ASSESS THE LEVEL OF STRESS AMONG NURSING STUDENTS IN PRIVATE COLLEGES OF PESHAWAR PAKISTAN" A CROSS SECTIONAL STUDY"

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Abstract

Background
Numerous academic, clinical, and personal pressures that nursing students regularly encounter can have an adverse effect on their mental well-being, academic achievement, and future professional competency. These pressures are frequently ignored in Pakistan, particularly in private institutions, which leads to exhaustion, discontent, and even the desire to migrate. Globally, research has consistently demonstrated that nursing students face substantial stress, with prevalence rates ranging from 20% to 65%, depending on geographic and institutional context. However, localized data from Pakistan especially from private sector institutions in cities like Peshawar remains limited. Understanding these stressors within the regional context is essential to design culturally and institutionally relevant interventions.

Objective
This study aimed to assess the prevalence, intensity, and sources of stress among undergraduate nursing students enrolled in six private nursing colleges in Peshawar, Pakistan.

Methodology
A descriptive cross-sectional study design was employed. Data were collected using the Stressors in Nursing Students Questionnaire, a validated tool measuring various domains of student stress, including academic pressure, clinical workload, interpersonal conflicts, and personal stress. A total of 270 nursing students participated in the study through purposive sampling. Data were analyzed using SPSS Version 26. Descriptive statistics, including means, frequencies, and standard deviations, were computed to explore stress levels. Cross-tabulation and inferential statistics were used to assess associations between stress levels and demographic variables.

Results
The findings revealed that a significant proportion of nursing students experienced moderate to high levels of stress. Academic workload, clinical responsibilities, and fear of failure were reported as major stressors. Female students and those in earlier years of study reported comparatively higher stress levels. Additionally, a considerable number of participants indicated that prolonged stress adversely affected their academic performance and personal well-being.

Conclusion
The study highlights the urgent need for structured stress management programs and institutional support mechanisms in nursing colleges. Addressing these stressors early may not only improve students' well-being and performance but also contribute to the retention and professional growth of the future nursing workforce in Pakistan.

INTRODUCTION

Stress is a normal psychological and physiological response to demands, pressures, or changes in life. It reflects the body's physical, emotional, mental, and behavioral reaction to situations that challenge its equilibrium, whether real or perceived (Aligned et al., n.d.). In educational settings, particularly in health sciences, stress is a common phenomenon due to the demanding nature of academic and professional training. Nursing students frequently experience stress as they cope with intensive coursework, lengthy study hours, assignments, examinations, and clinical responsibilities (Noreen et al., 2023; Khan et al., 2023).

Nursing is a complex and multifaceted profession that requires students to acquire extensive theoretical knowledge while simultaneously developing competence in essential clinical skills. Nursing students must integrate classroom learning with practical application in healthcare settings to meet the diverse and evolving needs of patients. This integration is essential for preparing students to function effectively in real-world clinical environments (Jadoon, 2023). Clinical education serves as a critical bridge between theory and practice, allowing students to engage directly with patients, develop technical competencies, and build confidence in delivering safe and effective nursing care (Aljohani, 2021).

Positive clinical experiences contribute significantly to the development of critical thinking, problem-solving abilities, and professional identity among nursing students. Such experiences enhance students' commitment to evidence-based practice and strengthen their sense of belonging within the nursing profession (Zheng, 2022). Conversely, negative clinical experiences may reduce self-confidence, lower professional satisfaction, and increase uncertainty regarding future nursing careers. These experiences can also hinder learning and contribute to elevated stress levels and disengagement from clinical education (Hamaideh, 2024).

Clinical placements are considered one of the most important components of nursing education because they provide opportunities for students to apply theoretical knowledge in real healthcare settings. However, these placements often expose students to stressful and unpredictable situations. The responsibility of caring for actual patients, adapting to unfamiliar environments, and meeting professional expectations under supervision can significantly increase anxiety and emotional strain (Chaabane, 2021). Students frequently report stress related to fear of making mistakes, managing patient care responsibilities, and being evaluated by clinical instructors and healthcare professionals (Cheng, 2022).

