

Navigating Student Challenges: From the Lens of First-Year Doctor of Physical Therapy Students

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Introduction. Anxiety, depression, and burnout are being discussed across health professions. Despite rising concern, studies investigating stress in students enrolled in Doctor of Physical Therapy (DPT) programs remain limited. Only recently have studies exploring stress in DPT students surfaced with any consistency. In this study, our aim was to elucidate the

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self-identified challenges first-year DPT students faced, how they reacted, and what they did to manage them.

Review of the Literature. Evidence suggests that DPT students, like other health professional students, report high levels of anxiety. Despite rising concern, studies investigating the impact of stress on DPT students remain limited. This concern also raises the question of the role of health professions educators in helping students develop the coping strategies needed to manage stress. Programs across the health professions have been proffered to address student stress; however, limited data exist to effectively guide educators. From the insights gained, we offer recommendations linked to the emic or student perspective that may help educators facilitate adaptive coping skills in their learners.

Subjects. Participants included first-year DPT students from 3 private universities.

Methods. A critical incident questionnaire was used to capture the student experience. Narratives were submitted electronically. Responses were deidentified, and researchers were blinded to participation. An inductive interpretivist approach was used to analyze the data. Strategies to ensure trustworthiness included prolonged engagement, triangulation of investigators, and peer review.

Results. Eighty-two first-year DPT students responded; 70 complete responses were analyzed. Three major themes were identified: 1) first-year DPT students faced academic, personal, and mixed challenges; 2) challenges evoked a range of negatively charged emotions; and 3) students relied on adaptive and some potentially maladaptive personal characteristics, behaviors, and strategies to manage their challenges.

Discussion and Conclusion. First-year DPT students face many of the same challenges as other health professional students. Most successfully navigated their challenges, however, not without some degree of emotion. As educators, we must

prepare students to develop the coping strategies needed to manage not only current academic stressors but ultimately the stressors inherent in clinical practice. Toward that end, we offer recommendations, linked to the emic perspective obtained, that may help educators facilitate adaptive coping skills in their learners.

Key Words: Qualitative Research, Challenges, Stressors, Emotion.

INTRODUCTION

Anxiety, depression, and burnout—these are terms currently discussed across the health professions.¹⁻⁶ The medical education literature highlights the prevalence and predictors of anxiety and depression in medical students nationally⁶⁻¹⁰ and internationally.^{9,11-14} An alarming rate of depression, depressive symptoms, and suicidal ideation has been noted in medical students.^{6,7} Researchers also describe the negative outcomes of acute stress on performance in medicine^{15,16} and document the impact of stress on behaviors, relationships, health, and patient care.^{6,16,17} Chronic stress is correlated with burnout, professional misconduct, and decreased altruism.¹⁸ US physicians report experiencing burnout in significant numbers.^{6,7,19} Only recently have studies related to stress in Doctor of Physical Therapy (DPT) students surfaced with any consistency,²⁰⁻²⁴ reached the national level in the physical therapy (PT) community.²⁵⁻²⁸ In this study, our aim was to elucidate the self-identified challenges first-year DPT students faced, how they reacted to those challenges, and what they did to manage them.

REVIEW OF LITERATURE

Evidence suggests that DPT students are often overwhelmed and report high levels of anxiety, nationally and internationally.^{21,24,29,30} Ellison et al³¹ reported moderate to severe levels of stress, anxiety, and depression, with an alarming 7% of participants reporting previous suicidal ideation. Douris et al³² also reported decreased aerobic fitness, quality of life, and sleep quality among first-year DPT

students, which is consistent with findings in other health professions students.³³

Despite rising concern, studies investigating the impact of stress on DPT students remain limited.²⁰⁻²⁴ Of note, current investigations do not qualitatively document how students describe their own stressors, emotional reactions, and management strategies.

Concern of anxiety, depression, and burnout across the health professions also raises the question of the role of educators in helping students develop the coping strategies needed to manage not only current academic stressors but ultimately the stressors inherent in clinical practice including balancing professional career with family and other personal life challenges. Many programs and interventions have been offered across the health professions to address student stress, including system-based interventions and flexible policies¹⁷; comprehensive wellness and mindfulness programs¹⁵; access to mental health services, mentoring, career planning, and assistance with financial concerns¹⁷; programs in nutrition and spirituality¹³; and use of humor, readings, and physical activity,³⁴ to name a few. However, there is no gold standard, and limited data exist to effectively guide wellness programs.³⁵ Without more fully understanding the student perspective, we risk implementing solutions that fail to match the underlying problems and do not adequately prepare students to develop the adaptive coping mechanisms needed to manage common stressors experienced in the classroom and in practice. From the insights gained, we offer recommendations linked to the emic or student perspective that may help educators facilitate adaptive coping skills in their learners.

SUBJECTS

This study included students enrolled in 3 DPT programs housed in private not-for-profit universities: George Washington University (GWU), a mid-Atlantic university with a 32-month postgraduate curriculum and an average class size of 45 students; Husson University (HU), a northeast university with a 6-year early assurance program with an average class size of 42; and Northwestern University (NU), a mid-western university with a 32-month postgraduate curriculum and an average class size of 95 students. In Spring 2019, students enrolled in the first year of their DPT program from all 3 universities were invited to participate in this study.

