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Graduate Healthcare Students' Mental Health: A Pilot Study

Abstract

This pilot study investigates the mental health of healthcare professional doctoral students, focusing on stress, anxiety, and depression, which can lead to burnout. These students are responsible for intense academic demands, personal lives, and professional careers.

This study explored student mental health in the Doctor of Medical Science (DMSc)/ Doctor of Health Science (DHSc) programs at the University of the Pacific's School of Health Sciences. The study contributes to existing literature, exploring how educational experiences impact healthcare students' mental health, behaviors, and symptoms.

The DASS-21 survey tool was utilized to assess anxiety, depression, and stress symptoms during their graduate studies. The findings are essential for those concerned with professional students' well-being, especially stress-related matters. The results can guide the enhancement of mental health resources for university students, benefiting both current and future DMSc/DHSc healthcare students.

Keywords

graduate students, mental health, stress, anxiety, depression, dass 21

This research was a pilot study designed to investigate the mental health of healthcare professional students pursuing doctoral degrees, with a specific focus on stress, anxiety, and depression, which could ultimately lead to burnout. Graduate-level students in healthcare education faced unique challenges, such as adapting to rigorous academic demands, maintaining a school-life balance, and dedicating sufficient time to their studies. The research aimed to provide insights into mental health issues experienced by this particular cohort, offering valuable information for improving support systems within academic institutions. The study participants were purposefully selected from the healthcare professional students currently enrolled in the Doctor of Medical Science (DMSc) or Doctor of Health Science (DHSc) programs within the University of the Pacific's School of Health Sciences (SHS). These programs are intensive full-time academic tracks that attract experienced clinicians seeking advanced education while maintaining clinical employment. Furthermore, this research added to the existing literature by shedding light on the mental health challenges faced by this specific group of healthcare students, contributing to the understanding of their experiences and needs.

Mental health, as defined by the American Psychological Association, encompasses emotional well-being, effective behavioral adjustment, minimal anxiety-related impairments, and the capacity to foster constructive relationships and manage the ordinary pressures of life [1]. Burnout among healthcare professional students can vary due to differences in individual experiences. For example, research has shown that female students tend to experience higher levels of stress and anxiety compared to their male counterparts, possibly due to a greater willingness to express their emotions [2].

This research parallels a previous study, "Mental health and coping strategies in graduate students in the COVID-19 Pandemic," where 331 Brazilian graduate students were examined

during the pandemic, and the researchers assessed their coping mechanisms using the Coping Strategies Inventory (CSI) and the Depression, Anxiety, and Stress Scale (DASS-21). Results from this study indicated that female graduate students, particularly those engaged in caregiving outside of academics, were more likely to use avoidance strategies as coping mechanisms [3]. The study also highlighted the importance of investing in college students' mental health by encouraging activities such as disconnecting from current news, exploring employment opportunities, or engaging in religious or spiritual practices [3].

The "Graduate Healthcare Students' Mental Health Pilot Study" presented here replicates elements of the study conducted by Scorsolini-Comin and colleagues (2021) but specifically focuses on doctoral healthcare professional students. It is essential to consider the unique challenges faced by healthcare students, particularly those just starting their program, who often contend with heightened levels of stress, anxiety, and depression [5]. Understanding the impact of these symptoms on the academic and professional journey of healthcare students can help educators support the mental health of future students.

METHODS

Study Participants

A purposive sample of 15 adult students enrolled in the DMSC/DHSC program was selected for this research, aiming to investigate the mental health of healthcare professionals. The participants were purposefully chosen to represent diverse backgrounds in terms of age, gender, race, and ethnicity. All participants held a master's degree and were actively engaged in both academic and clinical commitments

Data Collection Tools

This investigation utilized the Depression Anxiety Stress Scale-21 (DASS-21) screening tools to collect data on symptoms related to anxiety, depression, and stress [6,7]. The DASS-21 employed a Likert scale to assess the severity of these symptoms, categorizing them as mild, moderate, or severe.

