPED SIMULATION SCENARIOS: CULTURE AND LEADERSHIP

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Purpose/Aims: The purpose of the student developed simulation scenarios is to give students an opportunity to learn the development of a simulation scenario while learning about the leadership role a nurse takes in advocating for members of different cultures. The development of each scenario by students was based on research about a specific culture, a health care setting, and the role of the nurse as a member of a collaborative team caring for the client and family.

Rationale/Background: The event involved nursing faculty and nursing students enrolled in a professional role development course in the second semester of their junior year. As more facilities utilize simulation in the practice setting, it is a benefit for students to understand the development of simulation scenarios with the benefits and limitations. The development of the scenarios provides an additional learning opportunity for students to experience the role of the nurse while learning more about a specific culture.

Brief Description of the Undertaking: The students learned the basics of developing a simulation scenario utilizing high-fidelity mannequins. The students learned how to run the mannequins and the scenario before the actual event through an in-class module similar to that provided to faculty. The students were required to develop a 20-minute scenario with clearly defined objectives and guidelines each member of the scenario. Each group of students researched the cultural needs in the health care setting for the chosen culture, the role of the nurse, potential barriers, and communication strategies with the client and family. An additional expectation was for the students to create debriefing prompts and questions to facilitate discussion after the scenario. Students assigned specific roles to each participant such as family member, nursing supervisor, staff nurse, or other member of the health care team.

Outcomes Achieved: Students learned about technology currently utilized in the education and practice environments. The students learned about a specific culture in the health care setting through the implementation and development of the scenario from the creation of objectives to facilitating the debriefing session at the conclusion of the scenario. The faculty served as a resource in the process but the students were the facilitators of the experience. Anecdotally, the students report a more comprehensive understanding of cultural concerns addressed by the nurse in the health care setting.

Conclusion: Providing opportunities for students to create additional scenarios in relation to topics such as communication, palliative care, collaboration, and health care dilemmas allows students an opportunity to create and participate in an experiential learning experience. The leadership role in facilitating and creating the scenario facilitates a means of observing the learning process of their peers and the potential motivators and barriers to learning about the role of the nurse and cultural concerns for the client.

SYMPOSIUM: VULNERABLE POPULATIONS OF WOMEN AND HEALTH

INDICATORS FACILITATING HEALTH SERVICE USE IN DIAGNOSIS AND TREATMENT OF BREAST CANCER

Ruth A. DeBoard

PERINATAL DEPRESSION: BEST PRACTICE FOR ASSESSMENT AND INTERVENTION

Kate Sheppard

DO CURRENT BONE DENSITY TESTING GUIDELINES CONTRIBUTE TO FRACTURE VULNERABILITY?

Ann C. F. Olson

SUDANESE REFUGEE WOMEN IN CULTURAL TRANSITION

Martha B. Baird

JUST ANOTHER BUMP IN THE ROAD: DEPRESSIVE SYMPTOMS IN AFRICAN AMERICAN WOMEN WITH BRCA

Joda H. Weathersby

Indicators Facilitating Health Service Use in Diagnosis and Treatment of Breast Cancer

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Purpose: A substantial number of women screened for breast cancer have an inconclusive or abnormal finding on mammogram, yet do not return in a timely manner for diagnostics and treatment. Lack of effective transitions from screening to resolution increases vulnerability to delayed treatment and poorer outcomes. Consequences associated with delay include later entry into the health system with advanced disease, more extensive and expensive care, and burden on financial resources. Delays of more than 90 days in women with symptomatic breast cancer are associated with increased recurrence and death. The purpose of this research is to describe contextual characteristics at the health delivery level and individual characteristics of women with incomplete or abnormal mammography, and their association with use of follow- up health services. Particularly, this research examines the differences between women who are early and late responders.

Background: In the United States, breast cancer is a significant problem, affecting approximately one in eight women. Invasive breast cancer is second only to lung cancer as a cause of cancer- related death in women. Early detection and treatment improves patient outcomes so timely follow- up is crucial. This research used the Model of Use of Health Services (Andersen, et al, 2007) as a framework for explaining predisposing, enabling and need factors at the individual and health system level. The model also differentiates access representing health disparity or health equity.

Methods: The participants were a convenience sample of 380 uninsured women who participated in mobile breast cancer screening. A subset of women with inconclusive or abnormal mammogram findings was the focus of analysis. This research utilized a descriptive correlational design with primary data collection through participant survey at mobile mammogram screening events in urban and rural Arizona. Participants requiring further health care were followed by chart review.

Results: Data indicated the time to the first follow- up appointment ranged from 1- 110 days with 77.4% of participants seen within 60 days, 6.5% within 60-90 days, and 16.1% without a visit after 90 days. Significant relationships between contextual and individual characteristics and delay were found. Results suggest organizational health system characteristics of urban location and not providing a clinical breast exam with mammography contribute to delay. Individual predisposing characteristics of previous abnormal mammogram and beliefs associated with value of health care were associated with late responders. Individual enabling financial characteristics of out of pocket costs and perceptions of financial assistance were associated with early responders. Individual needs such as depression were associated with early responders and lack of preventive patterns was associated with late responders. Satisfaction with the last health visit and mammograms in general was associated with early responders.

