

Stress and Stress Management Strategies Among Nursing Students in University of Medical Sciences Ondo, Ondo State, Nigeria

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Abstract:

Nursing is a demanding profession which involves stress that can build the students' knowledge and performance when it remains at tolerable levels; but when it intensifies, it makes a student prone to mistakes, lose confidence in the ability to perform assigned tasks, and potentially fail. The objective of the study was to determine the perceived level of stress, stressors and the stress management strategies of nursing students in the University of Medical Sciences, Ondo, Ondo State. A cross sectional descriptive study was conducted and 130 nursing students participated. A self-administered questionnaire was used for data collection. The data was analysed using frequency, percentage table, chi-square and ANOVA. The study revealed that 82.3% and 13% of the students were moderately and highly stressed respectively. Stressors among the students were academic and psychosocial; while the most common stress management strategies were problem solving, followed by avoidance. The study also revealed that there was no significant association between the students' level of study and the perceived stress level or the stress management strategy used. Whether moderately or highly stressed, nursing students perceived themselves as having a level of stress; hence, the need to improve the counselling services in the University to equip students in ways to cope effectively with stress.

Keywords: Stress, stressors, stress management strategies, coping

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Introduction

Tertiary institution plays a vital role in stimulating a country's economy and empowering young people with the skills, knowledge and attitudes required for the 21st-century workplace (Mason, 2017). However, many factors can negatively affect a student's academic pursuit and these includes, financial constraint, intrapersonal and interpersonal challenges, inadequate preparation for examination, difficulties in maintaining balance in academic and personal life (Mason, 2017), increased pressure, competition, decreased resources, inadequate family support, exposure to violence through media, and increased use of alcohol as well as drugs (Sethi, 2018).

Stress describes the body's reaction to external changes and is defined as the non-specific response of the body to any demand for change" (Opoku-Acheampong et al., 2017). Stress is always seen as a subjective process and encompasses individual's personal response to a threatening event. Stress can have both physical and psychological effects on individuals ranging from headaches, gastrointestinal discomfort, poor memory and difficulty with concentration, to depression, anxiety and many other hazardous conditions (Opoku-Acheampong et al., 2017).

Students in tertiary institutions are exposed to ever-greater levels of stress which could negatively affect their academic performance and levels of well-being (Mason, 2017). Nursing is a demanding profession that requires constant interaction with different people within a complex clinical environment. It can build the students' knowledge and performance when it remains at tolerable levels but when it intensifies, it makes a student prone to mistakes, lose confidence in the ability to perform assigned tasks and potentially fail. Stressors among nursing students includes three key sources namely, academic sources like assignment, fear of failure; from clinical sources which comprise the clinical environment and personal or social sources which involve finance. These result into health problems such as heart diseases, immune deficiency and depression (Algaralleh et al., 2019).

Students in health professional courses are more prone to stress than other university peers. A professional career demands a great deal of diligence and persistence and brings new challenges for students in everyday life. Most of the students don't understand these demands and suffer from stress and anxiety (Tamang et al., 2020). When in a nursing education program, students are often exposed to high levels of stress when compared to other students in other formalized programs. In particular, the clinical component of the nursing program which is meant to prepare nursing students for professional nursing roles and enhance their critical thinking and decision making skills in the clinical settings produces high levels of discomfort, stress and anxiety. Existing evidence showed that there are two major sources of stress among nursing students: academic and clinical stressors, with the latter being perceived more intensely by nursing students at all levels (Tamang et al., 2020).

Students may resort to certain strategies to alleviate stress which may affect quality of life positively or negatively (Opoku-Acheampong et al, 2017). Problem-focused strategies used by students include defining the problem; coming up with possible solutions; trying to use the best option; remaining analytical while some employed the emotion-focused coping strategies which include diversional therapy like going to a movie or dancing. Some negative coping strategies used by students includes, avoidance, use of alcohol, drug abuse, which negatively affect their academic performance, self-esteem and well-being (Mason, 2017).