Stress responses are triggered when internal or external stressors disrupt the body's homeostasis. These stressors activate physiological and psychological mechanisms designed to help individuals adapt and maintain balance (Hedrick, 2021). While the stress response is initially protective and adaptive, excessive or prolonged exposure to stress can result in adverse physical and psychological consequences. Chronic stress has been associated with cardiovascular diseases, anxiety, depression, cognitive impairment, and reduced overall well-being (Berdida, 2023).

The relationship between stress and mental health outcomes has been widely documented. Prolonged exposure to stress can contribute to emotional disturbances and may increase the risk of severe psychological conditions. Research has highlighted neurobiological differences among individuals experiencing mood disorders, emphasizing the importance of recognizing and addressing stress-related mental health concerns at an early stage (Baluwa, 2021). Furthermore, stress has been identified as a significant factor associated with suicidal behaviors, particularly among adolescents and young adults, underscoring the need for effective mental health support systems (Villan, 2025).

Stress among nursing students is a globally recognized concern. Studies conducted in various countries have reported high levels of stress, anxiety, and depressive symptoms among nursing students. In Taiwan, nursing students demonstrated elevated depressive symptoms linked to academic overload (Chen, 2025). Similarly, vocational nursing students in China reported significant levels of stress, anxiety, and depression (Zeng, 2019). A systematic review further confirmed that stress prevalence among nursing students remains consistently high across different regions of the world (Zheng, 2022).

Comparable findings have been reported in South and Southeast Asia. In Vietnam, more than half of nursing students experienced moderate to severe stress (Ngoc & Tuan, 2024), while approximately one-third of nursing students in Kolkata, India, reported high stress levels (Ahamed, 2020). Despite the growing body of international evidence, research examining stress among nursing students in Pakistan remains limited, particularly in Khyber Pakhtunkhwa, where private-sector nursing education has expanded considerably in recent years.

Healthcare professionals are generally recognized as being at greater risk of occupational stress and burnout than individuals in many other professions. Long working hours, emotional demands, high levels of responsibility, and frequent exposure to patient suffering contribute to increased psychological burden among healthcare workers (Javaid, 2023). Nursing students, who are preparing to enter this demanding profession, often experience similar pressures during their educational journey. Studies have shown that nursing students report higher levels of stress than students in many other academic disciplines, with clinical training identified as a major source of stress (Cheng, 2022).

Research indicates that nearly all nursing students experience moderate to high levels of stress during clinical placements (D'emeh, 2021). However, significant gaps remain regarding the identification of specific stress levels, contributing factors, and coping mechanisms across different educational and cultural contexts. A comprehensive assessment of stress among nursing students is essential for protecting their physical and psychological well-being and for improving the quality of nursing education and clinical training (Majrashi, 2021).

The burden of stress among nursing students is further intensified during the transition from academic learning to clinical practice. This period is often characterized by increased responsibilities, interpersonal challenges, limited autonomy, and concerns about professional

competence. Students frequently report feeling inadequately prepared for clinical demands and fear negative evaluations from supervisors, which can contribute to emotional exhaustion and reduced psychological well-being. If left unaddressed, persistent stress may lead to absenteeism, poor academic performance, and withdrawal from nursing programs (Alenezi et al., 2023).

Given the increasing demand for qualified nurses and the expansion of private nursing colleges in Peshawar, understanding the level of stress experienced by nursing students is essential. Assessing stress levels can provide valuable insights for nursing educators, administrators, and policymakers, enabling the development of targeted interventions and support systems that promote resilience, academic success, and professional competence. Therefore, this study aims to determine the level of stress among nursing students enrolled in private nursing colleges in Peshawar, Pakistan.