METHODS

Critical Incident Technique

We used a critical incident questionnaire^{36,37} to gather information about the lived experiences of first-year students. Critical incident technique (CIT) in general is a qualitative methodology that

focuses on particular experiences, activities or events, and ultimately seeks to understand what helps and hinders the participants.^{37,38} CIT was first used in 1954.³⁶ Since then, the technique has evolved significantly.³⁹ Originally designed for task analyses in industry,³⁶ CIT has been adapted for use in studies exploring a range of psychological constructs, emotions, and personal experiences.³⁹ CIT has been used in a wide range of fields including medicine,⁴⁰⁻⁴² nursing,⁴³ health services,⁴⁴ cultural studies,⁴⁵ adult education,⁴⁶ and PT,⁴⁷⁻⁴⁹ to name a few. CIT is flexible in both data collection (eg, observation, written narrative, and interviews) and analysis (eg, content analysis and narrative analysis).^{36,39,43} Each critical incident questionnaire must be uniquely designed based on the purpose of the research.³⁶

In our case, we sought to better understand the challenges students face, how they reacted, and what they did about them. Using the CIT enabled participants to select and reflect on particularly meaningful events as they created their own narratives.^{37,38} Our critical incident questionnaire prompted students to describe a particularly meaningful challenge they experienced as first-year students (Appendix, Supplemental Digital Content, <http://links.lww.com/JOPT/A147>). Participation was voluntary, not linked to any course or grade, and informed consent was obtained before participation.

Data Collection

Participants submitted written narrative responses to the critical incident questionnaire through Research Electronic Data Capture (<https://www.project-redcap.org/>). Responses were deidentified by nonresearch assistants. Researchers were blinded to participation. The Husson University Institutional Review Board approved this study (Protocol #19PT03), and each academic site submitted an interagency authorization letter, verifying participation.

Data Analysis

Data were analyzed using qualitative methods. Analysis was approached using an inductive interpretivist approach requiring both inductive and deductive analysis.³⁷ Three qualitatively trained researchers (M.M.P., W.E.H., and M.J.H.) independently coded the first 15 critical incidents using an inductive approach. Each critical incident or narrative was analyzed individually and in relation to all other critical incidents. From there, we came to consensus on codes. We then applied those codes deductively to the next 15 narratives, while simultaneously using inductive analysis to search for additional emergent codes. This process was repeated until all narratives were analyzed, saturation was reached, and consensus was obtained on all codes. Analysis was ongoing and consisted of a continuous

comparison of emerging data with all previous and subsequent data in search of emergent themes, as well as confirming, discrepant and unique data.^{50,51} Through this iterative process, we identified and refined codes, categories, and themes. Linkages were analyzed vis-à-vis the emergent data and displays of the interaction of themes were proposed and continually revised throughout the process. As a result, the pictorial representation of the emergent processes was continually reconceptualized until saturation was reached, and no new information emerged. Reflexivity was maintained as all 3 researchers served to check each other's biases throughout the consensus-driven process. Three additional researchers (E.C., J.M., and K.H.) functioned as peer reviewers reviewing the process, data, and outcomes throughout.

Ensuring Trustworthiness

Several approaches were used to maximize the quality and trustworthiness of this study. Three researchers involved in the data analysis maintained a reflexive approach: sharing potential assumptions and relying on each other to address potential biases and presuppositions throughout the design, analysis, interpretation, and writing phases. Three additional researchers functioned as peer reviewers throughout the process, reviewing coded data, posing alternative explanations, and observing for potential biases in analysis and interpretation. We used triangulation of researchers (ie, 3 researchers independently coded and came to consensus on all codes, categories, and themes) and participants (ie, perspectives from students from 3 different universities were sought) to capture multiple perspectives in optimizing trustworthiness. We also continually searched for negative and unique cases as we developed categories and themes. We maintained prolonged engagement with the data to maximize our understanding of the student perspective. We also used direct quotes (ie, thick rich descriptions) in presenting the findings to enable the reader to judge trustworthiness.^{51,52}

RESULTS

Eighty-two first-year DPT students submitted responses; 12 were omitted for failure to respond accurately or completely to the questions posed (Table 1). Study participants were primarily female (74.6%), Caucasian (83.5%), and between the ages of 20–25 (83.5%), which is higher in proportion to gender and ethnicity reported data reported in the Aggregate Program Data for enrolled students in 2019–2020 from the Commission on Accreditation of Physical Therapy Education (61.4% female and 72.5% Caucasian).⁵³

Table 1. Participant Demographics

	Total	Husson University	Northwestern University	George Washington University
Respondents	82	41	15	26
Gender				
Female	59	24	14	21
Male	19	16	1	2
Nonbinary	1	0	0	1
Prefer not to answer	3	1	0	2
Ethnicity				
American Black	1	0	1	0
Asian	6	1	2	3
Caucasian	66	36	11	19
Hispanic Latino	1	1	0	0
Mixed	4	1	1	2
Other	1	1	0	0
Prefer not to answer	3	1	0	2
Age (years)				
<20	1	1	0	0
20–25	66	34	13	19
26–30	7	4	1	2
31–39	4	1	1	2
40–49	1	0	0	1
Prefer not to answer	3	1	0	2

Here, we discuss 3 major themes that emerged from the coded data: 1) first-year DPT students faced academic, personal, and mixed challenges; 2) challenges evoked a range of negatively charged emotions; and 3) students relied on personal characteristics, behaviors, and strategies that were more or less adaptive to manage challenges. Below we present the themes with exemplary supporting quotes.

