

Stress among Undergraduate Nursing Students at Governmental Nursing Faculties in Sudan

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ABSTRACT

Introduction: Stress among undergraduate nursing students is an increasingly important issue. Maladaptive responses can lead to serious health problems, such as anxiety, depression, and other mental health disorders. The aim of this study was to assess stress among undergraduate nursing students.

Methods: This study was a descriptive cross-sectional institution-based design with a sample size of 285 undergraduate nursing students from Omdurman Islamic University and Al Neelain University. The Perceived Stress Scale (PSS) was used to collect data.

Results: The majority of students (29%) reported environment as the leading cause of stress and had moderate level of stress. Second- and Fourth-year students had higher stress level compared to the First- and Third-year students.

Conclusion: This study concluded that environment-related pressures were the major cause of stress among undergraduate nursing students. It is recommended that academic counseling be established and maintained, and an orientation program provided to reduce stress. Tele learning and E-learning should also be initiated and maintained to reduce environmental stress.

Keywords: stress; undergraduate; nursing students; academic counseling; Sudan.

INTRODUCTION

Stress is an inevitable part of life and affects people in different ways. It is a normal response to challenging situations that can be beneficial or harmful to an¹. For undergraduate nursing students, stress can have a significant impact on their academic performance, mental health, and physical health². It is important to understand the sources of stress among nursing students, the effects of stress on their academic performance, and the strategies for coping with stress.

Studies have identified several sources of stress among undergraduate nursing students. These include academic demands such as studying for exams and engaging in class discussions, as well as managing clinical placements and personal³. Furthermore, due to the increasing responsibilities of their profession, nursing students experience additional stressors such as the pressure to provide competent care, maintain a good grade point average, and meet the standards of their clinical placements⁴.

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The effects of stress on nursing students' academic performance can be significant. Studies have shown that students who experience higher levels of stress have worse academic performance than those who experience lower levels of stress^{5, 6}. Furthermore, students who experience high levels of stress are more likely to experience physical and mental health issues such as headaches, depression, and anxiety⁷.

In order to cope with stress, nursing students must implement effective strategies. These can include developing good time management skills, engaging in positive self-talk, and engaging in physical activities such as yoga or meditation⁸. Furthermore, it is important for nursing students to reach out to peers and mentors for support, establish healthy boundaries between work and personal life, and maintain a balanced lifestyle⁹.

In conclusion, it is important to understand the sources of stress among undergraduate nursing students, the effects of stress on their academic performance, and the strategies for coping with stress. By understanding the sources of stress and taking proactive steps to manage it, nursing students can be better equipped to succeed in their academic and professional goals¹⁰⁻¹².

The aim of this study was to assess stress among undergraduate nursing students at governmental universities in Sudan.

METHODS

This cross-sectional, descriptive study was conducted at two governmental Faculties of Nursing, Alneelain University and Omdurman Islamic University, in Sudan. The study participants were 286 B.Sc. nursing students from all four levels (1-4) including repeat and upgrade students. Stratified sampling was used to select the study sample.

A self-administered structured questionnaire was used to collect data from the sample. The questionnaire contained three sections: (1) demographic profile (age, gender, university, academic year, nationality, residence, hours

spent studying per day, and hours of sleep per night); (2) Perceived Stress Scale (PSS) (American Institute of Stress, 2019; Cohen, 2019) to measure the level of stress; and (3) causes of stress domains (e.g., completion of extracurricular activities, performance of practical activities, professional communication, professional training, time management, environment, and theoretical activity).

Data were entered, coded, and analyzed using univariate and bivariate analysis in SPSS (Statistical Package for Social Sciences) Version 25. Frequency analysis, cross-tabulation, and manual revision were used to detect any errors. The results were presented in frequency tables, figures, and cross-tabulation. The significance test was carried out using the Chi-Square test, with a significance level of 0.05.

Prior to the start of the study, ethical approval was obtained from the Ethical Committee of the Institutional Review Board (IRB) at Alneelain University. Permission was also obtained from the Deans of the Faculties of Nursing Sciences at both Alneelain University and Omdurman Islamic University. Verbal consent was obtained from the students. All participants were ensured anonymity, confidentiality, and their privacy and dignity were protected. Participants had the right to refuse to answer any question.

In conclusion, this study utilized a descriptive cross-sectional institutional-based design to assess the level of stress and its causes among B.Sc. nursing students at two governmental Faculties of Nursing in Sudan. Stratified sampling technique was used to select the study sample, and a self-administered structured questionnaire was used to collect data. Data were analyzed using univariate and bivariate analysis, and the results were presented in frequency tables, figures, and cross-tabulation. The significance test was carried out using the Chi-Square test, with a significance level of 0.05. All participants were ensured anonymity, confidentiality, and their privacy and dignity were protected.