The DASS yields three subscale scores for depression, anxiety, and tension/stress.

- DASS_Anxiety = items 2, 4, 7, 9, 15, 19, and 20
- DASS_Depression = items 3, 5, 10, 13, 16, 17, and 21
- DASS_Stress = items 1, 6, 8, 11, 12, 14, and 18

DASS ₂₁		Name:	Date:
Please read each statement and circle a number 0, 1, 2 or 3 that indicates how much the statement applied to you <i>over the past week</i> . There are no right or wrong answers. Do not spend too much time on any statement.			
<i>The rating scale is as follows:</i>			
0	Did not apply to me at all		
1	Applied to me to some degree, or some of the time		
2	Applied to me to a considerable degree, or a good part of time		
3	Applied to me very much, or most of the time		
1	I found it hard to wind down	0	1 2 3
2	I was aware of dryness of my mouth	0	1 2 3
3	I couldn't seem to experience any positive feeling at all	0	1 2 3
4	I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1 2 3
5	I found it difficult to work up the initiative to do things	0	1 2 3
6	I tended to over-react to situations	0	1 2 3
7	I experienced trembling (eg, in the hands)	0	1 2 3
8	I felt that I was using a lot of nervous energy	0	1 2 3
9	I was worried about situations in which I might panic and make a fool of myself	0	1 2 3
10	I felt that I had nothing to look forward to	0	1 2 3
11	I found myself getting agitated	0	1 2 3
12	I found it difficult to relax	0	1 2 3
13	I felt down-hearted and blue	0	1 2 3
14	I was intolerant of anything that kept me from getting on with what I was doing	0	1 2 3
15	I felt I was close to panic	0	1 2 3
16	I was unable to become enthusiastic about anything	0	1 2 3
17	I felt I wasn't worth much as a person	0	1 2 3
18	I felt that I was rather touchy	0	1 2 3
19	I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)	0	1 2 3
20	I felt scared without any good reason	0	1 2 3
21	I felt that life was meaningless	0	1 2 3

Procedure

The research data were collected through an online survey administered via the Survey Monkey platform through student's participant email. The survey consisted of two sections: Demographic Information and Mental Health Assessment. The initial section gathered demographic data about the participants, including their educational background, occupation, and caregiving responsibilities outside of their academic studies. The subsequent portion involved participants' responses to the DASS-21 screening tools to assess anxiety, depression, and stress from 1 to 4, with the following response options:

- "Never – did not apply to me at all" (1 point)
- "Sometimes – applied to me to some degree, or some of the time" (2 points)
- "Often – applied to me to a considerable degree, or a good part of the time" (3 points)
- "Almost always – applied to me very much, or most of the time" (4 points) [3]