Theme 1: First-year DPT students faced Academic, Personal, and Mixed Challenges

Participants identified their greatest challenges as academic, personal, or a mix of both (Figure 1)

Academic challenges. Academic challenges included transitioning to graduate school and time management including managing the volume and density of course content as exemplified by the following:

I found the general transition to be the greatest challenge... I came straight from undergrad but this type of schooling is very intense. I thought I had my study techniques established but I needed to re-learn the best way to learn in these new situations. (32186)

The greatest challenge (sic)... [has been] balancing the numerous classes, assignments, projects, and upcoming tests while keeping up with the new material. (12197)

Other common academic challenges were failing, attaining a poor grade, or being unhappy with their overall performance. This student describes the significant impact of a failure:

A particularly challenging experience... was putting so much time into studying... but when the first exam was graded, I had failed. I had put so much time and effort into understanding the material... and was crushed by the grade. (22135)

Personal Challenges. Personal challenges included health conditions, roommate conflicts, and loss of relationships due to distance, death, or divorce.

The biggest challenge I have faced was dealing with a very rough time period during PT school. My parents got divorced right after I was told by a long-time professor here that I should quit the program... I couldn't share or count on them [my parents] as a support because I was too busy trying to support both of them and their own struggles. (2212)

Maintaining health during the first year was challenging and led to anxiety for some:

I dealt with a lot of anxiety... throughout high school and undergrad... before starting PT school, it was under control... However, during my second semester of school... my anxiety was returning. I did not feel confident... and I allowed this class [physiology] to consume my entire life. (121104)

Managing relationships, family responsibilities, and financial issues all added layers of challenge.

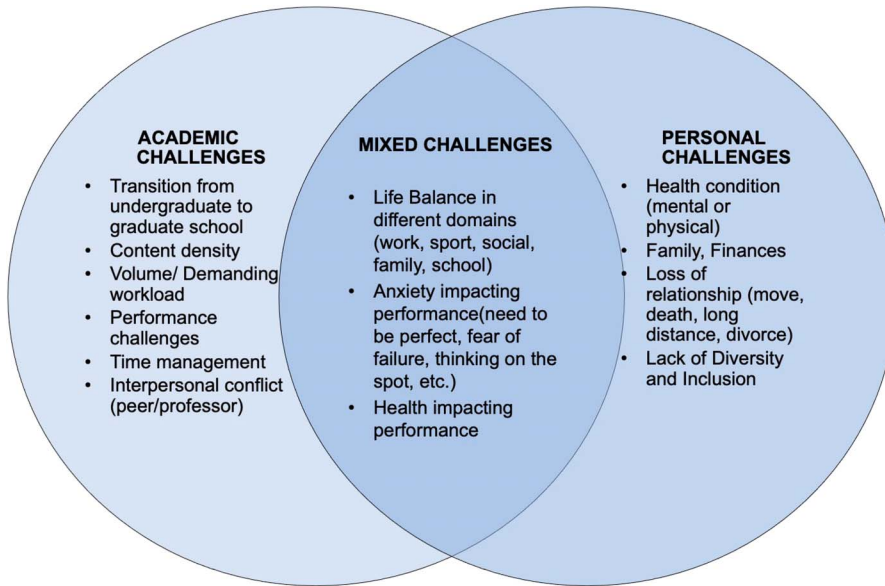
My long-distance relationship. I am constantly thinking about it and how it will affect my career... I have a hard time focusing on myself and school because I want to talk to him or FaceTime him in my time off. I do not socialize... because I feel bad I did not visit him that weekend. (32158)

The greatest challenge I've experienced... is trying to be a good father and a good student. It's very frustrating to hear your almost 3-year-old daughter call out to you to play or... see what she's done. With often times being forced to ignore it because an assignment or studying for an exam is needing to be done. (22111)
The greatest challenge I have experienced is financial... I have been paying my own bills and living on my own since I started college at 18... I have struggled each semester to buy books... I work... but most weeks I have to request work off due to school and studying, making it hard to afford groceries or gas for the week. (22125)

Some experienced self-doubt or self-questioning about their choice to attend PT school.

Moving back home from undergraduate university to begin the physical therapy program was the greatest challenge... I was painfully anxious about returning home... knowing I had changed... I found a vocation in my undergraduate

Figure 1. Challenges Experienced



career... I did not feel ready to leave. I felt like I was coming home to pursue a career I no longer felt driven to participate in and doing it in a space I thought would stifle the person I was becoming. (22130)

Finally, 1 student felt a unique sense of isolation because of the lack of diversity and inclusion in the student body.

Being one of the few black students in the program is the greatest challenge... because it is something I am reminded of everyday. It's not an incident, it just persists and it's not a matter of solving it but becoming comfortable with the reality of the situation... I am constantly reminded I am representing myself as a black... DPT student but also as the voice for the patients we will have in the future who look like me. (32174)

Mixed Challenges. Some students shared personal challenges, such as health issues, issues with anxiety, or an inability to find life balance, that compounded academic challenges.

