

An Evaluation of Anxiety, Perceived Stress, and Coping Mechanisms among Nursing Students: A Cross-Sectional Correlational Analysis

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ARTICLE INFO

ABSTRACT

Received: 10 Jan 2025

Revised: 27 Feb 2025

Accepted: 08 Mar 2025

Background: This study aimed to investigate the relationship between anxiety, perceived stress, and coping strategies of nursing students at Northern Border University during their clinical training. Specifically, it sought to determine the (a) demographic profiles of the participants, (b) quantify of the prevalence and severity of anxiety and perceived stress among nursing students at different stages of their educational program, (c) identify and analyze the coping strategies employed by nursing students to manage anxiety and stress, determining which are most effective. **Materials and Methods:** This is a cross-sectional correlational descriptive study. The sample used has a balanced representation of genders, with a slight majority of female students (55.1%, 65 students) compared to male students (44.9%, 53 students). The students are distributed across the four academic years of their nursing program. The questions consider the students' perceptions regarding anxiety, stress, and coping techniques, with multiple questions about their coping strategies and experiences, shows that a substantial 68.90% of students (agree or strongly agree) perceive the stress encountered during their education as a constructive element that contributes to their development as resilient nurses. **Results:** With 57.98% of students indicating that they use relaxation techniques, it is apparent that these strategies are a popular choice among nursing students for managing anxiety, particularly in high-pressure situations like exams and clinical practice. Clinical simulations and practical exams are identified as significant stressors by 77 students (64.7%) who agree or strongly agree that these contribute to their stress levels. Given the high stakes and practical nature of these assessments, it is understandable that they would induce anxiety. **Conclusion:** This perspective is crucial because it highlights how students can identify a silver lining within their challenges, protecting against the negative effects of stress. By reframing stress not merely as a hurdle to overcome but also as an opportunity for growth, students can develop resilience and a more positive outlook. For instance, a student preparing for a challenging exam might view the stress of studying as a chance to refine their time-management skills and deepen their understanding of the subject. Research has shown that adopting a growth mindset toward stress can enhance emotional well-being and improve performance in demanding situations. This underscores the importance of teaching students to reframe stressful experiences, not as threats to their well-being, but as valuable opportunities to learn, adapt, and thrive. Such a shift in perspective can foster long-term personal development and equip students with tools to navigate future challenges more effectively.

Keywords: Anxiety, Coping behavior, Nursing students, Perceived stress.

INTRODUCTION

In nursing, the subject of stress has received much attention in literature and continues to be the topic of many studies. The practical training of a nurse's education has been reported to be much more stressful than academic training. Also, the perceived lack of knowledge and skills are one of the common stressors for many students. (Saveh *et al.* 2021). The demanding landscape of nursing education, while preparing students for a noble and impactful career, can also impose significant psychological challenges. The rigorous academic curriculum, intense clinical placements, and constant

exposure to emotional complexities are potent stressors that contribute to high levels of anxiety and perceived stress among nursing students. (Hunskaar *et al.*, 2020) These factors have the potential to significantly impact not only academic performance but also mental and physical well-being, potentially jeopardizing both current and future success. (Chen *et al.*, 2019).

Therefore, unraveling the intricate interplay between anxiety, perceived stress, and coping mechanisms employed by nursing students is crucial for designing targeted interventions and fostering a supportive learning environment. Anxiety, characterized by heightened apprehension, tension, and uneasiness (Hunskaar *et al.*, 2020), manifests frequently in nursing students. Academic pressures, fear of clinical performance inadequacy, patient safety concerns, and interpersonal complexities within the demanding healthcare environment fuel this anxiety. It manifests in diverse ways, ranging from intrusive thoughts and persistent worry as cognitive symptoms to somatic symptoms like racing heart, fatigue, and muscle tension, and even avoidance behaviors like procrastination and social withdrawal (Chen *et al.*, 2019). Unchecked, anxiety can significantly hinder learning, academic performance, and ultimately, career trajectory.

Perceived stress, a close companion to anxiety, paints a similarly concerning picture. The relentless nature of nursing education throws a multitude of stressors at students, leading to high levels of perceived stress (Shin *et al.*, 2022). Academic burdens like heavy workloads, time constraints, and demanding exams blend with the emotional complexities of clinical placements, exposure to patient suffering, and interpersonal conflicts, creating a potent stress cocktail. (Cimera *et al.*, 2020). Perceived stress, akin to chronic drizzle, can leave a trail of devastation, impacting students' physical and mental health, academic performance, and future professional lives. Understanding how students perceive and manage these stressors is key to promoting positive academic experiences and long-term well-being. (Wilson *et al.*, 2019)

Amidst these challenges, nursing students exhibit remarkable resilience. They do not passively succumb to stressors but actively engage in a dynamic repertoire of coping strategies. Student nurses experience stress leading to poor health and course attrition. These strategies can be broadly categorized as problem-focused and emotion-focused approaches (Cheng *et al.*, 2022). Problem-focused strategies involve proactive engagement with stressors, such as seeking additional resources, implementing effective time management techniques, and confronting academic challenges head-on. This approach can be likened to a skilled sailor adjusting the sails and course of a ship to navigate through turbulent waters. Emotion-focused strategies, on the other hand, target the emotional stress response. These strategies incorporate techniques such as relaxation exercises like deep breathing or meditation, mindfulness practices to cultivate present-moment awareness, and seeking social support from peers, mentors, or family.