RESULTS

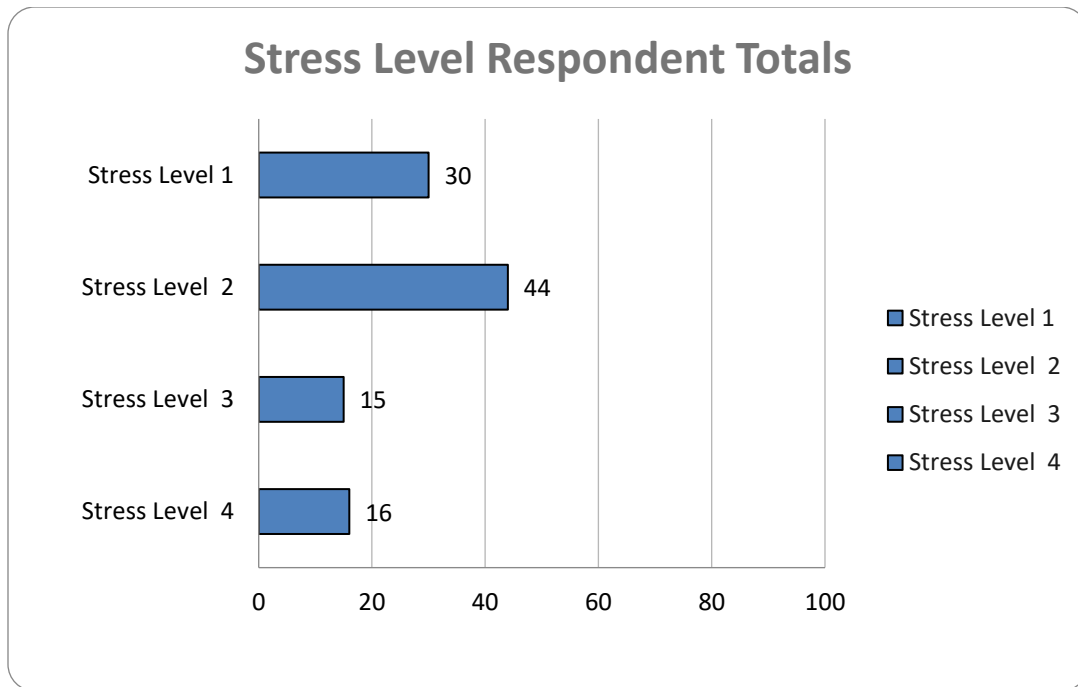
The scores for depression, anxiety, and stress were derived from the responses to the 21 items in the survey. The data were visually presented using bar graphs, which displayed the frequency of each score (ranging from 1 to 4) selected by the participants for each of the anxiety, depression, and stress categories.

The study included 15 graduate students aged 25-64 years old, 60% (n = 9) female, and a racial composition of 53% White (n=8), 6.7% Multiracial (n=1), 6.7% Middle Eastern (n=1), 13.3% Black/African American (n= 2), and 6.7% Asian (n=1). There were statistically significant differences in the symptoms from the graduate's study in depression, anxiety, and

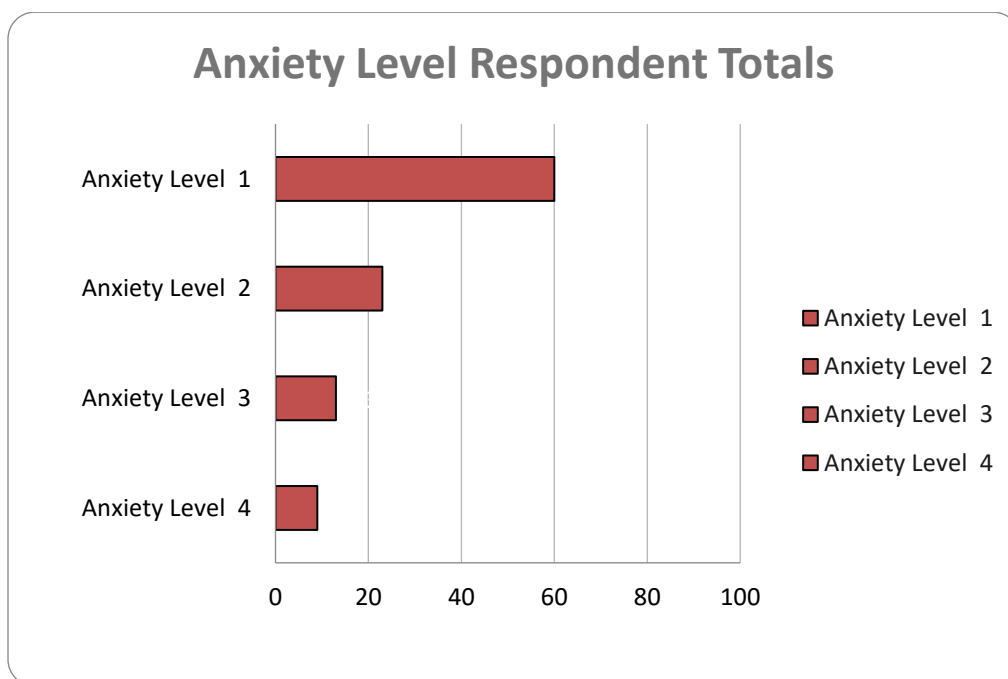
stress scores ($p < .05$). The study revealed that most participants work an average of 33-44+ hours per week with about 5-6 hours of sleep, less than 3 hours of physical exercise, and more than 9 hours of study each week. 80% of participants also care for children and other family members. A previous study stated that a correlation exists between students' sleep schedule and quality, leading to exhaustion, cynicism, and inefficacy, although it did not lead to burnout[4].