In my first semester... I had a major relapse of my previous eating disorder, which caused severe anxiety, stress, and challenge on top of my already very challenging schoolwork. (32194)
I realized how much anxiety, stress, and worry plagued me during the school year, influenced by various factors, that caused me to have poor academics. (22118)

This student described the significant impact of a wrist injury on academic performance as well as mental and physical health:

I injured my wrist... around the same time when I was doing badly on exams... My bad scores left me on edge... That, on top of my wrist injury, left my physical health in bad shape. The stress caused me to be sick for weeks, and my injury prevented me from keeping up an exercise regimen. Overall, both my mental and physical health spiraled down, and it was definitely one of the lowest points of my life. (32193)

Performance anxiety was particularly challenging for many. In this case, anxiety led to physical discomfort:

One of the greatest challenges I have experienced throughout PT school is skills checks and practicals... I am always well prepared, but something just makes me so anxious right before... my stomach would even hurt because I got so nervous thinking about it. (22133)

Finding life balance during PT school was another common challenge.

The greatest challenge... was trying to juggle my mental health, family life and troubles, and slipping grades all at once during a very tough semester. (121117)

Theme 2: Challenges evoked a wide range of negatively charged emotions in students

Many shared emotional responses to challenges. Most were negatively charged and ranged from what we as investigators described as lower intensity negative emotions such as feeling upset, discouraged, or

embarrassed to what appears to be higher-intensity negative emotions such as feeling crushed, trapped, devastated, or hopeless (Figure 2).

This student experienced numerous emotions after experiencing a failure for the first time.

I was terrified I had failed the course. I felt like a failure. I felt I had let down my children, my parents, myself. I was embarrassed and wondered what my classmates thought of me. I was ashamed. I felt my world was spinning and I did not know what my future would hold. It was the first time I had ever failed. (121136)

Another was overwhelmed leading to questioning academic ability and belonging.

I was overwhelmed, I felt trapped in a cloud... like one part of me knew and could understand what was happening, but the other side couldn't overcome it. I felt defeated, I felt confused... I felt stupid, and out of my element. It was the first time I ever felt like I didn't belong in school, and like I wasn't good enough academically. (22129)

Others shared similar losses of self-esteem and self-confidence or feelings of self-doubt:

I felt discouraged... like I wasn't good enough to be in the program... the experience took a heavy toll on me, leading to burn out and feeling of failure for the rest of the semester. (22117)
I was completely devastated and questioned whether I was cut out for the program... I felt like a fraud... as if I didn't deserve to be there. I had never failed an exam before and I questioned if I was as smart as I thought I was. (121124)

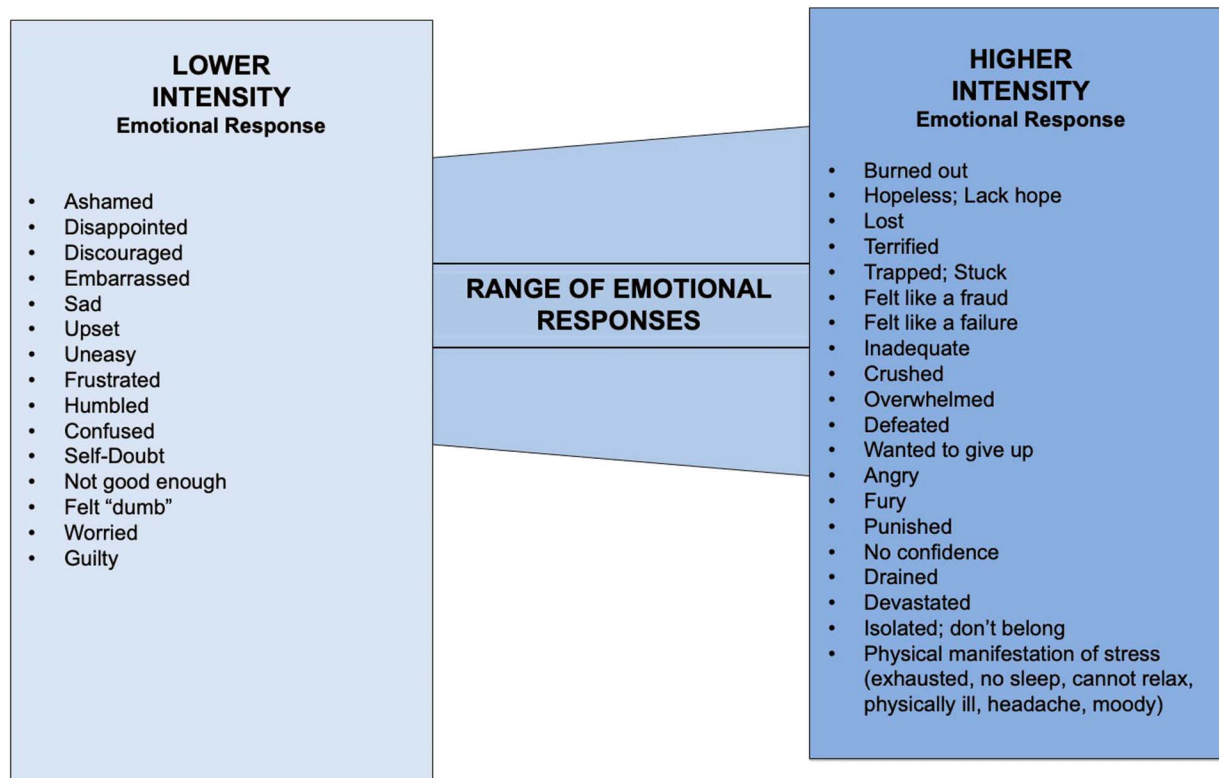
Still others shared physical manifestations of stress such as exhaustion, inability to relax or sleep, headaches, and moodiness. One student described a near accident due to the lack of sleep from PT school:

I hit a brick wall mentally, emotionally, and physically. I was falling asleep on my way to and from school and had almost hit an 18-wheeler... I was terrified, I felt trapped... I felt like a failure. (22123)

The negative effects of poor sleep were seconded by this student:

[I was un]able to shut my mind off... I was getting very few hours of sleep at night and it was affecting my ability to perform in school. I was very frustrated

Figure 2. Emotions Experienced



as I would just lay awake for hours. (22114)

Finally, some shared a sense of just wanting to give up.

I failed my first practical... I was crushed. I had just moved across the country to start this program and I felt like it had all been a mistake and there wasn't any place for me at this new university. As a person who has had anxiety and depressive disorders since childhood, it was nearly impossible for me to shake off the embarrassment and shame... I wanted to drop out and leave right away. (12199)

Theme 3: Students relied on adaptive or potentially maladaptive personal characteristics, behaviors, and strategies to manage challenges

Adaptive. When asked what they did to manage their challenges, the overwhelming majority shared their use of personal characteristics, behaviors, and adaptive strategies to cope. Personal characteristics such as dedication, hardworking, discipline, and persistence enabled them to address their challenges.

I have [been able to overcome my challenge] with hard work and dedication. (22174)

It was my determination and work ethic that allowed me to return to the program and continue on despite this setback. (32194)

My dedication to studying, and not giving up were my attributes to passing. (22137)

Behavior changes and strategies included prioritizing studies, setting goals, using detailed calendars, changing study habits, or managing time better.

I learned I needed to set short-term goals for myself and to keep a detailed calendar to complete more studying while balancing classes. (12197)

I changed my study habits... I took time to draw out what I was thinking about to use a kinesthetic learning style. This paid off and brought my grade up to where I needed it to be for the semester. (22135)

This student explicitly scheduled time with friends and for studying:

I prioritize friend-time because it makes me more focused during the grind

time... I find scheduling pretty much everything around those grind times makes them more distinct and urgent. (121102)

Others described using reflection and positive self-talk, changing their mindset, and engaging in self-care activities to overcome challenges:

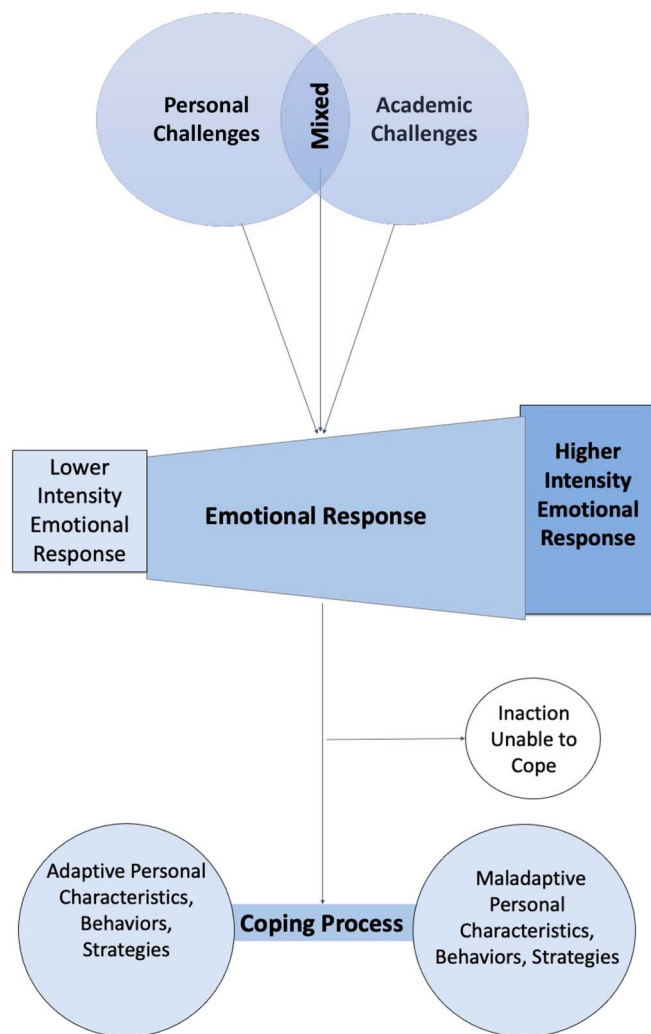
I was successful at understanding how to think about my stresses... I know to take a step back and understand I won't be good at every class and I won't understand all of the information perfectly the first time around... the best thing for me is to not talk about my grades at all to people. This just makes me second guess what I am doing and get down on myself. (22110)

I overcame my challenge by changing my mindset. I shifted the goal to something more attainable. Talking with my friends and family helped me see this new positive outlook. (121109)

Some adopted self-care activities to help overcome their challenges.

