

## A CROSS-SECTIONAL STUDY ON ACADEMIC BURNOUT AND STRESS LEVELS AMONG UNDERGRADUATE NURSING STUDENTS IN CHARSAZZA, KHYBER PAKHTUNKHWA, PAKISTAN

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### Abstract

**Background:** Nursing education integrates intensive theoretical instruction with clinical training, exposing students to psychological pressure, physical fatigue, and emotional exhaustion. Academic burnout among nursing students represents not only a personal psychological concern but also a systemic barrier to the sustainability of the global nursing workforce, which faces a projected deficit of nearly six million by 2030. However, limited evidence exists regarding burnout and stress among nursing students in District Charsadda, Khyber Pakhtunkhwa, Pakistan.

**Aim:** To assess the levels of academic burnout and perceived stress among undergraduate nursing students in Charsadda, Khyber Pakhtunkhwa, Pakistan, and to examine the relationship between these variables.

**Methodology:** A quantitative cross-sectional descriptive study was conducted among undergraduate nursing students enrolled in BSN programs across nursing colleges in Charsadda. A convenience sample of 132 students was recruited from a total population of 200. Data were collected using structured questionnaires measuring academic burnout and stress, with responses recorded on a 5-point Likert scale. Descriptive statistics and correlation analysis were performed using SPSS version 26.

**Results:** The findings revealed that a considerable proportion of nursing students experienced moderate to high levels of academic stress and burnout. Emotional exhaustion emerged as the most prominent dimension of burnout. Academic burnout demonstrated a significant positive relationship with stress levels among undergraduate nursing students.

**Conclusion:** Academic burnout and stress are prevalent among nursing students in Charsadda, with emotional exhaustion being particularly significant. The findings underscore the urgent need for institutional interventions, including stress-management programs, counseling services, mentorship initiatives, and curriculum adjustments to support student well-being and ensure the sustainability of the future nursing workforce.

### Introduction

Nursing education is designed to equip students with the necessary knowledge, skills, and

competencies to perform professional clinical responsibilities and deliver safe, effective patient care. The curriculum integrates intensive

theoretical instruction with hands-on clinical training, where students interact directly with patients experiencing illness, pain, and emotional distress. Engaging in clinical procedures and managing patient care situations can expose students to both psychological pressure and physical fatigue (Prakash, Sheilini, & Nayak, 2023).

Moreover, in addition to academic and clinical demands, nursing students may face negative attitudes from senior nursing staff, limited collaboration among peers, and insufficient institutional support for resolving workplace conflicts. Collectively, these experiences can significantly elevate stress levels and emotional exhaustion. Continuous exposure to such stressors may adversely affect students' physical health, psychological well-being, academic performance, and overall quality of life. If these pressures are not effectively managed, they can lead to decreased motivation, disengagement from learning, and ultimately, academic burnout (Prakash et al., 2023).

Academic burnout itself is understood as a psychological state in which students experience emotional exhaustion and feel unable to invest further effort in their studies. Consequently, this condition often results in diminished motivation, reduced academic engagement, and the development of negative perceptions regarding one's own academic abilities (Prakash et al., 2023).

The significance of academic burnout extends beyond individual well-being, particularly in the context of the global nursing workforce. The shortage of nurses has been widely recognized as a critical challenge to healthcare systems worldwide. According to the World Health Organization, this deficit is projected to approach six million by 2030 (World Health Organization [WHO], 2020, 2022). This alarming projection underscores the urgent need to strengthen nursing education programs and implement strategies to effectively recruit and retain nursing students. Within this context, academic burnout among undergraduate nursing students constitutes more than a personal psychological concern; it represents a systemic barrier to the

long-term sustainability and stability of the nursing workforce (Christian V. Villan, Gloria M. Cunanan, 2025).

Scholastic burnout is a related condition characterized by physical, emotional, and cognitive exhaustion resulting from prolonged and intense academic demands. It typically occurs when the workload and expectations of academic programs surpass a student's capacity to cope effectively. Nursing students are particularly vulnerable due to heavy academic workloads, clinical rotations, stringent deadlines for assignments, and high expectations from strict clinical instructors. These factors collectively contribute to significant mental fatigue and emotional strain (Christian V. Villan, Gloria M. Cunanan, 2025).

Empirical evidence supports the prevalence of academic stress and burnout among healthcare students. For example, Ma et al. (2022) reported that 85.3% of nursing students at a Chinese institution experienced moderate to severe academic stress, with 36.1% reporting emotional exhaustion. Similarly, Liasi et al. (2021) found that 16.3% of medical students experienced burnout, while 42.1% reported moderate to high levels of stress, highlighting the strong relationship between academic demands and psychological strain (Christian V. Villan, Gloria M. Cunanan, 2025).

Furthermore, academic burnout is considered a prolonged and adverse psychological condition primarily affecting students (Zhang et al., 2007). It is commonly conceptualized as comprising three core dimensions: emotional exhaustion, detachment or disengagement from studies, and a reduced sense of personal accomplishment (Lin & Huang, 2014).

#### Literature review

The concept of burnout was initially introduced by Christina Maslach, who defined it as a psychological syndrome consisting of three primary dimensions: emotional exhaustion, depersonalization, and a diminished sense of personal accomplishment (Maslach & Leiter, 2016). Over time, burnout has been extensively examined in educational and healthcare settings.

The Maslach Burnout Inventory–Student Survey (MBI-SS) has become one of the most commonly utilized instruments for evaluating burnout among student populations.

International research, particularly from Europe and North America, indicates that nursing students frequently experience considerable levels of burnout. For instance, Rudman and Gustavsson (2012) demonstrated that sustained academic pressure significantly contributes to emotional exhaustion among nursing students. Likewise, Chernomas and Shapiro (2013) identified heavy coursework demands and anxiety related to clinical performance as major contributors to student stress and burnout.

The theoretical explanation of stress is often linked to the transactional model developed by Lazarus and Folkman (1984), which suggests that stress arises when individuals perceive that situational demands exceed their available coping resources. Within nursing education, students are routinely exposed to challenging academic requirements, clinical assessments, and fear of making mistakes in patient care, all of which can intensify psychological strain.