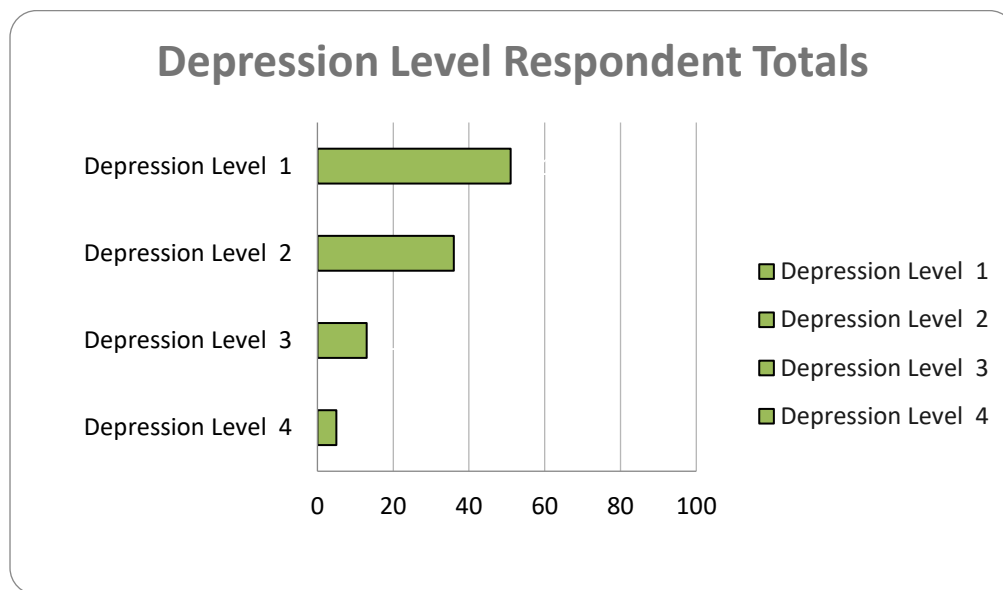
All the students have a job, of which 13.3% ($n = 2$) work 25-32 hours a week, and 86.7% of other students work 33-40+ hours or more weekly. The physical exercise and sleep students experience may affect their well-being. For example, students who report exercising 1 hour or less 46.7% ($n=7$), more than 1 hour up to 3 hours 33.33% ($n=5$), more than 3 hours up to 6 hours 6.67% ($n=1$), and 13.3% ($n=2$) do not apply to me. The students report that their average sleep of 4 or a few hours is 6.7% ($n = 1$), about five-six hours 80% ($n = 12$), and about seven-eight hours 13.3% ($n = 2$). The students report that their average weekly study is four or a few hours 6.7% ($n = 1$), about five-six hours 26.7% ($n = 4$), about seven-eight hours 13.3% ($n = 2$), and nine or more hours 53.3% ($n = 8$).