What helped me was my awareness of myself, and my awareness of the steps I need to take to better my health,

Figure 3. Coping with challenges



i.e., meditation, eating healthy, and exercising. (32193)

I have started working on a set sleep schedule and incorporated meditation to help clear my mind. (22114)

Still others learned and adopted multiple positive behaviors and strategies to address their first-year challenges:

I learned I could overcome test taking anxiety by being better prepared for class as well as start studying for tests sooner. I also learned I had to say no to social invitations, but to also plan social time during the valleys of assignments/tests to give myself motivation to work hard during the peaks. I also learned sleep plays a huge factor in learning and that reading material before bed was more beneficial than watching a show. (121134)

Now I work to stay focused on my studying and schoolwork completely at school... I am not as productive [at

home]... I am now switching between studying topics more... I also try to review the previous class lecture before attending a new class... I work in a quiet, non-distracting room... [I] hold myself accountable through the deadlines I keep for myself on a calendar... I now workout before coming to school, participate in my classes and then stay after school to continue studying until it is time to go home. (12197)

And finally, some sought professional and social supports to help them cope.

Working with a therapist has helped to come up with better coping mechanisms and being more comfortable in the city and making friends has also helped me build a better support system. (12199)
In my first semester of PT school, I had a major relapse of my previous eating disorder, which caused severe anxiety, stress, and challenge on top of my already very challenging schoolwork. I

sought help from outside providers, sometimes receiving treatment for more than 8 hours a week. (32194)

Potentially Maladaptive. Although most students shared helpful characteristics, behaviors, and adaptive strategies, a few shared what they described as unhelpful characteristics, such as being anxious or lacking self-confidence, which impacted their performance.

I was most disappointed in my loss of confidence while taking the exam. I obsessed over skills I knew I was capable of performing more efficiently and allowed myself to get overly anxious while taking the practical... I was not adequately prepared to pass the exam... I was extremely frustrated with myself and believed... I was not good enough. (121133)

A few described, what we perceived to be, maladaptive behaviors and strategies such as cramming, pushing through, just crying, or using negative self-talk; although for some, these behaviors enabled short-term success. This student's comment exemplifies the notion of cramming, which in this example led to self-reflection and a better way to approach studying:

I went to the library after class and just thought about everything... I decided I would study through lunch... I skipped my practice and kept studying (and doing other assignments) until midnight. I went home and went to bed having barely eaten. I went through the following day with a lot of caffeine and studied... until 2 in the morning. I went home and slept until 6 am. I got up, studied some more, took the test at 9 am and did quite well... I wasn't taking care of myself... but I also realized I needed better study habits. (2216)

This student seemed to accept the emotional toll resulting from pushing through course challenges:

[Dense courses] always cause me an insane amount of stress, but I manage it by just pushing through it and crying... I just have to deal with the wave of emotion and let it consume me and it will eventually spit me back up. (22120)

Assuming the worst motivated this student:

I basically assume I will fail every exam if I do not hustle like a madman. This approach has helped me a great deal. I do not know if it is necessarily good for everyone to imagine the worst-case scenario and assume it will happen without

Table 2. Recommendations

Recommendations	Rationale and Sample Actions/Activities	Related Themes
1. Approaches to teaching and learning. ^{16,63}	Despite significant success in undergraduate studies, the transition to graduate professional studies is one for which many were not well prepared. They needed to learn new study approaches. To support students in their development we may:	3
	1. Teach specific time management and organizational skills to help students prioritize studies, along with strategies to maintain self-care and work-life balance.	
	2. Teach evidence-based study approaches including strategies such as spaced learning, distributed learning, and retrieval practice.	
	3. Discuss overlearning as a strategy to minimize cognitive overload to help students manage both the demands of the task and their own stress more effectively.	
2. Cognitive reappraisal, learned resourcefulness, and coping strategies. ^{8,15,16,22,64,65}	Our students, with few exceptions, clearly demonstrated that they were able to cope with the challenges they faced; however, this was not without emotional energy. Sample support activities might include:	1,3
	1. Discuss challenges students face early on, so they are less novel or unanticipated.	
	2. Have near peers describe challenges they faced and the strategies they used to succeed.	
	. Engage students in mindfulness practice to help them recognize their typical responses to struggles.	
	4. Help students cognitively reframe how they perceive challenges to obtain more objective and accurate assessments.	
	5. Help students view the demands of PT school as challenges to overcome rather than stressors and roadblocks recognizing that viewing a situation as a challenge can lead to positive responses (eg, persistence, hard work); while viewing a situation as a stress or threat often leads to negative responses (eg, avoidance and give up).	
	6. Teach students active coping strategies to help minimize heightened stress responses.	
	7. Help students identify the resources they have available to meet the demands being placed on them, and when insufficient, identify access to external supports (eg, mental health counselors and financial aid).	
	8. Teach students to use active rather than avoidant coping strategies when faced with stress.	
3. Mindset, resilience, and stress inoculation ^{8,16,22,42,59,64,66}	Students developed their own strategies to help them take control over their learning, develop coping strategies, and manage their challenges over time. To support students in their efforts we may:	3
	1. Discuss benefits of having a growth mindset.	
	2. Help students modulate expectations to minimize fear of failure or need to be perfect.	
	3. Teach students to engage in positive self-talk and cognitive reappraisal to minimize stress, blaming, catastrophizing, and magnifying.	
	4. Help students recognize that they have control over their own situations, moving them from an external to an internal locus of control.	
	5. Improve student coping self-efficacy by progressively exposing students to academic stressors.	
	6. Encourage faculty to identify challenges inherent to the task versus those external to the task and progressively introduce stressors to students.	