Implications: Nurses are well positioned to facilitate transitions and reduce barriers to health care access. Identification of indicators that facilitate follow- up after health screening assists development of interventions to improve practice and patient outcomes. Health disparity related to screening without adequate options for access to health care and resolution is ethically untenable. Promotion of health equity has important implications for health policy.

Perinatal Depression: Best Practice for Assessment and Intervention

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Purpose/Aims: Describe best practice for assessing and treating perinatal depression. Aims are to describe: risk factors for perinatal depression, methods of identify women vulnerable to depression, and pharmacological and alternative interventions.
Rationale/Background: The perinatal period is associated with physical, emotional, and social stress. Hormonal changes are significant during and after pregnancy. The brain undergoes physical restructuring, and emotional dysregulation is common. During this transition, women are particularly vulnerable to depression.20% of women experience depression during pregnancy, and depression is considered the most common perinatal complication. 40-85% of women experience baby blues and 40% of births are complicated by postpartum mood disorders. Despite these statistics, perinatal depression is frequently missed. Symptoms of depression include disruptions to sleep and appetite, loss of concentration, loss of energy, difficulty completing tasks, feelings of shame and guilt, loss of interest, ruminations, anxiety, and physical illness; these affect mom's self-care and ability to care for newborn. Severe depression can lead to hallucinations, delusions, and suicide. Postpartum psychosis can lead to homicide. Pharmacological interventions help reduce symptoms but are not without risk. In adults, SSRIs can cause serotonin syndrome (hyperpyrexia and tachycardia) and serotonin withdrawal. Antidepressants cross the placenta and are excreted in breast milk. SSRIs are not associated with intrauterine death or major birth defects but do cause transient perinatal syndrome (hypotonia, failure to feed). Tricyclic antidepressants are toxic. Atypical antipsychotics can cause fetal irritability and hyperreflexia, and many mood stabilizers are teratogenic. Alternative interventions include therapies such as supportive, milieu, group, and cognitive-behavioral.
Best Practice: All perinatal women should be screened for risk factors and symptoms of depression using an instrument such as the Edinburgh Postnatal Depression Scale and interviews. Assessment should include observing the woman's appearance and personal hygiene, noting eye contact, posture, and gait. During conversation, observe the woman's thought content, speech pattern, and her interest in the baby. Ask specifically about hallucinations, delusion, and mood, and then look for consistency between mood and affect. Ask about use of alcohol, anxiolytics, or sleeping pills. Every patient should be screened at every visit for domestic violence and suicidal thoughts. As pharmacological interventions have inherent risks, best practice is to help the woman make an informed decision and even to consider a non-pharmacological therapeutic alternative.
Outcomes Achieved: Earlier identification of perinatal women vulnerable to depression facilitates reduction of symptoms and suicide risk, and improves well-being of mother and baby. Education helps pregnant women make informed decisions about treatment options.
Conclusions: Best nursing practice is to identify women vulnerable to perinatal depression, provide education regarding treatment options, reduce symptoms, prevent reoccurrence.

VULNERABLE POPULATIONS OF WOMEN AND HEALTH

Do Current Bone Density Testing Guidelines Contribute to Fracture Vulnerability?

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Purpose: To determine bone health status and contributing risk factors toward the incidence of low bone mineral density (BMD) among a group of healthy perimenopausal women.
Background: Osteoporosis, the most common bone health disease, affects more than 10 million people in the United States. An additional 34 million people have low BMD, of which 80% are women. To date, research and clinical focus has been on post-menopausal women and related osteoporosis risks or treatment options. Few women are assessed for bone health status using BMD testing before menopause, and are vulnerable to osteoporosis risk due to the rapid bone density loss associated with perimenopause. Determining individual bone health status and incidence of low BMD among women prior to menopause is needed in bone health promotion research and clinical practice. This change in current guidelines may reduce osteoporosis risk and subsequent morbidity and health care costs associated with preventable fractures.
Methods: A secondary analysis using a descriptive correlational design from a 2008 longitudinal experimental study of 150 Midwestern women was applied. All women received BMD testing using dual energy X-ray absorptiometry (DXA) of the hip, femur, lumbar spine, and forearm. Baseline demographic data, self-reported personal and family medical histories, anthropometric data, perimenopausal symptoms, and baseline bone health behaviors (calcium intake, vitamin D intake, and physical activity recalled within the previous 7 days) were analyzed and compared to BMD testing results. Statistical comparisons between participants with normal bone density and low bone density were made.
Results: All 150 participants met inclusion criteria for the secondary analysis. Forty-two (28%) had low bone density. Statistical significance was set at $p < .05$. BMD testing results were positively correlated with weight ($r = .34$), body mass index ($r = .27$), and number of pregnancies ($r = .17$). Low bone density results were associated with history of grandmother having osteoporosis (χ^2 (1) = 10.81), personal history of hyperthyroidism (two-sided Fisher's exact test, $p = .021$), and mood swings (χ^2 (1) = 4.74). There were no significant correlations or associations between BMD testing results and baseline self-report of average or adequate daily calcium intake, vitamin D intake, or planned exercise.
Conclusion: Although women lose BMD during the perimenopausal transition, predicting who is at highest risk for bone density loss and subsequent increased fracture risk may not be reliable based on history or lifestyle habits. Current BMD testing screening guidelines focusing on older women may contribute to bone health disparity among younger women as they transition toward and beyond menopause. Bone density testing using DXA is an effective and safe method to determine baseline BMD among perimenopausal women. Early detection of women at highest risk for osteoporosis via baseline DXA testing during perimenopause may provide advanced practice nurses and patients with opportunities for focused interventions to improve bone health. This change in BMD testing screening guidelines may contribute toward reduced osteoporosis morbidity and improve women's quality of life, thus reducing financial consequences to individuals, families, communities, and the nation.