A study conducted by Hemamalini et al (2018) revealed that stress affecting students academically affect their ability to concentrate which leads to bad performance in school

work and as a result, leads to depression, suicide etc. (Hemamalini et al., 2018). Another main source of stress for the students is the inadequate support system such as right career counsellors which leads to directionless goals and even after graduating, students are clueless about their careers and are insecure regarding a job (Jitender & Seema, 2019). The pressure of the studies in terms of academics, extra-curricular activities, assignments etc. has increased beyond comparison. Parents expect their children to be a part of rat race and outshine their competitors to enhance their own social status in the society (Jitender & Seema, 2019). There is a greater demand in clinical and academic environment among nursing students and inability to cope effectively often aggravate the stress which if not intervened early may have detrimental effect on health and may also affect the future workforce in rendering quality care (Dasgupta et.al, 2020).

The University of Medical Sciences Ondo is the first specialized institution of its kind in Nigeria and the third in Africa. It was created with passion for excellence in medical services and is dedicated entirely to training, service delivery and high quality research in medical disciplines. The goal of the University is also consistent with the goal of the Department of Nursing Science. This prompts the researcher to carry out a study on stress and stress management strategies among the nursing students of the University of Medical Sciences, Ondo. The study specifically

1. identified the stressors among nursing students in University of Medical Sciences;
2. assessed the perceived level of stress among nursing students in the University of Medical Sciences; and
3. identified the strategies used by nursing students in the management of stress.

Research Questions

1. What are the stressors among nursing students in University of Medical Sciences, Ondo State?
2. What is the perceived level of stress among nursing students in University of Medical Sciences, Ondo State?
3. What strategies do nursing students use in managing stress in University of Medical Sciences, Ondo State?

Research Hypotheses

1. There is no significant association between the level of study of nursing students and their level of stress
2. There is no significant association between the level of study of nursing students and their stress management strategies

Methodology

A descriptive, cross sectional study design was used to assess stress and stress management strategies among nursing students in the University of Medical Sciences Ondo, Ondo State. The research was carried out in the University of Medical Sciences, Ondo, Ondo State. The University is the first specialized institution of its kind in Nigeria and the third in Africa. The sample size of 130 was derived using Taro Yamane formula. Proportional and simple random sampling techniques were used to select the sample size.

A structured questionnaire was used to elicit response from the respondents in order to achieve the objectives of the study.

Section A: Socio-demographic data

Section B: **Perceived Stress level among nursing students.** Perceived Stress Scale (PSS-10) developed by Sheldon Cohen in 1988, is the most widely used psychological instrument for measuring the perception of stress. Each item is rated on a 5-point scale ranging from never (0) to very often (4). Positively worded items are reverse scored and the ratings are summed

with higher scores indicating more perceived stress. PSS-10 scores are obtained by reversing the scores on the four positive items: for example 0=4, 1=3, 2=2 etc and then summing across all 10 items. Items 4, 5, 7 and 8 are the positively stated items. A total score between 0-13 suggests low stress; 14- 26 suggests moderate stress and 27 – 40 suggests high stress

Section C: **Stressors among students.** Stressors identified among students in previous studies (Gyambrah et al., 2017; Essel & Owusu, 2017) were organized to assess stressors among the nursing students.

Section D: **Strategies used in managing stress.** Coping Behaviour Inventory (CBI) developed by Sheu et al (2002) was used to identify nursing students' coping strategies. It consists of nineteen items of 5-point Likert –type scale (0= Never; 1=infrequently; 2=sometimes; 3=frequently; 4=always). The nineteen items were divided into four categories of behaviors: Avoidance, Problem solving, Staying optimistic and Transference.