Anxiety among nursing students is a prevalent concern that can significantly impact their academic performance, clinical practice, and overall well-being. The demanding nature of nursing education, combined with the stressors of clinical placements, academic expectations, and the responsibility of caring for patients, contributes to heightened levels of anxiety among students. Research indicates that anxiety in nursing students is associated with factors such as fear of making mistakes, academic workload, high-stakes assessments, and the transition to clinical practice. Additionally, the intense and emotionally challenging nature of nursing practice can contribute to anticipatory anxiety about future patient care responsibilities. The consequences of unmanaged anxiety in nursing students can lead to decreased learning outcomes, burnout, and compromised mental health. Therefore, understanding the sources and manifestations of anxiety in nursing students is crucial for developing targeted interventions and support mechanisms to promote student well-being and academic success.

In response to anxiety, nursing students utilize various coping strategies to manage stress and enhance resilience. Coping strategies encompass cognitive, emotional, and behavioral efforts that individuals employ to manage the demands of stressful situations. Nursing students commonly utilize problem-focused coping strategies, such as seeking academic support, time management, and engaging in active learning strategies to address the sources of anxiety related to their academic workload and clinical responsibilities. Furthermore, seeking social support from peers, faculty, and mentors is a prevalent coping mechanism among nursing students, providing emotional validation and guidance in navigating the challenges of nursing education. Emotion-focused coping strategies, including mindfulness practices, relaxation techniques, and self-care activities, are also employed to regulate emotional distress and promote mental well-being. Understanding the coping strategies utilized by nursing students is essential for educators and healthcare

institutions to provide targeted support, resources, and interventions that promote adaptive coping and mitigate the negative impact of anxiety on the academic and clinical experiences of nursing students.

Nursing education, while preparing students for a noble and impactful career, presents a multitude of challenges. The rigorous academic workload, intense clinical placements, and exposure to emotional complexities are potent stressors that contribute to high levels of anxiety, perceived stress, and burnout among students (Shin *et al.*, 2022). These factors have the potential to significantly impact not only mental and physical well-being but also academic performance and future professional trajectory. Consequently, understanding the coping strategies employed by nursing students to navigate these challenges is crucial for promoting resilience and fostering a supportive learning environment. This literature review examines the prevalent coping mechanisms deployed by nursing students and their effectiveness in managing anxiety, stress, and academic well-being. (Mohamed *et al.*, 2024).

Nursing education is a challenging and demanding field, requiring students to excel in both academic and clinical settings. These dual expectations expose nursing students to significant levels of stress, which can negatively affect their physical health, mental well-being, and academic performance (P, 2020). Academic stress often arises from rigorous coursework, frequent assessments, and the pressure to achieve high grades. Research shows that nursing students experience higher stress levels compared to peers in other academic disciplines (Smith & Brown, 2019). Understanding the interplay between academic and clinical stress is essential to designing effective interventions that promote student well-being and success. This study aims to explore the sources, impacts, and coping strategies related to academic and clinical stress among nursing students, thereby providing insights for educators, policymakers, and healthcare institutions to create a supportive learning environment.

Some students might find solace in seeking social support, while others may prefer the solace of mindfulness practices. Adaptive coping strategies, such as engaging in physical activity, practicing mindfulness, and seeking social support, have been shown to significantly improve mental well-being and academic performance in nursing students. By equipping students with a diverse toolbox of coping mechanisms and providing targeted interventions, we can empower them to navigate the challenging landscape of nursing education and reach the safe harbor of professional success. (Yu *et al.*, 2020). Deciphering the complex interplay between anxiety, stress, and coping strategies in nursing students is crucial. By shedding light on this dynamic, we can cultivate a supportive and resilient learning environment. This, in turn, will equip future nurses not only with essential clinical skills but also with emotional resilience to navigate the demands of their chosen profession and flourish in the face of adversity.