Here's a concise version of your Chapter 3 methodology with the internal headings removed and the content presented as a coherent narrative:

Methodology

This chapter outlines the methodology used to determine the level of stress among nursing students in private nursing colleges of Peshawar. A descriptive cross-sectional study design was employed to assess stress levels from the participants' perspective.

The study population comprised approximately 900 third- and fourth-year nursing students enrolled in selected private nursing colleges in Peshawar, including School of Health Sciences, Ahmad Medical Institute, Farkhanda Institute of Nursing and Public Health, RAUFAID Nursing College, Khyber Pakhtunkhwa Institute of Medical Sciences, Ayyub International College of Nursing, and Health Nursing College. A sample of 270 students was selected using a convenient sampling technique. Students enrolled in BSN and Post-RN programs who were willing to provide informed consent were included, while students on academic leave, suspended from their programs, or unwilling to participate were excluded.

Data were collected using a structured questionnaire adopted from a previous study. The questionnaire consisted of 50 items divided into two sections: eight questions related to sociodemographic characteristics and 42 items assessing stress levels using a five-point Likert scale ranging from 1 (not at all stressful) to 5 (very stressful). Participants were provided with a brief explanation of the study purpose and instructions for completing the questionnaire.

The collected data were coded and analyzed using SPSS version 27. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize the data. Sociodemographic variables were presented through frequency tables, bar charts, and pie charts. Stress scores were calculated by summing responses to all stress-related items and were categorized into low, moderate, and high stress levels based on predefined score ranges.

Ethical approval was obtained from the relevant institutional authorities before data collection. Participation was voluntary, and informed consent was obtained from all participants.

Confidentiality and anonymity were maintained by coding responses and securely storing the data. Participants were also informed of their right to withdraw from the study at any stage without any consequences.

Results and Findings

Demographic Characteristics of the Study Participants

The study sample comprised 270 nursing students from six private nursing colleges in Peshawar, including School of Health Sciences, Ahmad Medical institute, Farkhanda Institute of Nursing & public health, Rufaida nursing college, Khyber Pakhtunkhwa Institute of Medical Sciences and Ayyub international college of nursing, Health nursing college. Their mean age was 23.937years with a standard deviation of ± 0.815.

Table 1; Demographic Variable Age

Descriptive Statistics			
	N	Mean	Std. Deviation
Age	270	23.97	.815

The majority were male nursing students, accounting for 196 individuals (72.6%), while female students made up 74 individuals (27.4%). This indicates a significant gender imbalance within the sample, with males comprising nearly three-fourths of the total study population. The cumulative percentage confirms that 100% of the sample was accounted for in gender reporting. Of the 270 participants, 41.9% were in their first semester of their fourth year, followed by 27.8% in their third year, 21.9% in their second semester, and just 8.5% in their third year, semester two. This indicates that the majority of pupils were in the more advance training phases .

Demographic Characteristics of the Study Participants

Table presents the demographic characteristics of the 270 nursing students who participated in the study from various private nursing colleges in Peshawar. Key variables include age, gender distribution, academic year, marital status, living arrangements, financial support, and previous academic performance. These factors were analyzed to understand the background and social conditions that may influence students' levels of stress during their academic and clinical training.

Table : Demographic Characteristics

Demographic Variable	Frequency	Percentage (%)
Age Group (Mean ± SD)	—	—
Male	196	72.6%
Female	74	27.4%
4th year (1st Sem)	113	41.9%
3rd year	75	27.8%
2nd Sem	59	21.9%
3rd year (2nd Sem)	23	8.5%
Unmarried	235	87.0%
Married	35	13.0%
Hostel	128	47.4%
With Family	67	24.9%
Rental	67	24.8%
Other	5	1.9%
Fully Supported	187	69.6%
Partially Supported	53	19.6%
Self-supporting	29	10.7%
Previous Performance 70-79%	209	77.4%
Previous Performance 60-69%	37	13.7%
Previous Performance >80%	24	8.9%