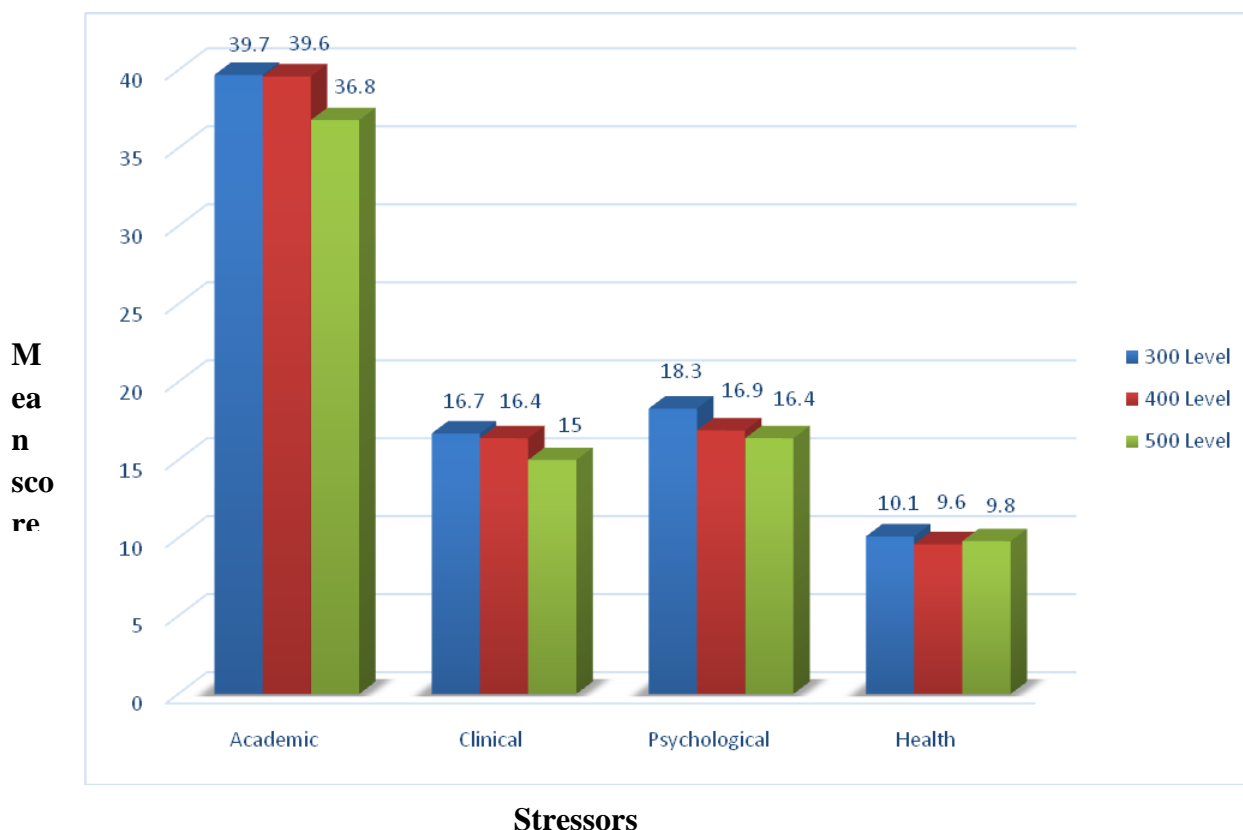
The researcher obtained ethical approval from Human Ethics Research Committee in the University of Medical Sciences, Ondo. The respondents were treated with respect and informed consent was obtained with the respondents writing “Yes” to indicate their consent to participate. The anonymity and confidentiality of the research participants were maintained throughout the period of study and the researcher ensured that the study caused no harm to the respondents.

The data collected was analysed using Statistical Package for Social Sciences (SPSS) version 23 and the results were presented using tables and charts. Hypotheses raised were analysed using Chi-square and ANOVA.

Results

Research Question 1: What are the stressors among nursing students in University of Medical Sciences, Ondo State?