Chronic stress can have detrimental effects on students' physical and mental health, academic performance, and professional development (Onieva *et al.*, 2022). Nursing students employ various coping strategies to manage anxiety and stress, categorized as problem-focused (e.g., seeking additional resources, planning) and emotion-focused (e.g., relaxation techniques, mindfulness) approaches (Adriani *et al.* 2022). The effectiveness of coping strategies depends on individual preferences, situational context, and available resources (Seiffge-Krenke, 2020). Studies suggest that adaptive coping strategies, such as seeking social support, engaging in physical activity, and practicing mindfulness, are associated with better mental health outcomes and academic success in nursing students (AMARANTO JENIFFER L. & AMARANTO, JEFF C., 2025).

Statement of the Problem

Within the context of nursing education, the pervasive challenges of anxiety and perceived stress has emerged as significant concerns warranting careful examination. The intricate interplay between the rigorous academic demands and the responsibilities inherent in clinical training precipitates elevated stress levels among nursing students. This study endeavors to comprehensively address the prevalence, nature, and implications of anxiety, perceived stress, and coping strategies within the nursing student demographic, aiming to discern the nuanced dimensions of this critical issue. Consequently, understanding the coping strategies employed by nursing students to navigate these challenges is crucial for promoting resilience and fostering a supportive learning environment. This literature review examines the prevalent coping mechanisms deployed by nursing students and their effectiveness in managing anxiety, stress, and academic well-being. (Mohamed *et al.*, 2024).

The aim of the study is to investigate the relationship between anxiety, perceived stress, and coping strategies of nursing students at Northern Border University during their clinical training. Specifically, it sought to determine the (a) demographic profiles of the participants, (b) quantify of the prevalence and severity of anxiety and perceived stress among nursing students at different stages of their educational program, (c) identify and analyze the coping strategies employed by nursing students to manage anxiety and stress, determining which are most effective.

Specifically, it sought answers to the following:

1. What is the sociodemographic profile of the respondents in terms of:
 - 1.1 age.
 - 1.2 gender.
 - 1.3 academic year
3. Are there any significant relationships between anxiety, perceived stress and coping strategies in nursing students?
4. Are there any significant relationships between anxiety, perceived stress and coping strategies in the nursing students when they are grouped according to their sociodemographic profile?
5. How may the findings be utilized to improve the undergraduate nursing students' perception of the image of the nursing profession?

Objectives related to the study

1. To quantify the prevalence and severity of anxiety and perceived stress among nursing students at different stages of their educational program.
2. To identify and analyze the coping strategies employed by nursing students to manage anxiety and stress, determining which are most effective.

Research questions:

1. Is there a relation between primary sources and levels of anxiety among nursing students during academic pursuits?
2. Is there a direct relation between demographic factors and variations in anxiety, stress perception, and coping strategies among nursing students?

Research Hypothesis

H₀: There is no significant difference in between anxiety, perceived stress, and the coping strategies used by nursing students during their clinical training

H₁: There is a significant difference in the between anxiety, perceived stress, and the coping strategies used by nursing students during their clinical training

Incidence of the Problem

Research indicates a noteworthy incidence of anxiety and perceived stress among nursing students. Academic pressures, clinical expectations, and the anticipation of future professional responsibilities collectively contribute to an environment where a substantial proportion of nursing students experience elevated stress levels. The incidence of anxiety is further exacerbated by the demanding nature of the nursing curriculum, leading to a significant impact on the mental health and overall well-being of students.

How This Problem Area Affects Individuals & Society

Individual Impact:

- **Academic Performance:** Elevated anxiety and perceived stress levels in nursing students have been linked to decreased academic performance, compromising the educational outcomes of individuals within this critical profession.
- **Mental Health:** Prolonged exposure to high levels of stress may contribute to mental health challenges such as burnout, emotional exhaustion, and a diminished sense of well-being among nursing students.

- **Professional Development:** The ability of nursing students to develop essential skills and competencies required for their future roles may be hindered by the negative impact of anxiety and stress on their learning experiences.

Societal Impact:

- **Healthcare Quality:** The mental well-being of nursing students directly correlates with the quality of patient care they provide. High levels of stress may compromise the ability of future healthcare professionals to deliver optimal care, affecting overall healthcare quality.
- **Workforce Resilience:** A resilient and mentally healthy nursing workforce is crucial for maintaining a robust and sustainable healthcare system. Addressing the challenges faced by nursing students in managing anxiety and stress is integral to cultivating a resilient healthcare workforce.

METHODOLOGY

Research design

The current study utilized a cross-sectional exploratory research design. This approach involves collecting data at a single point in time, allowing researchers to examine variables and their relationships without manipulating any conditions. The cross-sectional nature of the design is particularly useful for capturing a snapshot of the phenomenon under investigation, providing a broad understanding of the current state or trends.