Table 2. Recommendations *continued*

Recommendations	Rationale and Sample Actions/Activities	Related Themes
4. Social supports ^{54,60,67}	Social supports can be an important protective factor to students' mental health and well-being, and most of our students sought support, nonprofessional or professional, in times of stress. To support students in developing supportive social networks, we may:	2,3
	1. Ensure sufficient time and space for students to engage with peers, friends, and family outside class time.	
	2. Develop opportunities for near peer support such as affinity groups, peer tutoring, and mentoring programs.	
	3. Facilitate the development of student-led reflection groups to share like experiences, personal reactions, as well as management strategies and resources to develop a community of practice.	
5. Emotional and intellectual candor. ^{61,62}	Health care practitioners often experience a variety of emotions during patient interactions. To prepare students for their future practice, time must be dedicated to help students effectively recognize, reflect on, and process emotions as they move through challenges. To support students in learning ways to manage emotions that are constitutive to being healthcare providers, we may:	1,2,3
	1. Encourage faculty to engage in authentic dialogue where they:	
	i. Openly share challenging situations they faced, the feelings and emotional responses they experienced, and how they managed both	
	ii. Model effective ways to manage strong emotions;	
	iii. Share effective time management strategies; and	
	iv. Share strategies for managing demanding workloads.	
	2. Share strategies for creating work-life balance and preventing potential burnout.	

extreme effort to the contrary, but that kind of motivation is what has worked best for me. (121102)

Inaction. Finally, only 6 students identified no strategy for managing their challenge. They could not “break the cycle,” indicated it “will just happen again,” or had no alternative solution so took no action. For example:

I was stuck in a cycle. I would work extremely hard for the class, making me anxious, and then I wouldn't see the results I had hoped for. I felt stuck and hopeless. I didn't understand why this class was getting to me. I felt defeated and lost the confidence I once had. (121104)

What hinders me is my inability to see through the stress and fear... I still cope with it the same way each time and I have no time really to focus on changing it... I know it's unhealthy and very hard on the people around me, which is why I pull myself away from the situation so others aren't affected as badly from the "fallout."(22120)

DISCUSSION

This multisite qualitative research study was designed to help researchers better understand the emic perspective, or lived experiences, of first-year DPT students. The critical incident questionnaire enabled students to identify their most meaningful challenges and describe them in their own voice. Qualitative methods enabled us to capture their perspectives. Three themes were identified. Students experienced a variety of challenges, personal, academic, or a mix, and, as a result, experienced a range of negative emotions. Most used adaptive coping mechanisms to cope with these challenges, although some shared potentially maladaptive characteristics, behaviors, and strategies (Figure 3).

Students cited academic and personal challenges ranging from demanding workloads, performance difficulties, and time management issues, to health conditions, relationship struggles, and self-doubt. Students described performance anxiety, a fear of failing, a need to be perfect, and an inability to think on the spot. One student felt uniquely challenged daily by the lack of diversity and inclusion in the cohort. These academic and personal challenges are

largely consistent with current literature both in medicine and PT.^{9,17,20,24,31,54-57} The results of our study confirm that DPT students, like other health professions students, face a wide range of challenges.

Many researchers describe the prevalence and predictors of stress in health professions students^{6-9,11,12,20-24}; however, we found no articles examining the students' emotional reactions to those stressors. Particularly striking were the range of negatively charged terms students used to convey their emotional reactions, which ranged from seemingly mild (eg, upset, disappointed, and discouraged) to rather severe (eg, hopeless, trapped, and terrified). Given that the critical incident technique requires participants to select meaningful challenges, it is not surprising that most were negatively charged as authors have noted that negatively charged emotions tend to be more impactful on individuals and therefore more salient.⁵⁸ However, of significant concern were reports of the physical manifestations of stress including headaches, moodiness, illness, or an inability to sleep.

Challenges are uniquely defined by each individual.⁴⁷ What one may view as a

challenge to be overcome; another may view as a significant barrier or threat potentially defying solution. This difference was evident in the language our students used in their narratives. LeBlanc¹⁶ differentiates between challenges and stressors, noting that this differentiation relies heavily on one's assessment of the situation. Not all challenges result in a physiological stress reaction. Individual perceptions of situations are based on 2 cognitive appraisal processes: 1) assessment of the demand being placed on them and 2) assessment of the resources available to manage that demand. A challenging situation evokes a stress response only when an individual perceives a lack of sufficient resources to manage the challenge.^{8,15,16} As evident in our participants, some individuals shared mild reactions to challenging situations, whereas others reacted with strong negative emotions. This range of emotional responses could potentially be the result of the cognitive assessment process, a perceived lack of resources available, or both.