Figure 1: Stressors among Nursing Students



Academic factors were the major stressors across the levels (300, 400 and 500), followed by psychological related factors, clinical related factors and the least stressors were health related factors. The stressors among the respondents followed the same pattern across the levels.

Research Question 2: What is the perceived level of stress among nursing students in University of Medical Sciences, Ondo State?

Table 1: Respondents’ Perceived Level of stress

Stress level	Frequency	Percentage
Low stress	6	4.62
Moderate stress	107	82.31
High stress	17	13.08
Total	130	100

From Table 1, about 107 (82.31%) of the students experienced moderate stress level. Variations among the levels are shown in Figure 2.

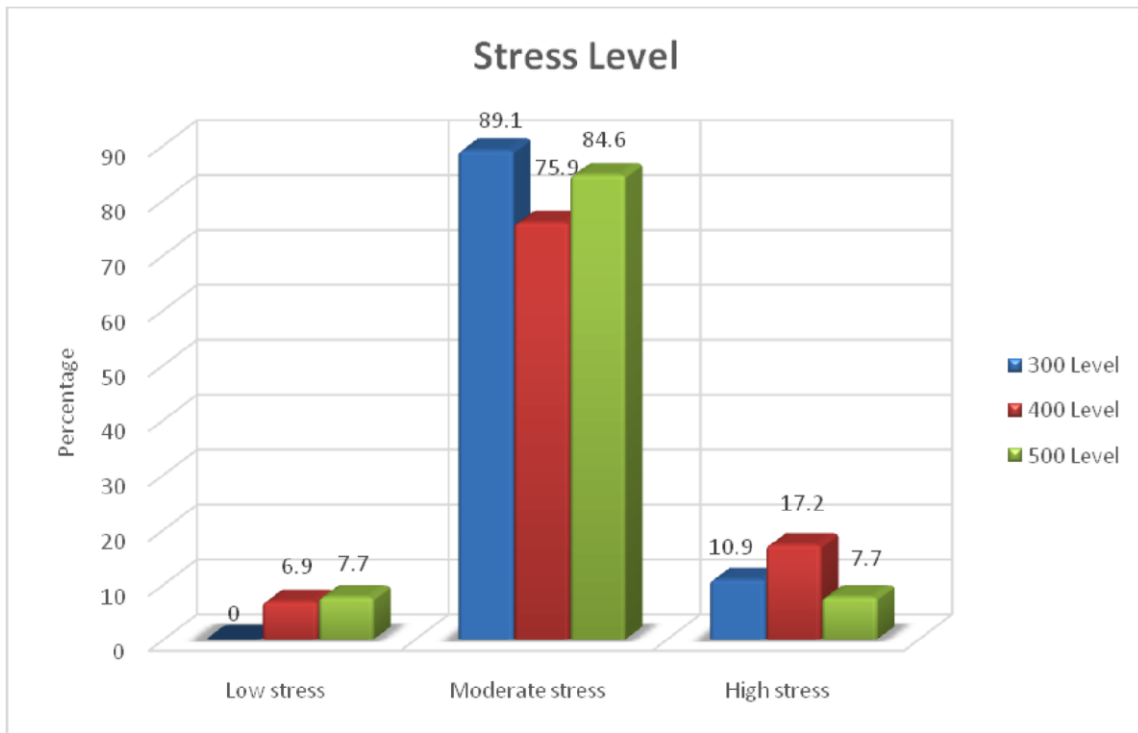
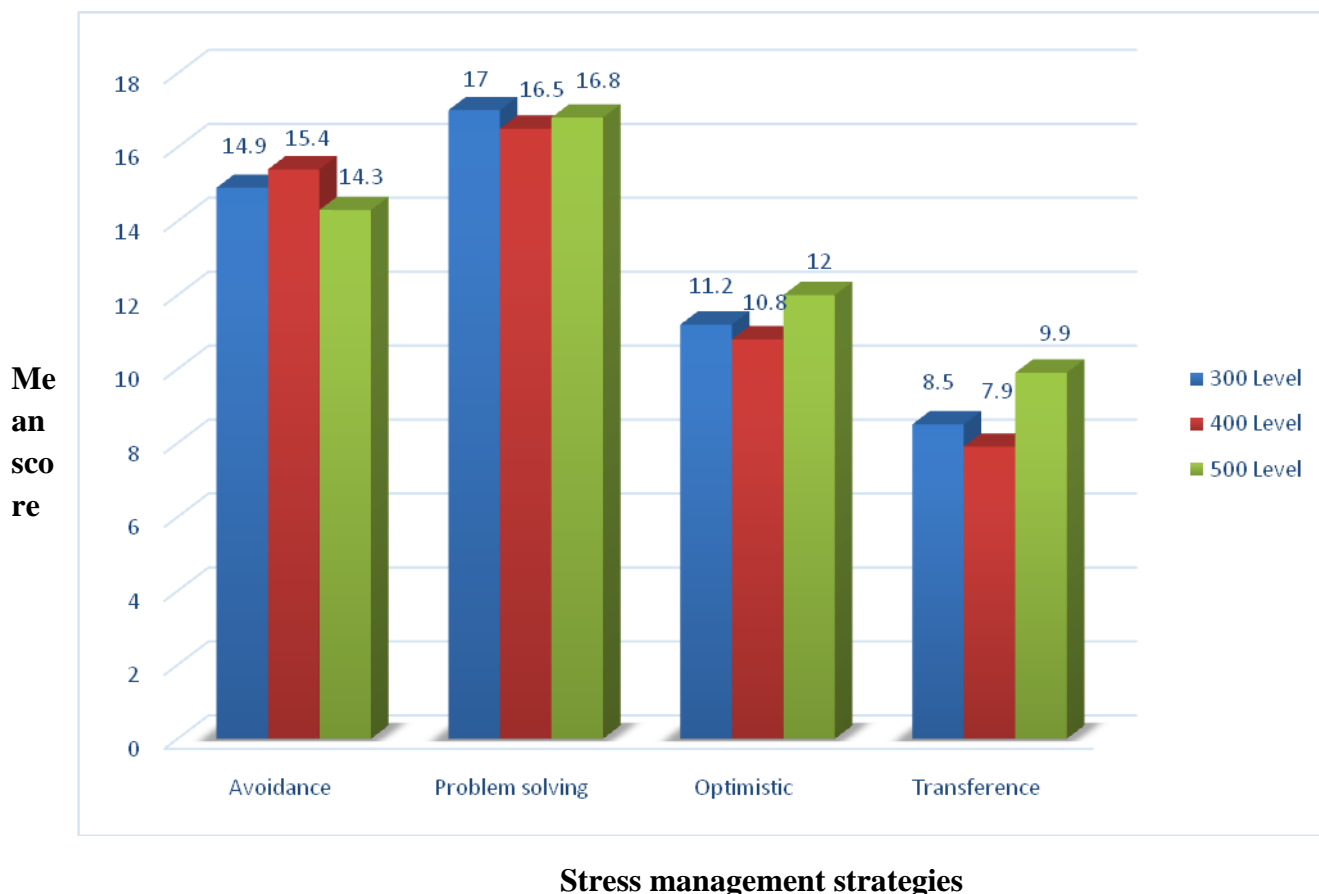