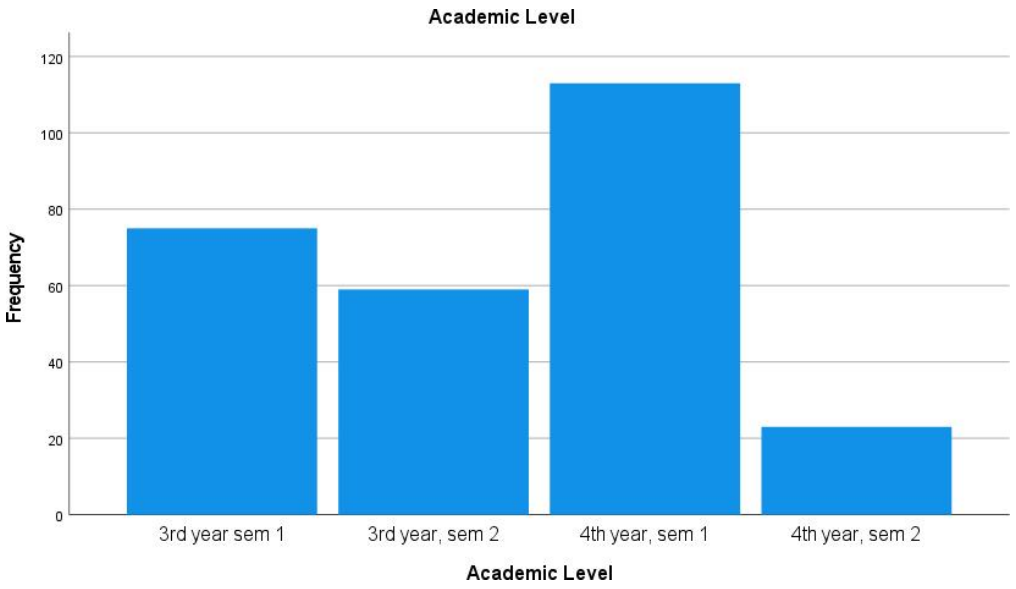
Study Variables and Measurement Tools

Table outlines the primary variables measured in this study and the tools used for their assessment. The central focus was on the stress levels of nursing students, which were evaluated using the Stressors in Nursing Students Questionnaire. This tool includes 42 items rated on a 5-point Likert scale to gauge the intensity of stressors across various domains. Demographic details and academic performance were also captured through self-reported sections in the questionnaire to explore possible associations with stress levels.

Table: Stress Levels

Variable	Frequency	Percentage (%)
Low Stress Level	90	33.3%
Moderate Stress Level	120	44.4%
High Stress Level	60	22.2%

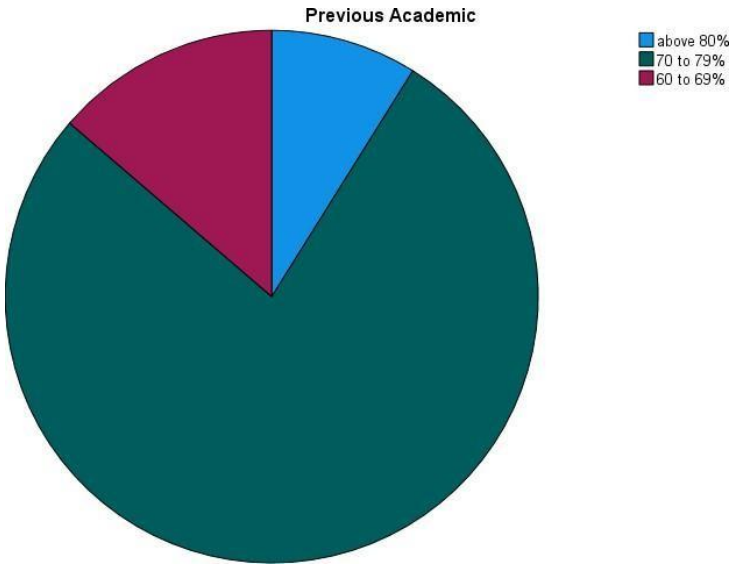
Figure 1; Demographic Variables (Academic Level)



Only 13.0% of the 270 nursing students were married, with the majority (87.0%) being unmarried. Nearly half (47.4%) lived in hostels, followed by family living (24.9%), rental housing (24.8%), and other living arrangements (1.9%). In terms of financial aid, 10.7% of students were self-supporting, 19.6% were partially supported, and 69.6% were fully supported by their families. Students' stress levels throughout clinical education may be significantly impacted by these sociodemographic characteristics, which include living circumstance, marital status, and financial dependency.