Although we cannot say that these negative emotions were accompanied by physiologic stress, heightened responses to daily stressors are associated with chronic health conditions.¹⁵ How one reacts to daily stressors can lead to physiological changes and chronic health conditions. This is of concern given how some of our students experienced physical ailments when exposed to the challenges or stresses in their first year of study. Acute stress can impede performance, particularly on tasks requiring divided attention, working memory, memory retrieval, and decision making¹⁶—all important skills for physical therapists—making stress an important concept to address early and identification of students with limited resources a high priority.

Recent studies have focused on what students do when faced with challenges.^{21,22,31} Our participants, with few exceptions, were successful in managing their challenges. When asked what they did to manage them, they shared personal characteristics, strategies, and behaviors. Students talked in terms of resilience citing their own persistence, dedication, and hard work as core to their success. They developed new study strategies, enhanced their self-care (eg, sleep, meditation, and exercise), and prioritized their studies. Some used reflection, positive self-talk, and modified their mindset and expectations. Finally, many sought supports from family, friends, and, when needed, professionals. Although most students described active and adaptive coping skills, some used what we perceived to be less adaptive, more passive, and potentially maladaptive coping behaviors, for example, cramming, negative

self-talk, just pushing through, and deficient self-care. Our findings are consistent with VanVeld et al,²² who described the coping strategies PT students used across the curriculum. First-year students relied heavily on reflecting, problem solving, and seeking social supports as well as organizing, exercising, healthy behaviors, and mindfulness. Similarly, they identified a minority of students who used more passive and avoidant or maladaptive coping strategies. Ellison et al³¹ and Douris et al³² also reported decreases in healthy behaviors in first-year DPT students.

Recommendations

Given that no gold standard or well accepted guidelines exist for developing programs to help students learn to manage their challenges and stressors,³⁵ we used the emic perspective gained from our students and, with the help of current literature, extrapolated strategies educators and future students may find helpful Table 2. We make recommendations in the following categories: 1) approaches to teaching and learning; 2) cognitive reappraisal, learned resourcefulness, and coping strategies; 3) mindset, resilience, and stress inoculation; 4) social supports; and 5) emotional and intellectual candor and reflection. Table 2 links recommendations to the themes that emerged from this study as well as to current literature and provides rationale and sample activities to support student development. It is important to remember that no single recommendation will meet the needs of all students. Just as challenges are uniquely defined, so too must be the strategies used to address these challenges.

Clinicians and educators must prepare students for successful careers in health care. Success requires students to manage challenges and their accompanying emotions. We cannot remove the stressors inherent in being health care providers. In fact, we would be doing our students a disservice if we failed to prepare them to manage stressful and emergent situations.¹⁶ Rather than simply removing stressors, our role is to help students develop strategies to accurately appraise situations that can lead to stress and help them develop the resources needed to manage both their challenges and concomitant emotions.^{15,16}

Future Studies

We focused on the first-year experience as foundational to a student's academic and professional career. This raises the question of whether stressors change over time, and if so, how might the supports and preparation needed change? The literature suggests that

students identify different challenges as they progress through their curricula.^{9,57,68} For example, literature notes, experiencing human suffering becomes a significant stressor as students progress into clinical practice.^{17,21} As students experience challenges and develop new coping skills, it would be important to ascertain what most helped and hindered them in developing those strategies. We used critical incidents to obtain a broader representation of the students' perspectives; what we missed in doing so is the ability to probe for deeper understanding. More in-depth interviews may further explicate the first-year experience. Finally, future research should explore the benefits of any recommendations or interventions used to help students learn to manage the challenges and emotions they will face as future health care providers.

Limitations

We used qualitative methods and a sample of convenience to capture challenges from the students' perspective. Although results from qualitative studies are not meant to be generalized, readers are encouraged to judge applicability of these outcomes to their context. To help readers make informed judgments, we used several strategies to ensure trustworthiness and transparency of methods and outcomes. In addition, the CIT is based on retrospective self-report; however, given that we were asking about a significant personal experience, we believe the essence of the narratives provided represent salient experiences for the students. This study was also limited to 3 universities; however, in selecting these universities, we sought diverse settings to optimize transferability. Participation was voluntary, so it is possible not all student experiences are represented. Finally, using written narrative limited the researchers' abilities to probe for clarity and further understanding.

CONCLUSIONS

First-year DPT students face many of the same challenges as students in other health professions. Most possessed essential characteristics and adopted behaviors and strategies to navigate their challenges successfully. However, negative emotions, some quite strong, most often accompanied these challenges. We cannot remove all stressors students will face as future health care providers; consequently, our role must be to prepare students for emergent challenges and help them develop strategies to manage the emotions often accompanying those challenges. Although significant negative consequences resulting from stress and burnout have been noted in medicine, the literature provides no

gold standard or well-established approach to address these concerns. Guided by the emic perspective obtained and current literature, this paper offers strategies educators and future students may find helpful in managing challenges and stressors in the academic setting.

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