Evidence from Asian countries also reveals elevated stress levels among nursing students. Common stressors include examination pressure, clinical competency expectations, and financial difficulties (Alzayyat & Al-Gamal, 2014). In Pakistan, limited cross-sectional studies have documented moderate to high stress levels among undergraduate nursing students, with findings indicating a meaningful relationship between stress and academic burnout.

Despite the growing body of literature, there is a scarcity of research specifically addressing burnout and stress among nursing students in District Charsadda, Khyber Pakhtunkhwa. This lack of localized evidence underscores the importance of conducting context-specific research to better understand and address these psychological challenges within the region.

### Research Hypotheses

#### Null Hypothesis ( $H_0$ ):

There is no significant relationship between academic burnout and stress levels among undergraduate nursing students in Charsadda.

#### Alternative Hypothesis ( $H_1$ ):

There is a significant positive relationship between academic burnout and stress levels among undergraduate nursing students in Charsadda.

### Research Questions

What is the level of academic burnout among undergraduate nursing students in Charsadda?

### Research Objectives

To assess academic burnout and stress levels among undergraduate nursing students in Charsadda, Khyber Pakhtunkhwa, Pakistan.

### Research Methodology

#### Research Design

This study will employ a quantitative cross-sectional descriptive research design to assess the level of academic burnout and stress among undergraduate nursing students in Charsadda, Khyber Pakhtunkhwa, Pakistan. A cross-sectional design allows researchers to collect data from participants at a single point in time in order to examine the prevalence and relationships between variables such as stress and academic burnout (Liu et al., 2022).

This design is widely used in nursing education research to evaluate psychological factors such as stress, burnout, and coping strategies among students (Alkouri et al., 2025).

#### Research Setting

The study will be conducted in selected nursing institutions located in District Charsadda, Khyber Pakhtunkhwa, Pakistan.

#### Study Population

The target population of this study will consist of all undergraduate nursing students enrolled in BSN programs in nursing colleges of Charsadda, Khyber Pakhtunkhwa.

The population will include students from first year to final year who are currently studying in the nursing program during the data collection period.

#### **Sampling Technique**

This study uses a convenience sampling technique to recruit participants. In this approach, nursing students who are available during the data collection period and who are willing to participate are selected for the study. Convenience sampling is commonly applied in educational research because it allows researchers to collect data efficiently from accessible participants within academic institutions.

#### **Sample Size**

This study includes a total population of 200 students from nursing colleges in Charsadda. The Raosoft sample size calculator was used to determine the appropriate sample size by setting a confidence level of 95% and a margin of error of 5%. The calculated sample size is 132, which adequately represents the population and enables the researchers to draw reliable conclusions from the study findings.

#### **Inclusion and Exclusion Criteria**

The inclusion criteria consist of undergraduate nursing students who are currently enrolled in the BSN program in selected nursing colleges in Charsadda and who voluntarily agree to participate in the study. Students from different academic years who are present during the data collection period are eligible for participation.

However, postgraduate nursing students, students who are on academic leave during the study period, and those who decline to provide informed consent are excluded from the study. Additionally, questionnaires that are incomplete or incorrectly filled are not included in the final analysis.

#### **Data Analysis**

The collected data were entered and analyzed using Statistical Package for the Social Sciences version 26. Descriptive statistics such as

frequency, percentage, mean, and standard deviation were used to summarize the demographic characteristics of the participants.

The responses to the questionnaire were measured using a 5-point Likert scale, where:

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

For negatively worded items, reverse coding was applied before analysis. The total scores for academic burnout and academic stress were calculated by summing the responses of the respective items.