The bulk of individuals (77.4%) who were asked about their prior academic performance reported scores between 70% and 79%, followed by 13.7% who reported scores between 60% and 69%, and just 8.9% who claimed scores above 80%. This suggests that while a small percentage of students achieved at an extraordinary level, the majority of pupils maintained average to good academic standing.

Figure 2: Demographic Variable (Previous academic performance)



Level of Stress among Study Participants

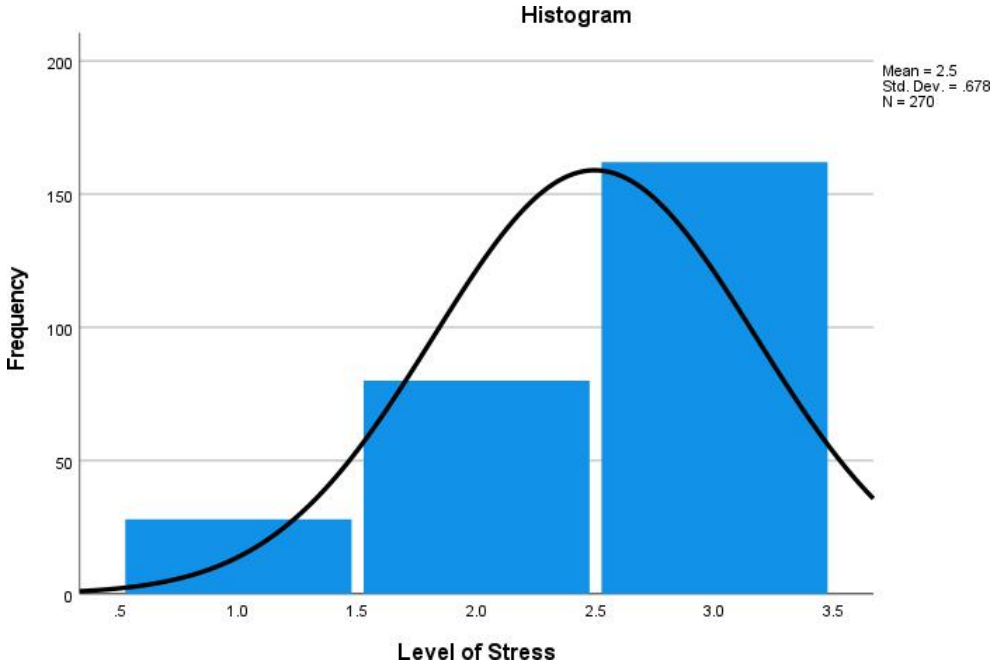
A mean score of 2.50 with a standard deviation of 0.678 was found in the descriptive analysis of nursing students' stress levels. On a scale of 1 to 3, 1 denoted little stress, 2 moderate stress, and 3 high stress. This implies that pupils tended to experience higher levels of stress on average. The distribution was left-skewed, indicating that more students reported higher levels of stress, according to the negative skewness score (-0.998). Instead of closely clustering around the mean, the distribution was platykurtic, or rather flat, as indicated by the kurtosis score (-0.227). These numbers highlight the high prevalence of substantial stress among individuals and support the previous frequency findings.