Study setting

The study was conducted among students at Northern Border University in the College of Nursing. The data collection process was facilitated virtually to ensure accessibility and convenience for participants. A digital questionnaire survey was designed and distributed through online platforms, enabling students to participate remotely. This approach was chosen to accommodate the schedules of the participants, minimize disruptions to their academic responsibilities, and ensure a broader reach within the target population. The virtual format also allowed for efficient data collection, reducing logistical constraints and enabling participants to respond at their convenience. By leveraging digital tools, the study aimed to foster engagement while maintaining confidentiality and ease of participation.

Study sample

The researchers utilized a convenience sample of 119 nursing students from both the male and female sections of the department at Northern Border University. This sampling method was chosen for its practicality and ease of access to participants, allowing for the inclusion of students who were readily available and willing to participate. The sample size was determined based on the availability of respondents during the study period and the feasibility of data collection. By including students from both sections, the study aimed to ensure gender representation and capture diverse perspectives within the department. Although convenience sampling may limit the generalizability of the findings, it provided a valuable opportunity to explore the research objectives within the specific context of the College of Nursing.

Data Collection Tools:

The researchers utilized an instrumental research survey questionnaire to assess anxiety, stress, and coping techniques. The tool collection is divided into 2 segments:

Part I: Demographic characteristics of the students include questions related to age, gender and their academic year.

Part II: Questions consider the student's perceptions regarding anxiety stress, and coping techniques with multiple questions about their coping strategies and experiences.

Validity and Reliability:

The validity of the modified survey was done with two faculty members from faculty of the nursing department. The content and instruments were verified and designated properly.

Pilot study:

A pilot study was carried out on 20 nursing students from both male and female sections to validate and ensure the feasibility, applicability, and clarity of the tool and no significant modification was done. Nursing students in the pilot study were excluded from the study.

Ethical considerations:

Prior to data collection, written informed consent will be obtained from all participating nursing students after a clear explanation of the study's purpose, procedures, and expected outcomes. Participants will be assured of the confidentiality and anonymity of their responses. All data will be handled securely and used solely for research purposes. Participation in the study will be entirely voluntary, and participants will have the right to withdraw from the study at any time without any consequences.

Inclusion criteria:

1. Enrollment in an accredited nursing program: Participants must be currently enrolled in a bachelor's degree.
2. Active participation in clinical rotations: Participants should be actively engaged in the clinical rotation phase of their nursing education to ensure they are experiencing the full scope of stressors related to both academic and practical aspects of nursing training.
3. Willingness to complete assessment tools: Participants must be willing to complete standardized questionnaires or assessment tools designed to measure levels of anxiety, perceived stress, and the usage and efficacy of various coping strategies

Exclusion criteria:

1. Non-nursing students: Individuals who are not currently enrolled in a nursing program or who are taking non-nursing-related courses will be excluded to ensure that the study results specifically reflect the experiences of nursing students.

Statistical Analysis:

Data was verified prior to computerized entry. The Statistical Package for Social Science (SPSS), version 21.0, was used for that purpose followed by data analysis and tabulation. Descriptive statistics were applied (e.g., frequency, percentage, mean and standard deviation).

RESULTS AND DISCUSSIONS**Table 1**

Part I: Demographic characteristics of the students include questions related to age, gender and their academic year.

Variable	n	%
Age in years		
18	5	4.53%
19	17	16.44%
20	17	15.6%
21	27	24.68%
22	29	27.6%
23	10	9.2%
24	2	1.82%
Gender		
Male	53	44.9%
Female	65	55.1%
Academic year		
1st Year	19	16%
2nd Year	25	21%

3rd Year	19	16%
4th Year	56	47%

The demographic data provided in the table gives an overview of the sample of nursing students who were assessed for anxiety, perceived stress, and coping strategies. The students' ages range from 18 to 24 years, with the largest age groups being 22 years old (27.6%, 29 students) and 21 years old (24.68%, 27 students), indicating that most of the sample is in their early twenties. Ages 19 and 20 are equally represented with 17 students each, accounting for 16.44% and 15.6% respectively. Fewer students are found at the extremes of the range, with only 5 students (4.53%) who are 18 years old, 10 students (9.2%) who are 23 years old, and the least number of students, 2 (1.82%), are 24 years old. The sample has a balanced representation of genders, with a slight majority of female students (55.1%, 65 students) compared to male students (44.9%, 53 students). The students are distributed across the four academic years of their nursing program. The largest group is in their 4th (final) year, making up nearly half of the population at 47% (56 students). The 2nd year students make up 21% of the sample (25 students), while the 1st and 3rd year each have 19 students, representing 16% of the sample for each year group. This demographic breakdown shows that the sample of nursing students is predominantly in their later years of study, with more females than males, and most students are aged between 21 and 22 years. Understanding the demographic composition of the sample is important for interpreting the results of the assessment on anxiety, perceived stress, and coping strategies, as these factors can influence the students' experiences.