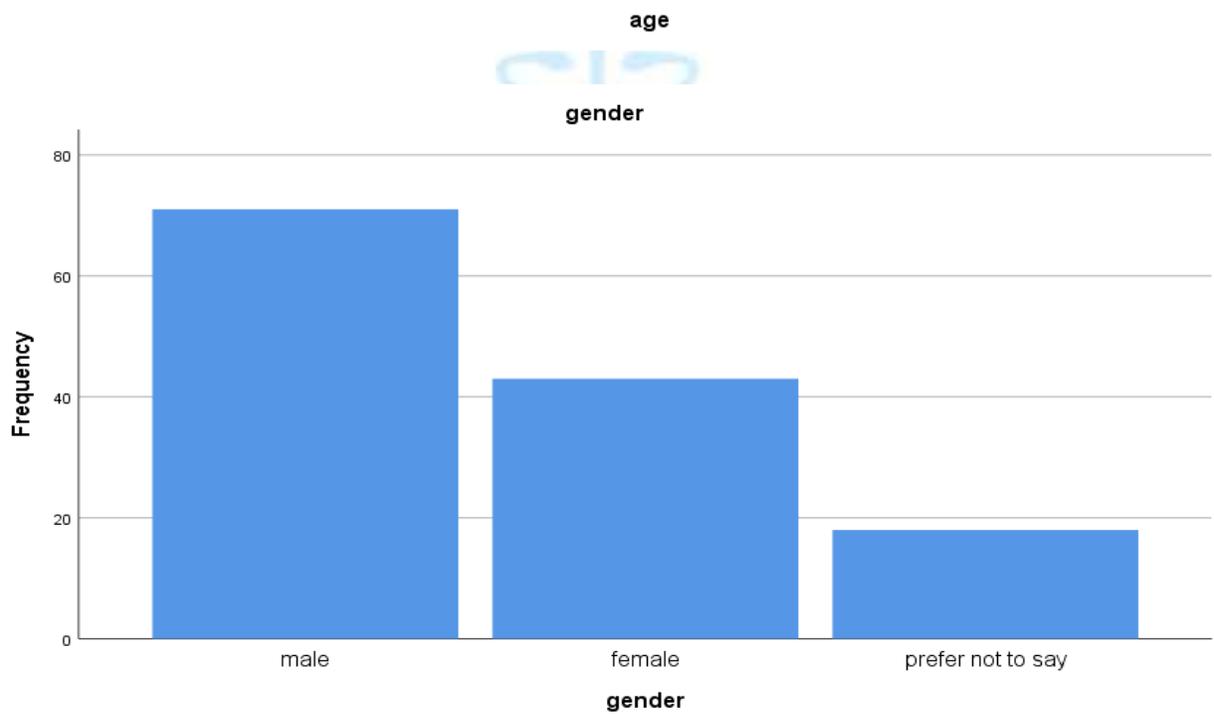
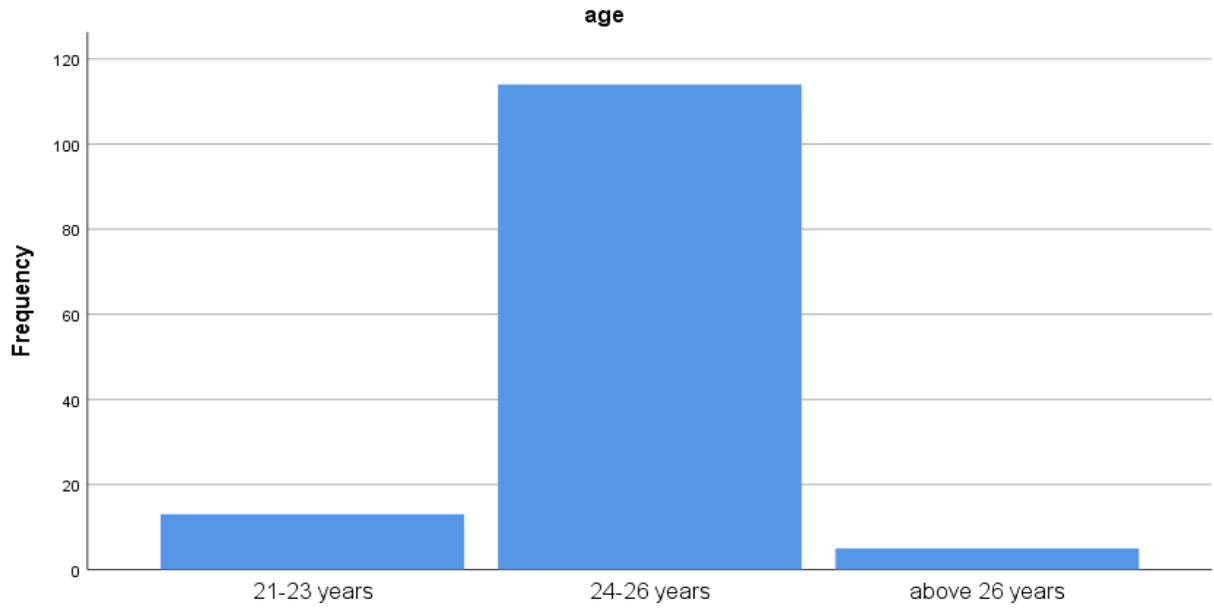
Burnout and stress levels were categorized into low, moderate, and high levels based on the total score ranges. Inferential statistics such as correlation analysis were also used to examine the relationship between academic burnout and stress levels among undergraduate nursing students.