Funding: Winona Health, Winona State University Foundation, National Osteoporosis Foundation.

Sudanese Refugee Women in Cultural Transition

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Purpose: The purpose of this paper is to present the theory of Well-Being Among Refugee Women in Cultural Transition.
Description of Theory: The theory resulted from an interpretive ethnography about the resettlement experiences of Sudanese refugee women who came to the United States (US) with their children. Three phases are identified in the process of the refugee women's cultural transition: separation, liminality, and integration. Nursing interventions, such as social and informational support, can positively influence the integration phase of cultural transition and lead to improved well-being in refugee families.
Process Used: The process used in development of this theory was an adaptation of theory derivation (Walker & Avant, 2005). Theory derivation incorporates knowledge from a variety of disciplines and applies it to domains relevant to the practice of nursing. The theory of Well-Being Among Refugee Women in Cultural Transition includes knowledge and concepts from the social sciences, anthropology, psychology, as well as nursing to address the complex social phenomenon associated with forced migration and resettlement to a host country.
Logic Linking the Theory to Nursing Practice or Research Problem: Nurses are in a unique position to positively influence the health of refugee families in the communities where they are resettled. There is a lack of, and need for; a guiding framework to help nurses address the complex health needs of refugee populations. This theory provides such a framework.
Conclusion: As the numbers of immigrants and refugees are steadily rising in the US, it is essential that nurses understand the health implications of moving from one culture to another. The theory of Well-Being of Refugee Women in Cultural Transition is a useful framework to advance nursing research and practice with refugee populations.

Funding: The ethnography that led to this theory was supported by a grant from the Transcultural Nursing Society.

Just Another Bump in the Road: Depressive Symptoms in African American Women with BRCA

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Purpose: The purpose of this study was to explicate the process of depressive symptoms in African American women with breast cancer using grounded theory. This research paper presents results on the *Being Strong* phase of the basic social psychological (BSP) process *Transcending the Now.*

Background: Considerable health disparities exist among African American women in the area of breast cancer and depression, increasing their vulnerability to early death, disability, and decreased quality of life. Gender, racial and ethnic origins are factors in vulnerability and vulnerability is intricately related to health. Symptoms of depression in breast cancer patients are associated with lower quality of life, poorer treatment compliance, and shorter disease free intervals. Despite the implications of poor psychological health on breast cancer, few studies have focused on psychosocial issues and their relation to breast cancer in African-American women.

Method: A grounded theory approach was used to conceptualize the issues of African American women with breast cancer experiencing depressive symptoms as they experienced them. The sample included nine African American women with breast cancer who experienced depressive symptoms. Semi-structured interviews were conducted with each participant.

Results: The African American women in this study offered contextual descriptions of how breast cancer and depressive symptoms impacted their lives. Data were analyzed using the constant comparison method. The data indicated that African American women used the basic social process of *Transcending the now* to manage the basic social problem of having breast cancer and experiencing depressive symptoms. The results of the *Being Strong* phase of the basic social psychological (BSP) process *Transcending the Now* further indicated that African American women with breast cancer and depressive symptoms particularly relied on faith to transcend their circumstances. Strong determination, trust in God and inner strength were consistent findings among the women in this study. In African American women, prayer combined with spiritual beliefs played a major role in assisting women to cope with every phase of breast cancer. The reliance on religion and spirituality was pervasive in the lives of the women in this study. Additional strategies used by the participants included being positive, being resilient, turning inward, and accepting it.

Implications: African American women's concerns cannot be examined outside of their sociocultural experience. Culturally African American women are educated and encouraged to be strong and to survive. Because of unequal power relations and a social structure that has rendered Black women voiceless, knowledge and understanding about Black women's lives has been either absent or seriously flawed. The results of this study provide nurses with new knowledge regarding the experience of depressive symptoms in African American women with breast cancer that can be used to conceptualize African American women's' behavior as meaningful and as a direct expression of their worldviews. Additionally, the results of this study suggest that supporting and encouraging religious expression in African American women may decrease symptoms of depression. As well, the findings can be used for designing future intervention studies to address symptom management of depressive symptoms in African American women with breast cancer.