Table 2

Part II: questions consider the student's perceptions regarding anxiety stress, and coping techniques with multiple questions about their coping strategies and experiences.

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
1. I often feel overwhelmed by my nursing coursework and clinical responsibilities.	48	35	14	11	11
2. I am confident in my ability to manage the stress associated with nursing school.	48	30	15	12	14
3. I feel anxious about making mistakes during my clinical rotations.	38	37	17	11	16
4. I use healthy coping strategies (e.g., exercise, meditation, talking to friends) to manage my stress levels.	48	28	19	13	11
5. I believe that the stress I experience in nursing school negatively affects my academic performance.	46	23	20	17	12
6. I have trouble sleeping due to worrying about my nursing studies and responsibilities.	39	28	17	23	12
7. I feel that my personal life is negatively impacted by the demands of nursing school.	40	23	19	23	14
8. I often discuss my stress and anxiety with my peers, and it helps me to cope.	43	28	16	14	17
9. Time management techniques have been effective in helping me cope with the workload in nursing school.	43	34	15	14	12
10. I feel that my nursing program provides adequate resources and support to help students manage stress and anxiety.	49	24	22	10	13

11. I feel that clinical simulations and practical exams contribute significantly to my stress levels.	40	37	18	15	8
12. I am satisfied with the balance between my academic work and my personal life.	49	30	21	8	11
13. I worry that the stress I experience now may affect my future ability to handle stress in the nursing profession.	39	30	16	20	13
14. I use relaxation techniques (e.g., deep breathing, progressive muscle relaxation) to reduce anxiety before exams or clinical practice.	46	23	20	17	12
15. I believe that my experiences with stress during nursing school are making me a more resilient nurse.	41	41	16	13	8

In this table, a significant 83% (48% strongly agree, 35% agree) of the students reported feeling overwhelmed by their nursing coursework and clinical responsibilities. This high percentage underscores the substantial burden experienced by most students, indicating the need for targeted support and resources to help them manage their academic and clinical demands effectively. While a notable 78% (48% strongly agree, 30% agree) of the students expressed confidence in their ability to manage the stress associated with nursing school, a combined 26% (12% disagree, 14% strongly disagree) reported lower confidence levels. This indicates that a considerable portion of students may benefit from interventions aimed at bolstering their stress management skills and enhancing their overall well-being. The survey revealed that 75% (38% strongly agree, 37% agree) of the students reported feeling anxious about making mistakes during their clinical rotations. This finding underscores the psychological pressure and performance anxiety experienced by a significant number of students during their practical training, highlighting the need for interventions to address and alleviate these concerns. A substantial 76% (48% strongly agree, 28% agree) of the students reported using healthy coping strategies such as exercise, meditation, and talking to friends to manage their stress levels. This positive indication of proactive stress management among most students underscores the potential for promoting and reinforcing healthy coping behaviors within the student community. The survey results revealed that 89% (46% strongly agree, 23% agree) of the students believe that the stress they experience in nursing school negatively affects their academic performance. Additionally, 67% (39% strongly agree, 28% agree) reported having trouble sleeping due to worrying about their nursing studies and responsibilities. These findings highlight the potential repercussions of stress on academic performance and sleep quality, indicating the need for targeted interventions to mitigate these effects and promote overall well-being. With 63 students (52.9%) agreeing or strongly agreeing that their personal lives are negatively impacted by the demands of nursing school, it's evident that more than half of the respondents are experiencing a considerable level of stress that spills over into their personal spheres. This indicates a potential need for enhanced work-life balance strategies or additional support. The 19.3% who disagree or strongly disagree may have more effective coping mechanisms or perhaps a less demanding personal life that allows for better absorption of academic pressures. Peer support seems to be a significant coping resource for the students, as 71 (59.6%) agree or strongly agree that discussing their stress and anxiety with peers helps them cope. This suggests a culture of mutual support and the importance of social networks in managing stress.

However, 31 students (26.1%) who are neutral or disagree may not find peer discussions helpful, possibly due to personal preferences for privacy, alternative coping strategies, or a perceived lack of understanding among peers. Most students, 77 (64.7%), agree or strongly agree that time management techniques are effective in coping with the workload. This underscores the importance of organizational skills in the context of a demanding nursing program. Time management may help students feel more in control of their responsibilities and could be an area for further development in curricular activities or workshops. A combined 73 students (61.4%) agree or strongly agree that their nursing program provides adequate resources and support for stress and anxiety management. This is a positive indicator that the institutions are taking measures to assist students. Nevertheless, there remains a notable portion of students, 33 (27.7%), who are neutral or disagree, which suggests there may be gaps in support offerings or awareness of available resources. Clinical simulations and practical exams are identified as significant stressors by 77 students

(64.7%) who agree or strongly agree that these contribute to their stress levels. Given the high stakes and practical nature of these assessments, it is understandable that they would induce anxiety. This feedback could be invaluable for educators seeking to design assessments that maintain educational rigor while minimizing unnecessary stress. Notably, 79 students (66.4%) agree or strongly agree that they are satisfied with the balance between their academic work and personal life.