Table 2; Descriptive statistics of stress level

Descriptive Statistics				
	N	Mean	Std. Deviation	
	Statistic	Statistic	Statistic	Std. Error
Level of Stress	270	2.50	.678	.295
Valid N (listwise)	270			

The majority of participants (60.0%) reported experiencing significant levels of stress during their clinical assignments, according to an analysis of the stress levels among the 270 nursing students. Furthermore, just 10.4% of respondents reported feeling low levels of stress, compared to 29.6% who reported moderate levels. These results suggest that a significant percentage of students experience significant psychological stress, which may have an effect on their academic achievement, clinical performance, and general well-being. The prevalence of high stress highlights the pressing need for curriculum changes, institutional initiatives, and mental health support to lessen the strain on nursing students during their practicum.

Figure 3; Level of Stress



Discussion of the Findings

This chapter discusses the study's key findings from the in-depth interviews (IDIs) of nursing students stress level studying in the Private Nursing Colleges at Peshawar, Pakistan, followed by the strengths and limitations of the study, recommendations, and conclusion.

The purpose of this study was to evaluate the stress levels of nursing students attending six private nursing schools in Peshawar, Pakistan. The results showed that only 10.4% of the participants reported low stress levels during their clinical education, whereas the majority (60.0%) reported high stress levels. These findings are consistent with a large body of research worldwide, indicating that nursing students, wherever they may be, experience significant psychological stress, particularly during clinical rotations. Although this study supports the general frequency of stress, it also offers context-specific insights that are significantly different from those found in previous research.
The current study's findings closely match those of Jones et al. (2018), who looked at nursing students' perceptions of stress and burnout at a private university in California. Their investigation revealed high levels of stress and emotional tiredness among students, especially during clinical rotations, which is consistent with the current findings. According to both research, students at private schools frequently face high expectations for their academic and clinical performance, which raises stress levels. Jones et al., however, also emphasized burnout, a notion that was not specifically assessed in the current study, and recommended that future studies in Pakistan should look more closely at the long-term effects of ongoing stress, like emotional exhaustion and depersonalization (Jones, 2018).

The Singh et al. (2018) study, which looked into stress among Indian nursing students, found a similar pattern. According to their findings, the majority of students suffered from moderate to high levels of stress, primarily as a result of their clinical obligations, academic overload,

and test pressure. Considering the geographical and cultural similarities between India and Pakistan, the findings' comparability is noteworthy. However, Singh et al. also observed gender-based differences in stress levels, with female students reporting higher levels of stress. In contrast, the current study did not focus on gender-based differences because a larger majority of the sample (72.6%) comprised of male students. This suggests a possible direction for future research: evaluating how gender influences stress reactions in Pakistani nursing students.(Singh, 2018).

Fascinatingly, the current study's identification of high stress levels among nursing

students is consistent with that of a study conducted in 2023 by Jadoon et al., which particularly looked at stress factors in nursing students across both public and commercial universities in Pakistan. But according to Jadoon et al., adolescents attending public schools were more likely to experience structural and systemic stresses such poor facilities, a lack of staff, and uneven monitoring. On the other hand, stress was more frequently linked to clinical performance pressure, financial strains, and interpersonal competition among students at private universities, like those in the current study. This lends credence to the notion that although stress is a common problem among nursing students, the causes of it might differ greatly depending on the institutional setting. (Jadoon, 2023)

By incorporating students from both public and private colleges across disciplines, the study by Engelbrecht et al. (2022), which looked at pharmacy students at Malaysian universities, provides a more comprehensive comparison. According to their findings, students at private universities reported far higher levels of stress, especially as a result of competitive cultures, performance expectations, and a lack of free time. While not focused on nursing specifically, this reinforces the idea that students in private institutions Furthermore, in both trials, the sense of stress was significantly influenced by financial support. Although just 10.7% of participants in this study were self-sufficient, even a small amount of financial responsibility was linked to increased stress levels, confirming Alshagga et al.'s finding that financial dependence and educational investment increase performance pressure. (Engelbrechet, 2022)