WOMEN'S HEALTH ISSUES

FALL EXPERIENCES IN WOMEN WITH FIBROMYALGIA

Dana N. Rutledge, Debra J. Rose, Alexandra Martinez, Theresa Kengen

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PERCEPTIONS OF SELF-ESTEEM IN A WELFARE-TO-WELLNESS-TO-WORK PROGRAM

Carolyn T. Martin, Judith L. Keswick, Diane Crayton, Paula LeVeck

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WEIGHT MANAGEMENT DURING PREGNANCY UTILIZING THE IOM GUIDELINES

Octavia Hyacinth, Barbara Sarter, Joseph F. Burkard

A DELPHI STUDY OF SELF-COMPETENCE FOR CHILDBIRTH

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WOMEN WITH T2DM AND STAGE 3 CKD: THEIR SELF-MANAGEMENT CONSIDERATIONS

Teresa J. Sakraida, Paul F. Cook, Sarah J. Schmiege

PERINEAL HYGIENE AND THE DEVELOPMENT OF CHORIOAMNIONITIS

Marie Hastings-Tolsma, Jennifer Hensley, Kate Koshoreck, Mesako Terado, Courtney G. Lupiablasi, Elisa Patterson, Sarah Schmiege, Alexis Hill

FALL EXPERIENCES IN WOMEN WITH FIBROMYALGIA

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Purpose: Describe the circumstances and consequences of falls among a community sample of persons with fibromyalgia (FM) and a prior history of falls.

Background: Recent studies have shown that persons with FM are at higher risk for falls than persons without FM (Jones et al, 2009; Rutledge et al., 2010). Persons with FM typically suffer from a multitude of concurrent symptoms and conditions that include abnormal pain sensitivity and inhibition, altered biological responses to stress, sleep disturbances, morning stiffness, and balance issues (Bennett et al., 2007; Bradley, 2009).

Knowledge of falls in community-dwelling adults with chronic conditions comes mostly from medical or risk management records, which are not rich in contextual information. No published research describes circumstances of falls for persons with FM. It is unknown therefore whether falls in FM are more/less likely to have similar causes, similar circumstances, and similar consequences as falls in other community-dwelling persons.

Methods: This descriptive longitudinal study received university review board approval. The purposively chosen sample was limited to participants with FM who were English-speaking, had fallen at least once in the prior year, had a phone, and were willing to participate in a 6-month study using fall diaries and post-fall or near-fall telephone interviews. Eighteen women participated.

An investigator-developed health history included questions about age, gender, education, race/ethnicity, medical history, medications, and employment. Monthly fall diaries were adapted from those used by the university Center for Successful Aging. Participants who fell or had a near fall were personally interviewed using the Fall Interview Guide, developed for this study based upon the falls literature and knowledge of FM.

Results: To date (88 diaries received), participants have reported 37 falls and 193 near falls (one woman reported 69 near falls over 6 months) and 49 interviews have been conducted. When all participants have completed their 6th and final diary and interviews are completed, key individual and aggregated fall experiences (circumstances, context, sequelae) will be described. Preliminary findings are that 78% of falls/near falls occur in the home, with most involving walking, stairs, and reaching/bending. Over half of participants report a loss of balance as a precipitating factor. Most falls (67%) were non-injurious.

Implications: Prior to the development of tailored fall risk reduction interventions, it is essential to further understand the causes, circumstances, and consequences of falls that may be unique to persons with FM.

PERCEPTIONS OF SELF-ESTEEM IN A WELFARE-TO-WELLNESS-TO-WORK PROGRAM

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Purposes/Aims: The purpose of this paper is to describe welfare-to wellness-to-work program participants' perception of their self-esteem. The study investigates welfare recipients' perceptions of personal self-esteem in relationship to their participation in a welfare-to-wellness-to-work program's curriculum called Work Wellness: The Basics.
Rationale/Background: Welfare reform required entry into the work force after 24 months of benefits. States develop welfare-to-work programs to assist recipients in locating jobs and leaving public assistance. Work Wellness: The Basics is designed to assist individuals facing multiple barriers in their effort to move successfully from welfare to the work world. This unique program was designed by a nurse using a holistic wellness model. Among other things it encourages positive personal self-esteem. Poor self-esteem prevents many low-income welfare recipients from leaving welfare. Research addressing issues of welfare-to-work program participants' self-esteem with the goal to improve the understanding of the role it has in changing socio-economic status is limited.
Brief Description: The cross-sectional descriptive design examined a convenience sample of 33 participants who attended a welfare-to-wellness-to-work program called Work Wellness: The Basics. Data were collected on four males and 29 females ranging in age from 23 to 59 years with varied ethnicity, the largest group being Hispanic (34%). A demographic survey, Rosenberg's Self-Esteem scale, and qualitative interviews were used. Content analysis was used to evaluate the qualitative data.
Outcomes Achieved: Even years after completing the program and with normal self-esteem scores, the participants attribute the program to supporting or increasing their self-esteem. Qualitative themes identified include: program, self-esteem, mental health, and domestic violence.
Conclusions: This study demonstrates the valuable contributions of a welfare-to-wellness-to-work program in relationship to participants' perception of personal self-esteem. Health promotion is a fundamental element of nursing practice. It is imperative that nurse leaders take active roles in developing community wellness curricula and policies that consider health risks in welfare recipients to improve the health status of this population. Information about the benefits of a holistic wellness program and its relationship to self-reported enhanced self-esteem can be used to assist with health promotion, policy, and the development of innovative programs that assist with transition from public assistance.