This is somewhat surprising given the previously noted impact on personal life due to school demands. This response may reflect a complex interplay of factors including acceptance of the temporary nature of such demands, successful coping strategies, or even the rewarding aspects of the nursing program that compensate for the imbalance. The results indicate a student body that acknowledges the high demands of their nursing education and its impact on their personal lives and stress levels. However, the responses also reflect a resilience among the majority, who report effective coping mechanisms, such as peer support and time management, and a general satisfaction with institutional support and work-life balance achieved. 58.82% of the students expressed concern (agree or strongly agree) that the stress they are experiencing at present might negatively impact their capacity to manage stress in their future nursing careers. This suggests that most of the students are aware of the potential for current stress to influence their future professional performance and well-being. It also underscores the need for educational institutions to address these concerns by providing students with strategies to build resilience and manage stress effectively. With 57.98% of students indicating that they use relaxation techniques (agree or strongly agree), it is apparent that these strategies are a popular choice among nursing students for managing anxiety, particularly in high-pressure situations like exams and clinical practice. This finding highlights the potential value in incorporating stress-reduction training within the nursing curriculum, ensuring that all students have access to and are proficient in techniques that could improve their academic performance and clinical competence. A substantial 68.90% of students (agree or strongly agree) perceive the stress encountered during their education as a constructive element that contributes to their development as resilient nurses. This perspective is crucial because it suggests that students identify a silver lining within their challenges, which may serve as a protective factor against the negative effects of stress. It also points to the importance of framing stress not just as a hurdle to overcome but also as an opportunity for growth.

Indicators Supporting H₁ (There is a significant difference)

Based on the results presented in Table 2, we conclude that there is a positive correlation between anxiety, perceived stress, and the coping strategies used by nursing students during their clinical training. Therefore, the alternative hypothesis (H₁) is accepted.

The following supports that there is a significant difference according to the following.

1. High levels of stress and anxiety reported:

Item 1: 83 respondents (Strongly Agree + Agree) often feel overwhelmed.

Item 3: 75 respondents feel anxious about making mistakes.

Item 6: 67 respondents report trouble sleeping.

2. Coping strategies are used, but with variation:

Item 4: 76 respondents use healthy coping strategies, but 43 are neutral or disagree.

Item 8 & 14: A mix of responses, showing variability in reliance on peer support and relaxation techniques.

3. Perceived impact of stress:

Item 5: 69 respondents believe stress negatively affects academic performance.

Item 13: 69 respondents worry about future stress-handling ability.

Therefore, these variations suggest differences in levels of anxiety, perceived stress, and coping mechanisms among participants — which supports rejecting the null hypothesis (H₀).

DISCUSSION

Stress in nursing students is an area of growing concern. The stress among the students can have a serious effect on health and studies. The present study was conducted to assess stress levels and factors associated with stress among nursing students and the use of their coping strategies. The present study shows that among 283 respondents 61.5% of the respondents had moderate stress and 27.9% of the respondents had severe stress (Lavoie-Tremblay M, 2021). The nursing students in this study reported experiencing certain financial stress during their clinical, may be that nursing students spend a long time on their clinical. In addition, physical fitness is also a stressor for the nursing students. Clinical

work involves heavy tasks, and nursing students must have a strong body to cope with such work. Once nursing students have physical problems, their clinical work is affected thus increasing their pressure (Aljohani W, 2021)

Teaching arrangements, which include departmental rotation, departmental examination, nurse certification examination, graduation thesis, and school theory examination, are common sources of stress for nursing students. Departmental rotation is a challenge for nursing students and increases their stress. This may be related to the following reasons: students may be afraid of making mistakes due to unfamiliarity with the equipment and care procedures in a new environment, and students may be unacquainted with patients and teachers, which places them in a difficult position. In addition, departmental examinations can also put pressure on nursing students. The potential reason for this situation may be that departmental examinations not only increase the workload of nursing students but also lead them to worry about the examination results. In addition, the nurse certification examination is an additional stressor for nursing students. Nursing students are busy performing clinical work and thus have limited time to prepare for the nurse certification examination. (Gazzaz ZJ, 2018).