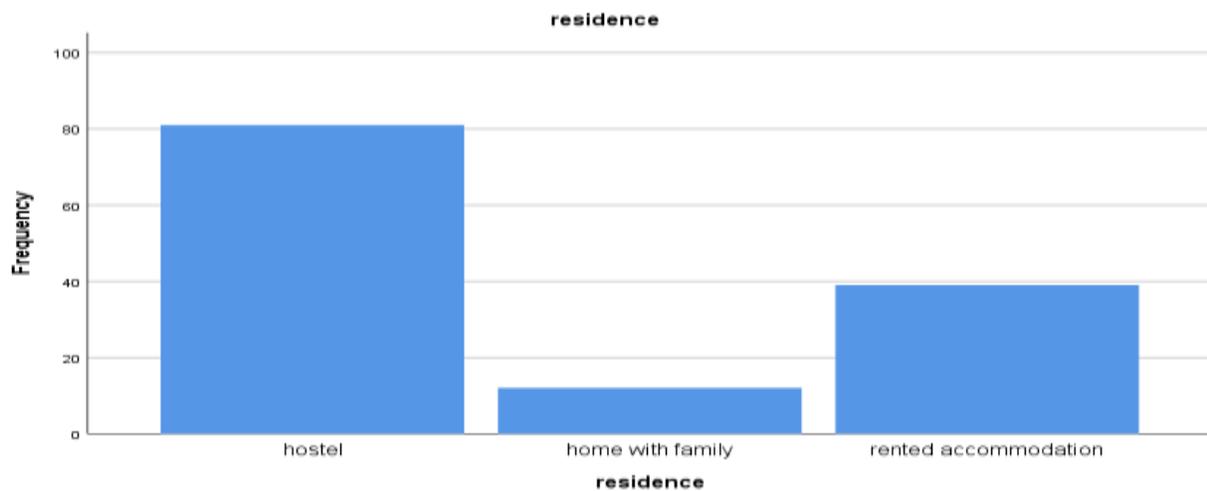
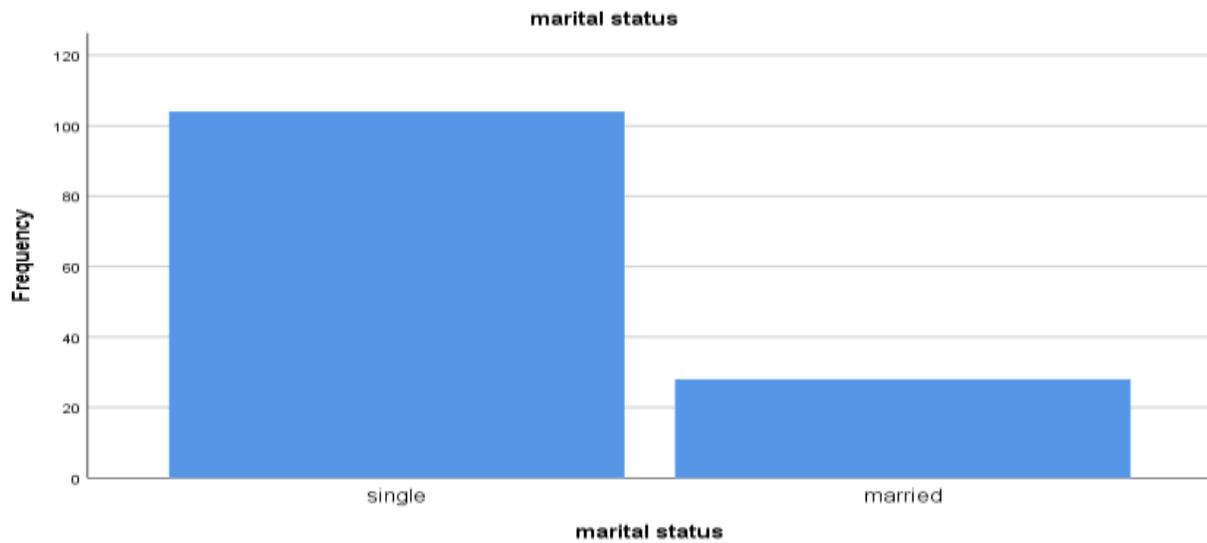
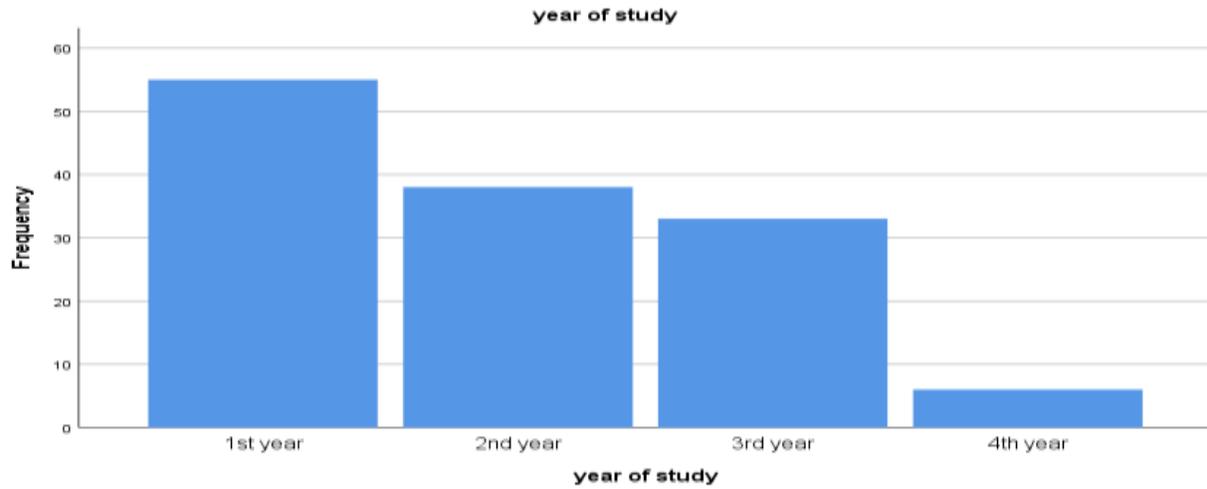
The results were presented using tables, charts, and graphs for better understanding and interpretation.