WEIGHT MANAGEMENT DURING PREGNANCY UTILIZING THE IOM GUIDELINES

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Background: Excessive weight gain during pregnancy has been linked to complications, which include gestational diabetes, preeclampsia, fetal macrosomia, and complications with delivery. Causes of excessive weight gain include pre-pregnancy obesity, poor diet, lack of exercise, lack of knowledge, and lack of patient adherence to Institute of Medicine (IOM) recommendations on weight gain during pregnancy. To prevent risk factors associated with excessive weight gain during pregnancy, weight gain should be closely monitored. This can be achieved through the use of the IOM guidelines on weight management during pregnancy.
Aim/Purpose: The purpose of this study is to determine whether pregnant women who receive education regarding weight management, using the IOM guidelines in conjunction with nutrition and exercise counseling, develop greater compliance with IOM recommended weight gain than compared to standard nutrition and exercise counseling.
Design and Methods: This study is a quasi-experiment. The intervention consists of IOM recommendations for weight gain during pregnancy and education on nutrition and exercise during pregnancy. The following three tools were utilized for this project: (1) the IOM graph, (2) the clinic's pamphlet outlining exercise during pregnancy, and (3) the clinic's pamphlet on nutrition guidelines during pregnancy. All providers (NPs and MDs) received training and education on the adverse effects of excessive weight gain during pregnancy, IOM guidelines, and use of the IOM graph. All of the medical assistants received training on accurately obtaining and documenting patient's weight, height, and Body Mass Index (BMI) on the IOM graph as well as in the patient's electronic charts. The following data will be collected from each chart: patient's height, pre-pregnancy weight, first trimester end weight, second trimester end weight, and third trimester end weight or pre-delivery weight. This data will be used to compare compliance rates by trimester. The pre-pregnancy weight and height will be used to determine the patient's BMI classification according to IOM guidelines. The recommended weight gain range will be obtained based on the patient's classification as either underweight, normal weight, overweight, or obese. The patients third trimester or pre-delivery weight will be subtracted from the pre-pregnancy weight to obtain the total weight gained. This number will then be compared to the IOM weight gain recommendations to determine compliance.
Results and Outcomes: Data collection and analysis in progress.
Conclusions and Implications: The results of this project should demonstrate significant improvements in overall weight gain trends at the study clinic. The short-term goal is weight management within the IOM guidelines. The long-term goal is to achieve reduction in pregnancy complications related to excessive weight gain. The projected implication for practice is a stricter adherence to IOM guidelines regarding pregnancy weight gain limits. Further research is needed to better address barriers to healthy eating during pregnancy.

A DELPHI STUDY OF SELF-COMPETENCE FOR CHILDBIRTH

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Rationale/Conceptual Basis/Background: Childbirth in America is changing. With today's escalating elective induction of labor and cesarean section rates and their potential negative health outcomes, it is essential to identify attributes of women who continue to birth powerfully with great grace and skill, embodying effectiveness, ability, sufficiency and/or success for accomplishing physiologic childbirth; in other words, women who are self-competent for childbirth.
Purposes/Aims: The purposes of this study are to investigate expert maternity care providers' descriptions of, understanding of, and clinical experiences with women who exhibit self-competence for childbirth, and to identify the defining attributes of self-competence for childbirth. The study aims to generate knowledge for future instrument development to measure self-competence for childbirth which will enable study of factors that affect the processes and outcomes of childbirth.
Method: This four round Delphi study will be administered to a group of physicians, midwives, nurses, and doulas to represent opinions of varying maternity care professionals with a wide variety of experience with childbearing women. IRB approval is obtained and nominated potential panelists consented for study participation. At least 80 panelists representing eight separate maternity care provider groups will comprise the expert panel.

Demographic and first round Delphi study surveys are in process. The purpose of the first round survey is to collect qualitative comments from panelists to five open-ended questions about their experiences with women who are self-competent for childbirth. Content analysis of first round results will generate statements representing panelists' responses to these questions. These statements form the basis for the second round survey.

This round will be comprised of the statements for ranking on a Likert scale according to how well each statement describes women who are self-competent for childbirth. Panelists also may provide descriptive responses with their rankings. Data analysis will identify the median and interquartile range of each statement's group ranking.