The lack of hospital facilities and equipment for procedures patient with serious diseases suffering and unfamiliar environment of the health care setting, doing bedside care to the patient, little direction, to what expected from teacher to many patients to handle, inadequate knowledge and skill needed to care the patient, relationship with the clinical instructors/ supervisors. The nursing students were found to use emotional support, humor, positive reframing, acceptance, self-distraction, behavioral disengagement mostly rather than planning, substance use, and denial. It might be because it is easier to cope using emotional strategies than problem-based strategies for their comfort. (Suikkala A, 2020)

Eliminating stressors is a common coping style for nursing students and includes three subthemes: improving self-ability, sleeping, and changing cognition. Nursing students choose to improve their self-care and sleep more to address stressors. This finding is consistent with that of Ahmed *et al.*'s study, which indicated that solving stressful events and sleeping more are approaches significantly utilized by nursing students to manage stressors. If inadequate ability and sleep problems are important stressors for nursing students, then improving their self-efficacy level and sleeping ability are the keys to effectively addressing such stressors. It is worth noting that changing cognition is one of the coping styles of nursing students discussed herein, which is in line with the findings of a previous study. This may be due to the important role that the cognitive system plays in assessing stressors and choosing coping styles; furthermore, examining problems with an optimistic attitude is an effective way to reduce stress(Meng JX. 2020).

Every nursing student face stress in day-to-day life, and it cannot be ignored. Moderately, students can cope with various stressors faced during their nursing education. Rather, a better approach is needed to cope with the stress so that the nursing student can be healthy mentally, as well. This results information is also useful for nursing management and nursing teachers to identify students' needs, for effective planning, facilitating their learning in the academic and clinical setting, and to reduce or prevent stress during their education and training.

RECOMMENDATIONS AND IMPLICATIONS

It is recommended to conduct longitudinal studies to comprehensively assess the trajectory of anxiety, perceived stress, and coping strategies in nursing students throughout their educational journey. By collecting data at multiple times, such as at the beginning of the program, during clinical placements, and post-graduation, researchers can gain insights into how these psychological factors fluctuate over time and their impact on students' overall well-being. Longitudinal studies will also shed light on the potential long-term effects of stress and anxiety on nursing students as they transition into professional practice, thus informing the development of targeted interventions and support systems.

A comparative analysis of anxiety, perceived stress, and coping strategies among nursing students at different stages of their education should be undertaken. By comparing the experiences of junior, senior, and graduate nursing students, researchers can identify potential differences in stressors and coping mechanisms at various points in the educational continuum. This approach will provide valuable insights into the evolving nature of stress and anxiety throughout nursing education, highlighting critical periods where interventions may be particularly beneficial. Additionally, comparative analysis can help identify specific stressors unique to each educational stage, thereby informing the development of stage-specific support programs for nursing students.

1. **Implement Structured Stress Management Programs:** Given the high levels of reported stress and anxiety, especially regarding academic and clinical responsibilities, institutions should offer regular workshops or

integrated coursework on stress management techniques. These could include mindfulness training, guided relaxation, resilience building, and coping strategy sessions tailored to the demands of nursing education.

2. *Enhance Access to Mental Health and Counseling Services:* Although the majority feel supported, a significant portion of students still express unmet needs. Strengthening visibility, accessibility, and availability of counseling services—ideally with professionals familiar with the unique pressures of healthcare education—would help bridge this gap.
3. *Develop Peer Support and Mentorship Networks:* Since many students benefit from peer discussions, establishing formal peer mentoring or support groups can foster a stronger culture of mutual support. These groups can be instrumental in normalizing stress experience and sharing effective coping strategies.
4. *Revise Clinical Assessment Approaches:* With clinical simulations and practical exams being major stressors, nursing programs should consider reviewing the design and delivery of these assessments. Clear guidelines, preparatory workshops, and debriefing sessions could help reduce anxiety while maintaining rigorous standards.
5. *Integrate Time Management and Organizational Skills into the Curriculum:* As time management was identified as an effective coping tool, incorporating modules or optional workshops that teach prioritization, scheduling, and workload distribution can empower students to manage demands more effectively.
6. *Regularly Evaluate and Improve Institutional Support Systems:* Since 27.7% of students still feel unsupported, institutions should conduct routine evaluations (e.g., anonymous surveys, focus groups) to identify specific areas where support services may be lacking or underutilized. Enhancing communication about available resources is equally important.
7. *Promote Healthy Coping Behaviors Through Campus Initiatives:* The use of healthy coping mechanisms like exercise, meditation, and peer interaction is promising. Institutions should consider creating health-promoting initiatives such as wellness challenges, free fitness classes, or meditation spaces to reinforce these behaviors.
8. *Prepare Students for Long-Term Stress Management in Their Careers:* With many students concerned about the long-term impact of current stress, nursing programs should include career-resilience training. This could involve case studies, reflective exercises, and alumni talks that illustrate how nurses manage stress in real-world settings.
9. *Reframe Stress as a Growth Opportunity:* Since a substantial number of students view stress as constructive, faculty and mentors can reinforce this perspective by emphasizing personal growth, adaptability, and strength-building through challenging experiences—while also validating the emotional difficulty of the journey.