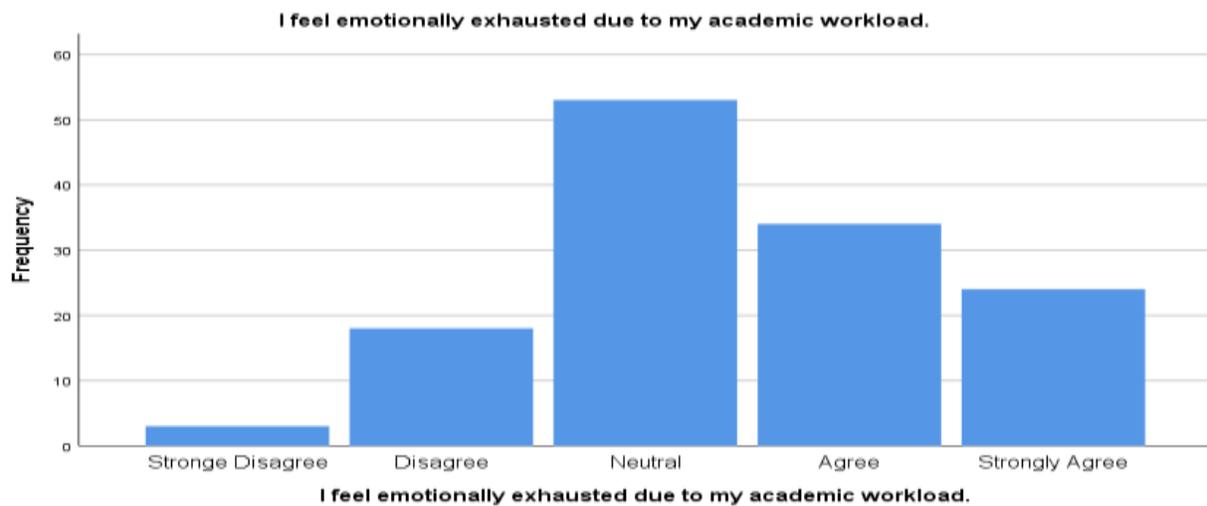
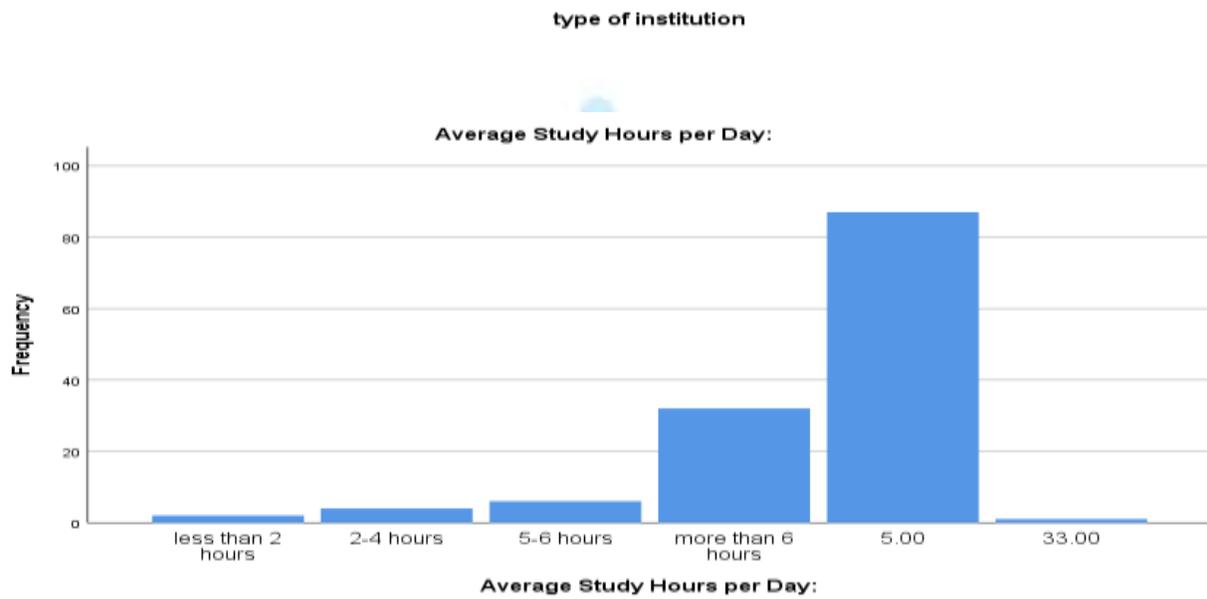
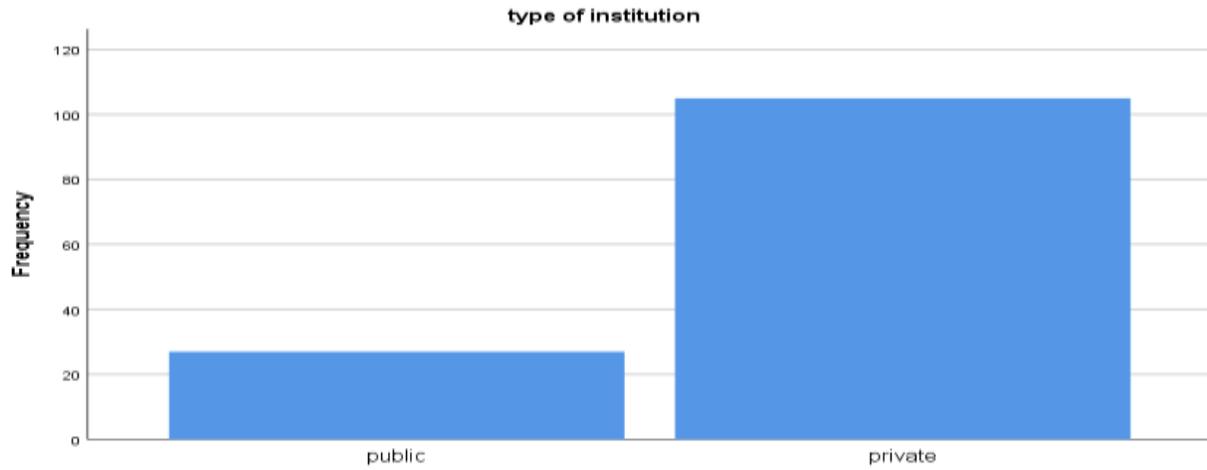
#### **Ethical considerations:**

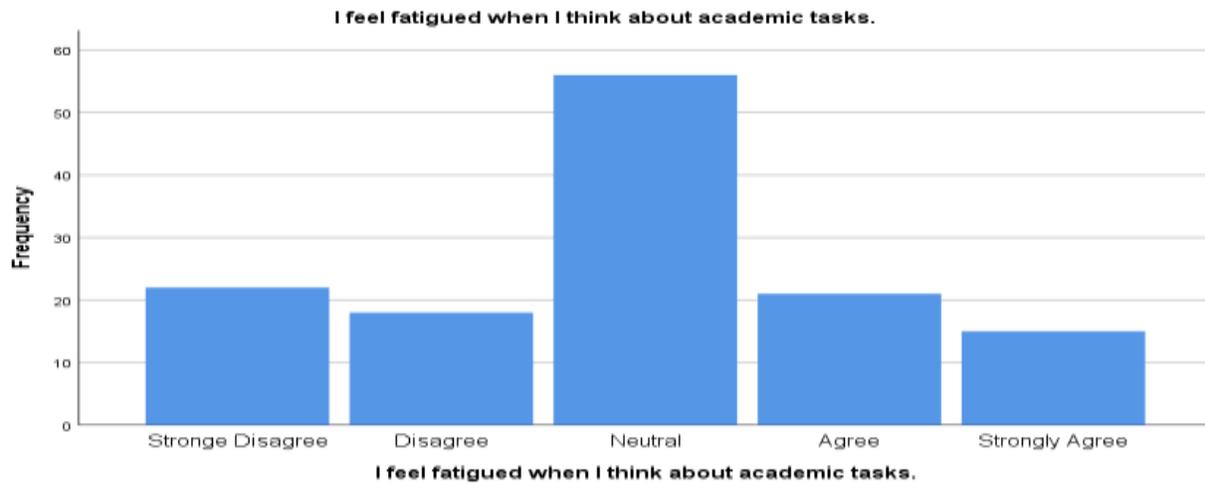
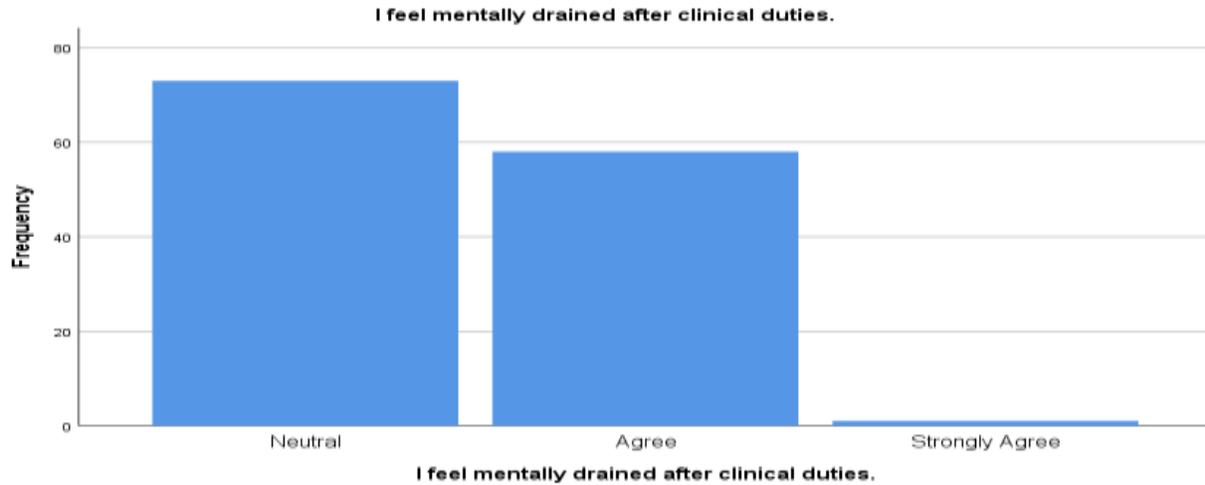
Ethical principles are strictly followed throughout the research process in accordance with established research ethics guidelines. Permission to conduct the study is obtained from the administration of the selected nursing institutions before data collection begins. Participants receive clear information about the purpose of the study, and informed consent is obtained prior to their participation. Participation is completely voluntary, and students have the right to withdraw from the study at any stage without any consequences. The confidentiality and anonymity of the participants are maintained by not recording personal identifiers such as names or registration numbers. Furthermore, the collected data are used solely for academic research purposes and handled with strict confidentiality (World Medical Association, 2013).