Moreover, 67% of the participants have other extracurricular activities that they participate in. The participating students reported mild to moderate symptoms of stress, anxiety, and depression. Factors that predicted depression and anxiety included having less than 7 hours of sleep per night, worse general health, lower healthy lifestyle beliefs, lower healthy lifestyle behaviors, higher stress, and a perceived lack of control. The descriptive analysis of stress that is significant is the stress question "I find myself struggling to wind down, with ($M = 2.87$; $SD = 0.99$), "I found it difficult to relax" with ($M = 2.33$; $SD = 0.90$), "I tended to over-react to situations" with ($M = 2.07$; $SD = 1.03$). The Stress Level Respondent totals are depicted below:



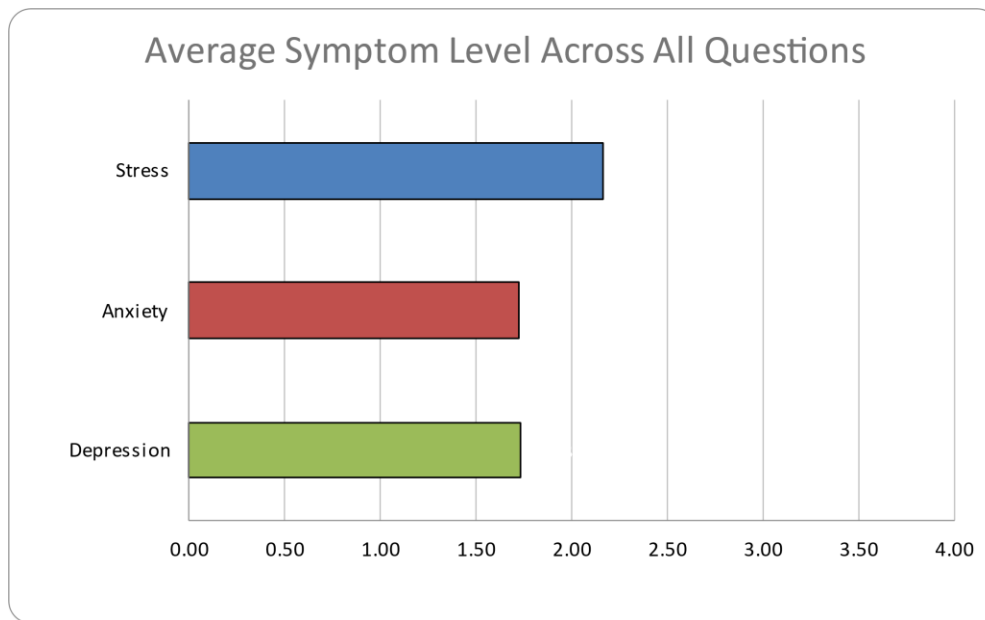
The anxiety questions, "I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion) with ($M = 1.87$; $SD = 0.92$), and depression question, "I found it difficult to work up the initiative to do things" ($M = 2.27$; $SD = 0.88$) are depicted in the charts below:





DISCUSSION

The stress levels students reported were mild as most of the responses related to stress questions were either: Never – did not apply to me at all, is given 1 point; Sometimes – applied to me to some degree, or some of the time, is given 2 points; Often – applied to me to a considerable degree. The anxiety level students experienced were mild as most of the responses related to stress questions were either: Never – did not apply to me at all, is given 1 point; Sometimes – applied to me to some degree, or some of the time, is given 2 points; Often – applied to me to a considerable degree. The depression level students reported was mild as most of the responses related to stress questions were either: Never – did not apply to me at all, is given 1 point; Sometimes – applied to me to some degree, or some of the time, is given 2 points; Often – applied to me to a considerable degree.



Overall, the DMSc/ DHSc graduate students had mild mental health symptoms. The students managed their well-being by balancing school, studying, working, resting, caring for others, and joining extracurricular activities.

CONCLUSION

This pilot study provided valuable insights into the mental health status of healthcare professional students enrolled in doctoral programs. The findings highlighted the prevalence of mild to moderate symptoms of stress, anxiety, and depression among this cohort. The research findings were limited to the purposive sample of students enrolled in the DMSc/DHSc program at the University of the Pacific. While the study had a high response rate, not all students participated, potentially impacting the generalizability of the findings. Future research endeavors should aim to include a larger and more diverse participant pool to ensure broader representation and comparison across different academic institutions.

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