During the third round, data analysis will identify panel consensus of how well each statement describes women who are self-competent for childbirth. This will be achieved by presenting panelists with their individual and the group's rankings from round two. Panelists reconsider their individual ranking of each statement in the context of the group's overall ranking, then re-rank how well each statement describes the women for whom they care. Retained statements will be those with a median ranking of 5 or 6 on a 6 point Likert scale. These will comprise the final defining attributes of Self-Competence for Childbirth and will be presented to panelists in the fourth round for final confirmation.
Results: Study results will identify defining attributes of self-competence for childbirth derived from this Delphi survey of expert maternity care providers.
Implications: Study results will provide conceptual validation and an item pool for subsequent instrument development measuring self-competence for childbirth.

BREASTFEEDING AND MOTHERS WITH CHRONIC HEALTH CONDITIONS

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Breastfeeding may be most beneficial for women with specific chronic illness and may decrease the risk or prevent those illnesses from developing in their children. This study examined the initiation and duration rates of mothers identified as having asthma, hypertension, and diabetes; differences between the three groups in their efforts to breastfeed, and associations between determinants/outcomes of breastfeeding and behavioral beliefs, normative beliefs, and perceived control of mothers using Ajzen's Theory of Planned Behavior (TPB).

A retrospective quantitative methodology was used to compare rates of initiation and duration, the differences between the three groups, and correlations of determinants/outcomes to the constructs of the TPB. A qualitative element identified continuation/discontinuation themes and was used to give further insight into the mothers' breastfeeding decisions.

Fifty-three mothers, with asthma, hypertension or diabetes prior to the pregnancy were recruited into the study. The Breastfeeding Attrition Predictor Tool (BAPT), a 52- item valid and reliable Likert scale instrument was used to assess the mothers' behavior and normative beliefs and perceived control regarding breastfeeding. The BAPT also provided a section for demographic information. Descriptive statistics, ANOVA, and correlations were used to analyze the data.

Findings included a breastfeeding initiation rate of 100 % for all groups of mothers and a duration rate that exceeded the 2010 Healthy People recommendations. Mothers with asthma were found to higher Positive Breastfeeding Sentiment (PBS) than the other two groups. Women who endured a cesarean delivery reported lower levels of PBS. Women who breastfed their last child longer reported higher levels of Breastfeeding Control (BFC) along with those who reported more positive breastfeeding experiences with their last child. The recurring theme for continuing to breastfeed was the health of the baby, while discontinuing was self weaning of the baby or goals were achieved.

Mothers with chronic health conditions face challenges of managing their chronic illness while dealing with all of the changes associated with pregnancy and breastfeeding.

A better understanding of their efforts to breastfeed may help health care providers to develop, implement, and evaluate programs that support this vulnerable group of mothers.

EXAMINING KNOWLEDGE AND ATTITUDES TOWARDS ALCOHOL USE AMONG WOMEN OF CHILDBEARING AGE

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Although the exact prevalence of FASD is unknown, the overall incidence of fetal alcohol spectrum disorders (FASDs) in the U.S. is estimated to be from 0.5 to 10 cases per 1,000 (i.e., at least 40,000) live births annually. Educating allied health practitioners about the prevalence and problems associated with FASDs is an important first step in providing competent and comprehensive prevention, identification, and intervention services. The purpose of this presentation is to highlight the impact of infusing brief, intensive curricula on students' knowledge and attitudes about substance use disorders (SUDs). Although diagnostic guidelines exist for Fetal Alcohol Syndrome, it and other FASDs often go unidentified or misdiagnosed because many health care professionals do not recognize the indicators or know the diagnostic criteria, and/or fail to ask pregnant patients about their alcohol use. This, in part, is due to the fact that many medical and allied health professionals do not receive enough FASD-specific content in their pre-service education. Offsetting the prevalence, as well as the economic and social ramifications, of these conditions is dependent on health professionals having expertise in FASD diagnosis and treatment. However, academic programs often have difficulty finding time and room in the regular curriculum to include additional content. To bridge this gap, a brief research-based FASD curriculum was developed to be integrated into existing upper division nursing courses. The 2-hour Curriculum Infusion Package (CIP) is based on the CDC's *FASD Competency-Based Curriculum Development Guide* (2009). The FASD-CIP was integrated into existing upper-division nursing academic programs at seven universities throughout the Frontier Regional FASD Training Center region during Fall 2009 and Spring 2010 semesters. Nursing students (n=147) completed pre/post-test instruments based on CIP learning objectives and used to measure the impact of the CIP on their knowledge and attitudes related to FASDs and alcohol use among women of childbearing age. In addition to a significant increase in knowledge related to FASDs, results suggest that, despite a significant decrease in stigmatizing attitudes between pre/post-test measures, attitudes are significantly more negative towards women with SUDs who are pregnant vs. non-pregnant. Results lend support to the effectiveness of infusing brief research-based curricula into existing academic courses on increasing knowledge and reducing stigmatizing attitudes related to individuals with SUDs, and could have long-term implications for preparing nurses to work with women of childbearing age who have SUDs, as well as individuals who have an FASD.