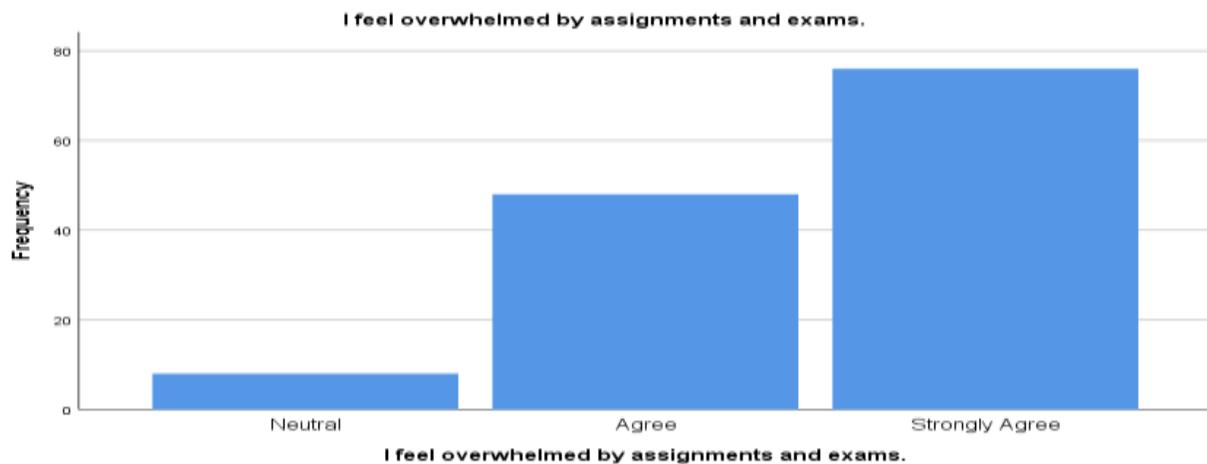
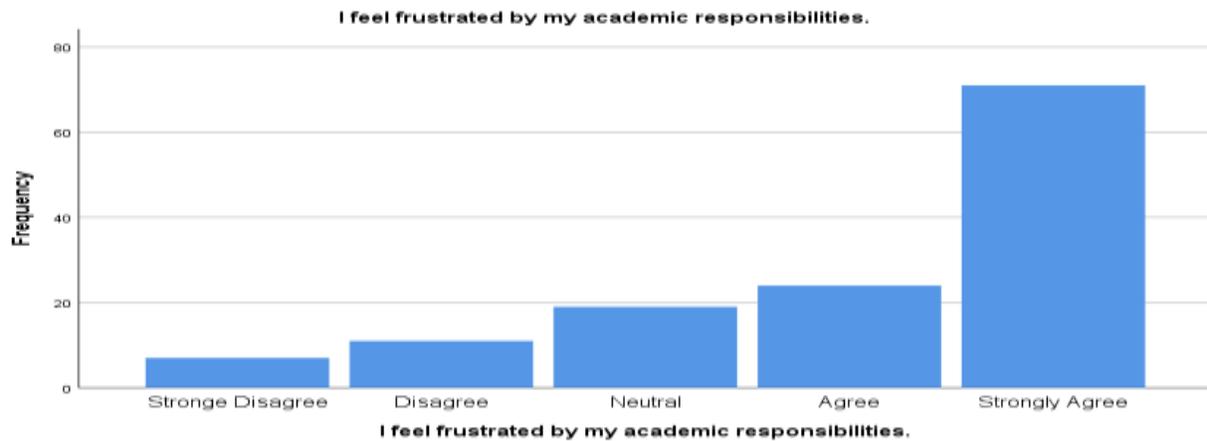
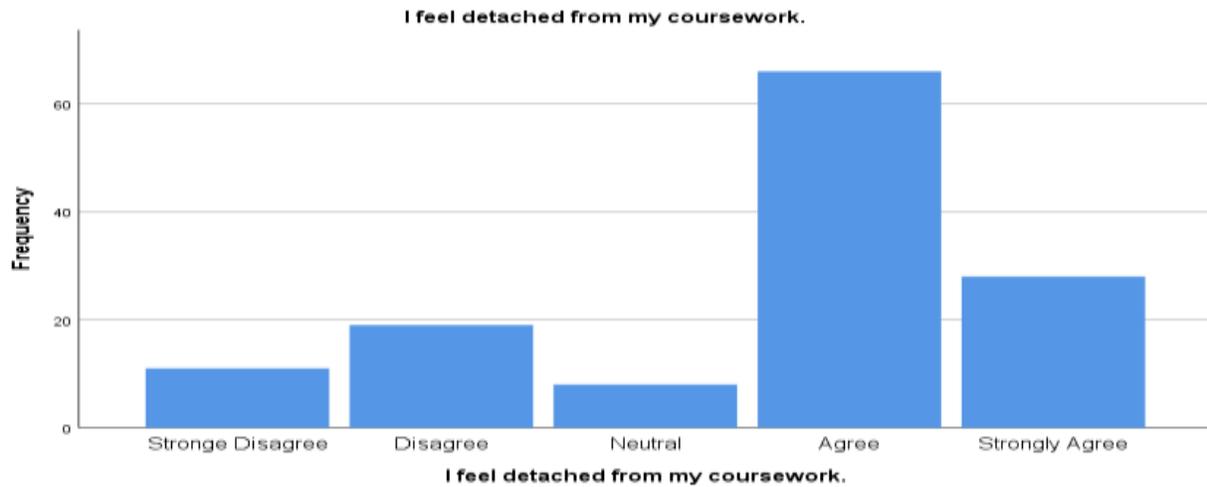
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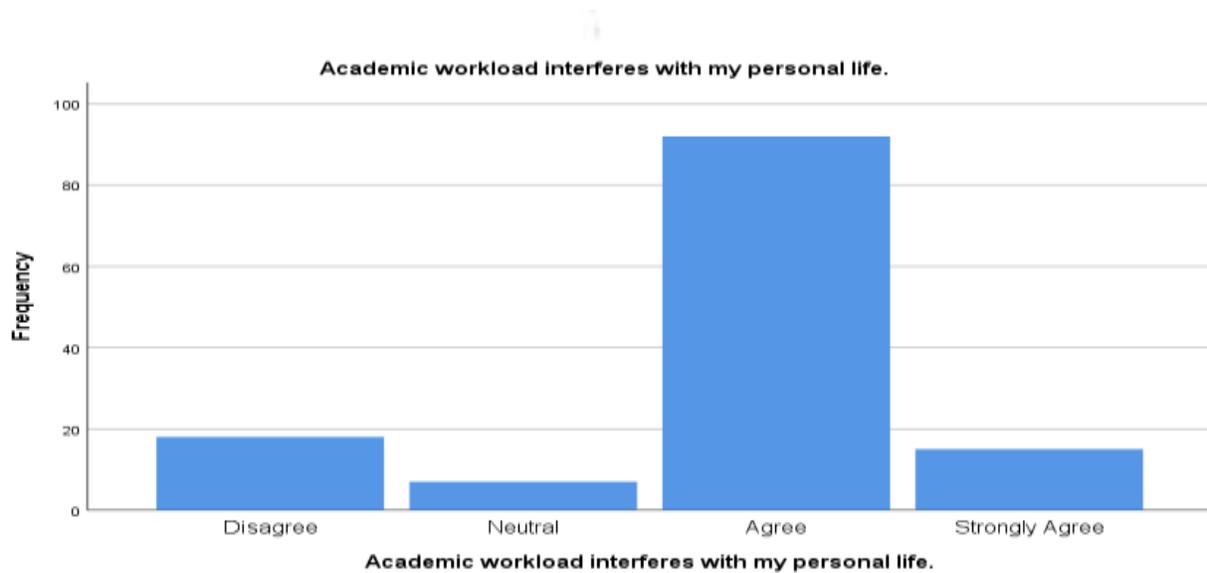
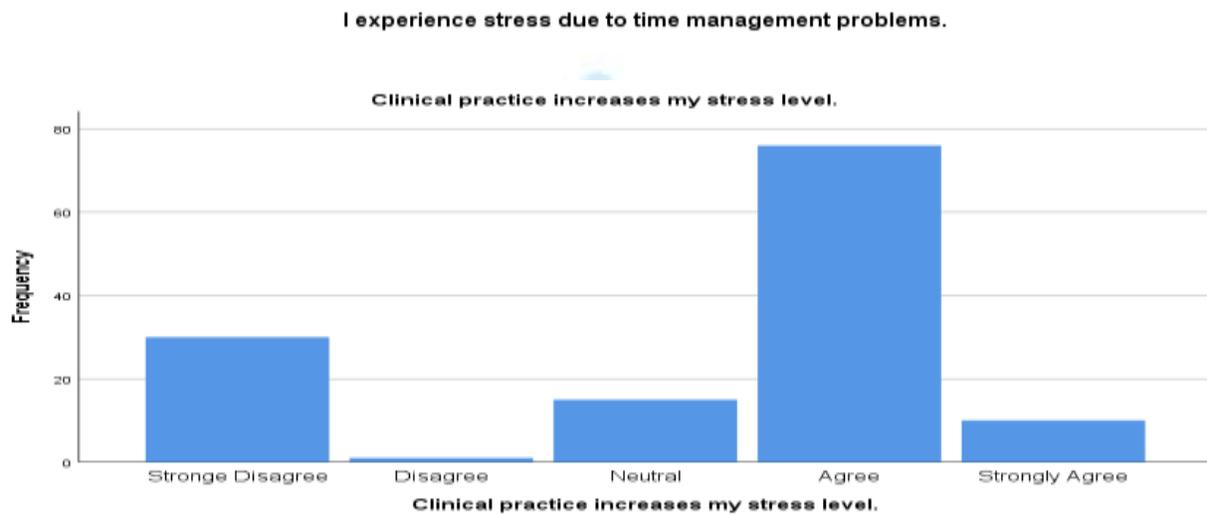