RESULTS

Table 1 provides demographic information on 285 participants in a study. The majority of the participants were female (95.8%) and were between the ages of 16 and 21 (53.7%). The highest percentage of participants (26.0%) were in either academic level 3 or 4, while the lowest percentage (4.2%) were male. Over half of the participants (56.1%) lived with their family, while a smaller percentage lived with classmates (27.7%) or relatives (16.1%).

The results show that the most common level of stress across all causes was medium, with the exception of theoretical activity where low stress was reported more frequently. A notable finding is that completion of extracurricular activities and professional

Table 1: Demographic Profile of Participants in the Study

Demographic Information	Percentage of Total Participants	Number of Participants
Academic Level		
Level 1	23.5%	67
Level 2	24.6%	70
Level 3	26.0%	74
Level 4	26.0%	74
Total	100.0%	285
Gender		
Male	4.2%	12
Female	95.8%	273
Total	100.0%	285
Age Group		
16-21 years	53.7%	153
22-26 years	41.4%	118
27-31 years	3.5%	10
32-36 years	1.4%	4
Total	100.0%	285
Residence		
With family	56.1%	160
With classmates	27.7%	79
With relatives	16.1%	46
Total	100.0%	285

training had the most significant proportion of participants reporting medium stress levels. On the other hand, time management and environment were identified as the causes with the highest level of stress, with a significant proportion of participants reporting high or very high stress levels as shown in **Table 2**.

Table 3 presents the results of a study examining the relationship between academic year and stress levels among students. The study considered four academic levels, with level one being the first year and level four being the final year. The stress levels were measured based on three categories: low stress, moderate stress, and high stress.

The results show that the majority of students across all academic levels reported moderate stress levels. The highest number of students reporting low stress levels was in the first academic year, while the highest number of students reporting high stress levels was in the final academic year. It should be noted that the p-value of the study was 0.3, which suggests that the relationship between academic year and stress levels may not be statistically significant.

DISCUSSION

In this study, we aimed to determine the level of stress among undergraduate nursing students in Omdurman Islamic University and Alneelain University in Sudan. Our results showed that the majority of the participants (95.8%) were female, and most of them (53.7%) were between the ages of 16-21 years. The majority (82.1%) of the participants reported moderate levels of stress.

In terms of academic year, our results revealed that first-year students had a lower level of stress compared to second and fourth-year students. This finding is consistent with previous studies that reported moderate stress levels among undergraduate students^{13, 14}. However, the increased stress levels among second and fourth-year students may be due to the increased demands of their academic and personal lives¹⁵.

Table 2: Level of Stress Experienced by Participants According to Different Causes

Cause of Stress	Very Low Stress	Low Stress	Medium Stress	High Stress	Very High Stress	Total Participants
Completion of Extracurricular Activities	16.5% (47)	23.5% (67)	35.4% (101)	17.2% (49)	7.4% (21)	100% (285)
Performance of Practical Activities	14% (40)	25.6% (73)	27.7% (79)	24.2% (69)	8.4% (24)	100% (285)
Professional Communication	15.8% (45)	21.8% (62)	40% (114)	16.8% (48)	5.6% (16)	100% (285)
Professional Training	16.5% (47)	26% (74)	29.8% (85)	18.9% (54)	8.8% (25)	100% (285)
Time Management	13.3% (38)	18.9% (54)	24.2% (69)	20% (57)	23.5% (67)	100% (285)
Environment	16.1% (46)	16.5% (47)	18.6% (53)	20% (57)	28.8% (82)	100% (285)
Theoretical Activity	11.6% (33)	25.6% (73)	31.9% (91)	16.8% (48)	14% (40)	100% (285)

Table 3: Stress Level by Academic Year

Academic Year	Low	Moderate	High
Level one	0	58	9
Level two	2	55	13
Level three	4	61	9
Level four	1	60	13
Total	7	234	44

Our study also found that the faculty environment was a significant source of stress among nursing students. This is supported by previous research that evaluated stress factors among nursing students in Malaysian Public Universities^{16, 17}. The majority of the participants reported moderate levels of stress in relation to academic activities, such as completion of extracurricular activities, performance of practical activities, professional communication, professional training, time management, and theoretical activities. These results suggest that academic stress among nursing students is reasonable and moderate¹³.

Additionally, our study found that factors such as universities, academic year, nationality, residence, and age were not significantly associated with stress levels among nursing students. This finding is

consistent with previous studies that assessed stress levels among undergraduate medical students and nursing students in Malaysian Public Universities¹⁸⁻²⁰.

CONCLUSION

In conclusion, this study highlights the importance of addressing stress among undergraduate nursing students and the potential role of the educational institution in providing support. Future research could further explore stress-management strategies to help nursing students manage their stress levels. We would like to thank all of the students who participated in this project and their universities.

Conflict of Interest: The authors declare that they have no financial or non-financial interests that could potentially impact the results or interpretation of the study.

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Ethical Clearance: Ethical approval was obtained from the Institutional Review Board (IRB) at Alneelain University. The study was in accordance with the ethical standards and guidelines set by the IRB.

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