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WOMEN WITH T2DM AND STAGE 3 CKD: THEIR SELF-MANAGEMENT CONSIDERATIONS

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Background: Nearly 10 million women have chronic illness. Because women have a longer lifespan than men and have more disease disability, they are at increased risk of long-term complications from Type 2 Diabetes Mellitus (T2DM) including chronic kidney disease (CKD). There remains limited information about what other factors contribute to better self-management.
Aims: This is a report from a parent study that described variation over time in T2DM and stage 3 CKD patients. This report characterizes the women participants' diabetes related stage of change, health-related quality of life, distress, and social support.
Methods: Patients 18 to 85 years ($N = 54$) were recruited from ambulatory care clinics in western Colorado to participate in a descriptive survey study. The following instruments were completed at study entry and 6 months later: sociodemographic profile, Problem Areas in Diabetes (PAID) scale, Kidney Disease Quality of Life-Short Form (KDQOL), Stage of Change in Adopting Behaviors classification, and Chronic Illness Resources Survey (CIRS). Hemoglobin $A1_c$ was retrieved from the medical record. Descriptive analysis was conducted using SPSS v. 18 with 43 subjects at entry and 39 at 6 months.
Results: Subjects were treatment-experienced 12 women and 31 men. The mean age was 64.33 ($SD = 11.57$) for women and 67.48 ($SD = 8.36$) for men; the mean years married was 28.42 ($SD = 18.72$) for women and 33.10 ($SD = 17.95$) for men; and, the mean education was 12.75 years ($SD = 1.29$) for women and 14.68 ($SD = 2.45$) years for men. Nearly half of the women (45.45%) compared to only 22.58% of the men reported being an ethnic minority. Men and women did not significantly differ from one another in the observed demographics, with the exception of educational level. For study outcomes, women reported experiencing significantly lower physical quality of life compared to men ($M = 35.28$, $SD = 9.56$ and $M = 42.07$, $SD = 10.49$, respectively); men and women did not significantly differ on any of the other KDQOL subscales, or on the PAID, CIRS, or stage of change measures. Relationships among study variables were examined by gender. Greater reported problem areas in diabetes (PAID) were negatively related to KDQOL in both men and women. Among women only, higher dietary stage of change was related to higher symptom-related quality of life ($r = .66$, $p < .05$), higher quality of life with regard to the CKD effects ($r = .73$, $p < .01$), lower food-related distress ($r = -.72$, $p < .01$), and a greater number of social resources ($r = .67$, $p < .05$).
Implications: Greater diabetes-related distress among women and men with T2DM with stage 3 CKD was associated with decreased quality of life. Women reported lower physical quality of life. For this sample of women, greater readiness for dietary change was related to higher kidney disease quality of life, lower distress, and greater social resource use. Although generalizability of gender-specific findings was limited by the number of women in the sample, clinical interventions to promote dietary self-management may be indicated.

Funding: STTI Alpha Kappa Chap at-Large, 2006.

PERINEAL HYGIENE AND THE DEVELOPMENT OF CHORIOAMNIONITIS

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Purpose/Aim: The purpose of this research is to examine the relationship between perineal hygiene and the development of chorioamnionitis. The specific research aim is: For term pregnant women in active labor: What is the relationship of the nature and frequency of perineal hygiene to the incidence of chorioamnionitis, when other treatment modalities, clinical factors, and patient characteristics are held constant?
Rationale/Conceptual Basis/Background: Chorioamnionitis is inflammation of fetal membranes that most often occurs during labor with an overall rate of 11.2/1,000 live births. When chorioamnionitis occurs, it places the fetus/neonate at risk for sepsis, pneumonia, respiratory distress, and death. The impact is particularly great for preterm infants where the incidence of chorioamnionitis is nearly 30%. Where chorioamnionitis is believed to be present, intravenous antibiotics are administered but not without potential consequence to the mother/fetus, as well as significant cost to the health care system. A number of risk factors are known to increase the risk of chorioamnionitis and include digital vaginal exams, use of internal monitoring, urogenital tract infections, and prolonged rupture of membranes. *What has not been examined is the impact of perineal hygiene on the development of chorioamnionitis*. A responsibility of labor nurses, the nature and frequency of perineal hygiene needs careful consideration.
Methods: Sample: A convenience sample of 140 low-risk term pregnant women and their newborns who are receiving care at a tertiary care regional medical center with a large nurse midwifery service are eligible for study inclusion. **Research Design:** A prospective observational pilot study will examine perineal hygiene during labor on the development of chorioamnionitis. Kane's (1997) Model of Treatment and Outcomes will be used to examine birth outcomes, holding constant other treatment modalities, clinical factors, and patient characteristics. **Instrument:** Recorded observations will be made onto the Perineal Hygiene Tool by a trained observer from the time of admission for active labor through birth. **Procedure:** Women admitted in active labor will be observed during all provider actions. Recorded observations will include frequency and nature of perineal hygiene, number of vaginal exams, use of sterile versus clean gloves, and other select variables likely to influence development of chorioamnionitis.
Results: Data will be entered into SPSS. Descriptive statistics and logistic regression analyses will be used to determine the relationship between perineal hygiene (nature and frequency) and chorioamnionitis when treatment modalities, clinical factors, and patient characteristics are held constant. Level of significance is .05 with power of 0.80 based on an estimated medium effect size.
Implications: Pending.