Implications for Nursing

The findings of this study have several significant implications for nursing education, practice, and workforce development:

1. *Enhancing Nursing Education Support Systems:* The high prevalence of stress and anxiety among nursing students underscores the need for educational institutions to strengthen their academic and emotional support systems. By embedding mental health resources, stress management training, and time management skills into the curriculum, nursing programs can better prepare students to handle the demanding nature of the profession.
2. *Fostering Resilient Future Nurses:* Students' recognition of stress as a factor that can contribute to resilience highlights an opportunity for nursing education to frame challenges as growth experiences. Educators and clinical instructors can play a pivotal role in helping students develop adaptive coping strategies that will serve them throughout their careers.
3. *Improving Clinical Training Environments:* Given the anxiety associated with clinical simulations and fear of making mistakes, clinical learning environments must be reviewed for psychological safety. A supportive clinical mentorship model, coupled with constructive feedback, can help students build confidence and competence without compromising their mental well-being.
4. *Promoting a Culture of Wellness in Nursing Practice:* As students transition into the workforce, the stress-coping habits they form during their education are likely to carry over into their professional lives. Institutions that promote and model wellness and work-life balance within academic settings can influence future workplace cultures positively, reducing burnout and improving retention in the nursing field.

5. *Strengthening Peer Collaboration and Communication:* The reliance on peer support as a coping mechanism highlights the importance of teamwork and open communication in nursing. Encouraging peer collaboration during training can cultivate interpersonal skills that are vital in clinical practice, where teamwork is essential for patient care and professional support.
6. *Information Policy and Curriculum Development:* These findings can inform policy at both institutional and national levels, advocating for mental health integration within nursing curricula and workplace preparedness. Addressing student stress early contributes to the development of more emotionally resilient, competent, and confident nurses.

CONCLUSION

The assessment of anxiety, perceived stress, and coping strategies among nursing students is critically important due to the psychological challenges inherent in the demanding nature of nursing education. The rigorous academic curriculum, intensive clinical placements, and frequent exposure to emotionally charged situations contribute to elevated levels of anxiety and perceived stress. These factors can significantly impact students' academic performance and overall mental and physical well-being.

A comprehensive understanding of the complex interplay between psychological stressors and the coping mechanisms employed by nursing students is vital for developing evidence-based interventions aimed at fostering resilience and promoting well-being. The high prevalence of anxiety among nursing students, driven by academic pressures, concerns clinical competence, patient safety responsibilities, and interpersonal challenges within the healthcare setting, highlights the urgent need for proactive and targeted strategies. Such measures would support students in navigating these challenges effectively, thereby ensuring their success in both academic and professional spheres while enhancing their readiness to provide high-quality patient care.

The results of this study reveal that nursing students experience a high level of stress related to academic workload, clinical responsibilities, and performance expectations. While many students demonstrate resilience through effective coping strategies such as time management, peer support, and healthy lifestyle practices, a significant proportion continue to struggle with anxiety, sleep disturbances, and the impact of stress on their academic and personal lives. These findings highlight the dual reality of nursing education: it is both a demanding and growth-enabling experience.

Despite the challenges, most students recognize the value of stress in shaping their professional development, suggesting an opportunity to harness this pressure constructively. However, the presence of stress-related concerns among a sizable group of students emphasizes the need for institutions to implement targeted interventions, such as wellness programs, enhanced counseling services, and revised approaches to clinical education. Ultimately, fostering a supportive learning environment that prioritizes student well-being is essential in preparing future nurses who are not only clinically competent but also emotionally resilient and equipped to thrive in the demanding healthcare environment.

Acknowledgement

We would like to express my sincere thanks and gratitude to the students at Northern Border University for their valuable participation in this research. Your willingness to contribute your time, insights, and experiences played a crucial role in the successful completion of this study. Your cooperation and support are deeply appreciated, and this work would not have been possible without your involvement. Thank you for being an essential part of this research journey

Funding Statement

This research was conducted independently and did not receive any financial support, grants, or sponsorship from governmental, institutional, or private funding bodies. All costs associated with the design, data collection, analysis, and reporting of this study were fully covered by the researcher using personal resources. The decision to undertake this research without external funding was made to maintain full academic independence and to ensure the integrity and objectivity of the study. Despite the lack of financial support, every effort was made to uphold high methodological and ethical standards throughout the research process.

Author Contributions

The research team solely conceived, designed, and conducted the study. Responsibilities included formulating the research questions, designing the methodology, collecting and analyzing the data, interpreting the findings, and drafting the manuscript. All aspects of the research process—from literature review to final write-up—were carried out independently by the research team. The authors also ensured the ethical standards of the research were maintained throughout the study.

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