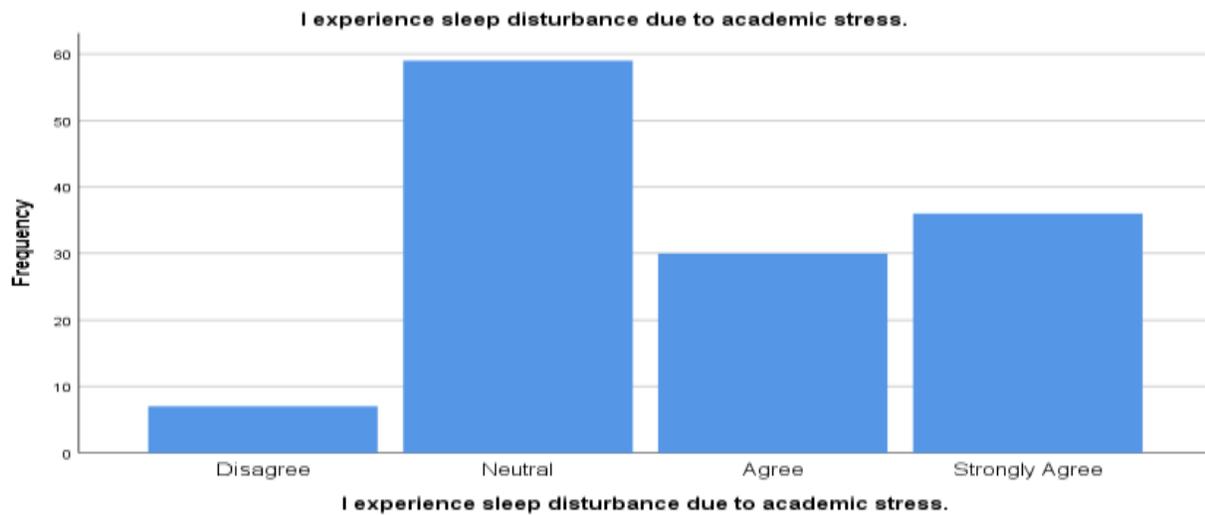












### Discussion

The present study examined the levels of academic burnout and perceived stress among undergraduate nursing students. The findings indicate that a considerable proportion of students experience moderate to high levels of stress and burnout, highlighting a significant academic and mental health concern within nursing education.

Nursing education is widely recognized as academically demanding and emotionally challenging. The rigorous curriculum, clinical responsibilities, examination pressure, and expectations of professional competence collectively contribute to psychological strain. These findings align with the conceptual framework of burnout described in the Maslach Burnout Inventory, which identifies emotional exhaustion, depersonalization, and reduced personal accomplishment as core components of burnout (Maslach & Jackson, 1981; Maslach, Schaufeli, & Leiter, 2001). In the present study, emotional exhaustion emerged as the most prominent dimension, suggesting that students feel overwhelmed by continuous academic and clinical demands.

The results are consistent with previous international studies reporting high stress levels among nursing students due to clinical exposure, fear of making mistakes, heavy workload, and time management difficulties (Pulido-Martos, Augusto-Landa, & Lopez-Zafra, 2012; Labrague,

2017). According to the World Health Organization, chronic unmanaged stress can negatively affect both mental and physical well-being (World Health Organization, 2019). Persistent academic stress may impair concentration, reduce academic performance, and increase the risk of anxiety and depressive symptoms (Dyrbye, Thomas, & Shanafelt, 2006).

One possible explanation for elevated stress levels is the dual responsibility of theoretical learning and clinical practice. Unlike many other disciplines, nursing students must simultaneously master cognitive knowledge, psychomotor skills, and emotional resilience. This multidimensional demand may accelerate burnout, particularly among junior students who are still adapting to the clinical environment (Gibbons, Dempster, & Moutray, 2011).

The study also suggests that demographic factors such as year of study, gender, and living arrangements may influence stress perception. Senior students often report higher burnout due to increased clinical workload and preparation for professional examinations, while junior students may experience stress related to academic transition and adjustment to university life (Labrague et al., 2018). These variations highlight the need for targeted interventions at different academic levels.

Importantly, unmanaged burnout may have long-term professional implications. Students experiencing chronic stress during their training

may enter the workforce with reduced motivation, lower job satisfaction, and an increased risk of early career attrition (Maslach & Leiter, 2016). This issue is particularly concerning in countries facing nursing shortages, as student well-being directly influences the sustainability of the future nursing workforce (WHO, 2020).

The findings emphasize the urgent need for institutional strategies to reduce academic stress. Universities should consider implementing stress-management workshops, mentorship programs, counseling services, and resilience-building training for nursing students (Labrague & McEnroe-Petitte, 2018). Faculty support and positive clinical supervision can significantly reduce students' psychological burden. Curriculum restructuring to balance theoretical and clinical hours may also help mitigate academic overload.

Furthermore, promoting peer-support systems and encouraging reflective learning practices can enhance students' coping mechanisms. Early identification of students at risk of burnout through screening tools may allow timely psychological support and intervention (Gibbons et al., 2011).

#### Limitations

Despite its contributions, the study has certain limitations. Self-reported questionnaires may introduce response bias. Additionally, the cross-sectional design limits the ability to establish causal relationships between academic stress and burnout. Future longitudinal studies are recommended to examine the progression of stress and burnout across different academic years.

#### Conclusion of Discussion

In conclusion, the study confirms that academic burnout and stress are prevalent among undergraduate nursing students. Without appropriate institutional support and coping interventions, these stressors may adversely affect academic performance and professional development. Addressing burnout at the educational level is essential for producing

competent, resilient, and psychologically healthy nursing professionals.

#### Recommendations

##### 1. Conduct longitudinal studies

Future researchers should conduct longitudinal studies to examine how academic burnout and stress levels change throughout the different years of nursing education. This approach would help in understanding the progression and long-term impact of stress on students.

##### 2. Include a larger and more diverse sample

Future studies should include larger sample sizes and involve nursing students from multiple institutions or regions to improve the generalizability of the findings.

##### 3. Explore additional influencing factors

Researchers are encouraged to investigate other factors that may contribute to academic burnout and stress, such as coping strategies, social support, financial difficulties, and academic workload.

##### 4. Evaluate intervention programs

Future research should assess the effectiveness of stress-management interventions, counseling services, and resilience-training programs in reducing burnout and improving the psychological well-being of nursing students.

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