RESEARCH & INFORMATION EXCHANGE

The Research & Information Exchange includes posters of research conducted by faculty and students, and nurses in clinical practice. These posters have been selected by, and submitted from, WIN member agencies.

ARIZONA STATE UNIVERSITY COLLEGE OF NURSING & HEALTH INNOVATION

Phoenix, AZ

HEALTH EMPOWERMENT INTERVENTION WITH RURAL MEXICAN AMERICAN OLDER ADULTS

Laura J. Blank

AN EVIDENCE REVIEW OF TEXT MESSAGING TO PROMOTE HEALTHY LIFESTYLE BEHAVIORS

Lisa K. Militello

A SYSTEMATIC REVIEW OF ACTIVE LEARNING IN THE CLASSROOM

Nickolaus J. Miehl

AN EVALUATION OF EMPOWERMENT INTERVENTIONS FOR AFRICAN AMERICAN ADULTS

Anne-Marie O'Brien

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Ebere Ume

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The Western Institute of Nursing proudly recognized outstanding Western nurses with the following awards and honors in 2011.

DISTINGUISHED RESEARCH LECTURESHIP AWARD

The Distinguished Research Lectureship recognizes a senior researcher whose research efforts have made significant and sustained contributions to nursing. The 2011 award recipient was:

Bernadette Melnyk, PhD, RN, CPNP, NPP, FAAN, FNAP, Dean and Distinguished Foundation Professor in Nursing, College of Nursing & Healthcare Innovation, Arizona State University, Phoenix, AZ.

CAROL A. LINDEMAN AWARD FOR A NEW RESEARCHER

The New Researcher Award was established in 1976 by Carol A. Lindeman to support nursing researchers early in their careers. In 1987, the award was renamed to recognize Dr. Lindeman for her contributions and support of colleagues. In 2011, the award was given to:

Connie Kim Yen Nguyen-Truong, BSN, RN, PCCN, PhD Candidate/Progressive Care Certified Nurse, School of Nursing, Oregon Health & Science University, Portland, OR.

JOHN A. HARTFORD FOUNDATION/WESTERN INSTITUTE OF NURSING REGIONAL GERIATRIC NURSING RESEARCH AWARD

The Western Institute of Nursing and the John A. Hartford Foundation sponsors annual awards to a senior and a new nurse researcher to recognize outstanding nurse researchers and to foster and showcase geriatric nursing research. Recipients of the award in 2011 were:

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The Anna M. Shannon Mentorship Award was established in the name of the former Dean and Professor of the College of Nursing, Montana State University – Bozeman who unselfishly supported and promoted the professional growth of other nurses in the West. The 2011 Award recipient was:

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The Ann M. Voda American Indian/Alaskan Native/First Nation Conference Award was established in 2008 by Ann Voda to encourage American Indian/Alaskan Native/First Nation nursing students or nurse clinicians to participate with the WIN community of scholars. The 2011 award was made to:

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The Western Academy of Nurses recognizes and honors nurses who have demonstrated excellence in nursing practice and who have advanced nursing in direct care, education, or research. Inducted into the Academy in 2011 was:

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In 2010, the Western Institute of Nursing Board of Governors established the Friends of WIN Award. The award is given for stellar individuals or organizations that have made outstanding contributions to the Western Institute of Nursing (WIN). The intent of this award is to recognize these individuals or organizations and to thank them for their contributions. The first award was made to:

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Abbreviations

AAP = American Academy of Pediatrics
ADHD = Attention Deficit Hyperactivity Disorder
ALS = Amyotrophic Lateral Sclerosis
CBPR = Community Based Participatory Research
CICU = Cardiac Intensive Care Unit
CNL = Clinical Nurse Leaders
COPE = Creating Opportunities for Parent Empowerment
CTSA = Clinical and Translational Science Award
CVD = Cardiovascular Disease
EBP = Evidence Based Practice
ELISA = Enzyme-Linked ImmunoSorbent Assay
GABRA6 = Gamma-aminobutyric acid receptor subunit alpha-6
HCT = Hematopoietic Cell Transplantatioin
IDDM = Insulin Dependent (type 1) Diabetes Mellitus
IOM = Institute of Medicine
IPV = Intimate Partner Violence
JIA = Juvenile Idiopathic Arthritis
MERSQI = Medical Education Research Study Quality Instrument
NANDS = Nurses' Attitudes toward Nurses with Disabilities Scale
NEXus = Nursing Education eXchange
ORA = Operational Requirements Analysis
PEWS = Pediatric Early Warning Score
PHR = Personal Health Record
PICU = Pediatric Intensive Care Unit
RUIT = Reconceptualized Uncertainty in Illness Theory
SMI = Serious Mental Illness
WHI = Women's Health Initiative

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