The study by Sawaengdee et al. (2016) in Thailand, which examined final-year students' self-assessment of nursing competence in public and private institutions, provides the last comparison. According to their research, students at private schools frequently reported higher levels of stress while also having better self-perceived competency. This is probably because of the more competitive learning environment and institutional expectations. Although it was not specifically examined in the current study, this duality of stress and confidence is noteworthy. Even while their academic reputation is still comparatively good, it is conceivable that students in Peshawar's private nursing colleges may feel pressured to "prove themselves" as skilled and competent, leading to heightened internal tension. (Sawaengdee, 2016)

Conclusion

This study assessed the level of stress among nursing students in private colleges in Peshawar, Pakistan. The findings revealed that a significant proportion of nursing students 60% of the sample experienced high levels of stress during their clinical education. The average stress level was 2.50 on a 3-point scale, with a skew toward higher stress responses, indicating that elevated stress is a widespread concern. Demographic factors such as academic year, gender, living arrangements, financial support, and marital status played a potential role in influencing stress levels. Notably,

the majority of the students were in their final academic years, were unmarried, and fully financially dependent on their families all variables that may increase vulnerability to stress. Additionally, the academic performance of most participants was in the average-to-good range, suggesting that stress did not necessarily correlate with academic failure but could still impair performance and well-being.

The results emphasize the urgent need for institutional reforms, psychological support systems, and targeted stress management strategies to promote the mental health and academic success of nursing students. Future efforts should focus on early intervention, curriculum redesign, and resilience-building programs to mitigate the psychological burden of clinical training.

Recommendations

Nursing schools are advised to include organized stress management programs in their curricula in light of the findings. To help students better handle clinical stresses, these should include instruction on time management, emotional control, and mindfulness. Additionally, in order to make psychological help easily accessible, colleges must offer on-campus mental health counseling services. Students should be supervised by clinical mentors during their rotations, and clinical workloads should be balanced to prevent undue stress. Establishing peer support groups can enhance students' feeling of community, particularly for those living in dorms. Furthermore, providing flexible payment options or scholarships could reduce financial strain. In order to minimize burnout and foster a more supportive and healthy learning environment, nursing schools should also update their academic timetables and conduct regular mental health assessments. Given that this study's sample was predominately male, future research should examine how gender affects nursing students' stress responses. Instead of focusing on a single instance, longitudinal studies are advised to monitor the development of stress over the course of academic years. Research comparing public and private nursing schools would provide insight into environmental and structural pressures. Students' lived experiences and coping mechanisms should be documented through qualitative research techniques such as focus groups and interviews. It's also critical to look into how clinical teachers affect stress levels. Future research should also examine students' coping mechanisms and long-term impacts like anxiety, PTSD, and burnout. It is highly suggested to do research on cultural or religious coping strategies and evaluate the efficacy of particular stress-reduction techniques.

Strengths

This research contributes to the current body of knowledge in a number of ways. It offers localized insights that can guide region-specific solutions by concentrating on a particular and understudied population: nursing students enrolled in private

colleges in Peshawar. The findings' reliability and representativeness are improved by the study's comparatively high sample size (n=270). Consistency in data collection is ensured and comparison with research conducted elsewhere is made possible by the use of a structured, standardized stress assessment tool. A detailed examination of stressors was also made possible by the sample's demographic variety, which included a range of income and educational backgrounds. All things considered, the study clarifies a crucial problem in nursing education and creates avenues for focused institutional and policy reform.

Limitations

The study has certain shortcomings in spite of its advantages. First, its cross-sectional design captures stress levels at only one point in time, limiting the ability to assess changes over time or establish causality. Second, the use of self-report questionnaires may introduce response bias, as participants might underreport or overstate their stress levels. Third, the study did not explore correlations between stress levels and variables such as academic performance, gender, or coping mechanisms factors that could provide deeper insights. Also, the research was limited to private colleges in one city, reducing generalizability to public institutions or other regions. Finally, cultural or social factors influencing stress, such as stigma around mental health, were not directly examined but could significantly impact the results.

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