Figure 2: Perceived Level of Stress among the Students

From Figure 2, a greater percentage of 89.1% of the nursing students experienced moderate stress. None of the 300 level students experienced low stress level, while 10.9% experienced high stress. Moderate stress level was recorded among 75.9% and 84.6% of 400 and 500 level students respectively

Research Question 3: What strategies do nursing students use in managing stress in University of Medical Sciences, Ondo State?

Figure 3: Respondents' levels and stress management strategies



In figure 3, the most commonly used stress management strategies across students in the levels were problem solving strategies with a mean score of 17.0, 16.5 and 16.8 for 300, 400 and 500 level respectively. Avoidance strategies were next and then staying optimistic while transference strategies were the least used.

Test of Hypotheses

Research Hypothesis 1: There is no significant association between the level of study of nursing students and their stress level.

Table 2: Chi-square test of perceived level of stress among nursing students

Level of study	Stress level			Test	Value	df	p-value
	Low stress (%)	Moderate Stress (%)	High stress (%)				
300 level	0(0.0)	41(89.1)	5(10.9)	Pearson Chi-Square	5.397a	4	.249
400 level	4(6.9)	44(75.9)	10(17.2)				
500 level	2(7.7)	22(84.6)	2(7.7)				



With the p value greater than 0.05 in Table 2, the null hypothesis is not rejected which reveals that there is no significant relationship between the level of study and the level of stress.

Hypothesis 2: There is no significant relationship between the level of study of nursing students and the stress management strategies used.

Table 3: ANOVA of management strategies among nursing students

Management strategies		Sum of Squares	df	Mean Square	F	Sig. (p ≤ 0.05)
AVOIDANCE	Between Groups	19.255	2	9.627	.370	.692
	Within Groups	3307.738	127	26.045		
	Total	3326.992	129			
PROBLEM_SOLVING	Between Groups	5.577	2	2.788	.124	.884
	Within Groups	2863.046	127	22.544		
	Total	2868.623	129			
OPTIMISTIC	Between Groups	24.510	2	12.255	1.273	.283
	Within Groups	1222.414	127	9.625		
	Total	1246.923	129			
TRANSFERENCE	Between Groups	73.529	2	36.764	1.250	.290
	Within Groups	3734.963	127	29.409		
	Total	3808.492	129			

The p-values are greater than 0.05 in Table 3, as this implies that the null hypothesis is not rejected. Therefore, there is no significant relationship between the students' level of study and the stress management strategies used by nursing students.

Discussion

Results from the study revealed that nursing students were more stressed with academic related factors, followed by psychological factors, clinical factors and least stressed by health related factors. This correlates with the study of Labrague et al. (2016) which revealed that main stressors among students included stress through the caring of patients, assignments and workloads. Similarly, findings from a study among undergraduate health professional students during their clinical education revealed that nursing students showed mild stress and students were highly stressed from patients' care, assignment and workload, lack of knowledge and professional skills, and environment; but were minimally stressed by peers and daily life, teachers and other staff (Tamang et al., 2020). A study conducted among MBA students of Gujarat Technological University also revealed that various too many assignments, tuition, feeling of insecurity due to competition for good grades and good jobs, studies and examinations, and no longer being able to do things they very much liked to do, were responsible for the students' stress (Sethi, 2018). Findings of the study is also in agreement with another study carried out in the University of Applied Management, a specialized distance education institution in the Greater Accra Region of Ghana, identified that major sources or causes of stress among students were excessive assignment, inadequate

time to study, work, financial fears, and family issues; which resulted into anxiety, headache, poor sleep patterns and loss of appetite (Gyambal et al., 2017).

The study also revealed that most of the nursing students were moderately stressed; while some were mildly or highly stressed. Labrague et al. (2016) reported that stress level among the nursing students in their study ranged from moderate to high. A pattern close to the one observed in this study was documented in a study conducted among undergraduate nursing students from Western Rajasthan using Standardized Student Nurses Stress Index, where most of the participants (82.4%) reported moderate level of stress, followed by mild (12.6%) and severe level of stress (5%) (Nebhinani et al., 2020). However, Mahfouz and Alsahli (2016) reported high level of stress (94.1%) and moderate stress (5.9%) among students who were newly practicing in the clinical training in different hospitals at the nursing college in Princess Nourah University (Mahfouz & Alsahli, 2016). Also, Kupcewicz et al. (2020) in a study conducted among nursing students in Poland, Spain and Slovakia reported that students rated their stress intensity over the last month as moderate or high. Apart from the high level (94.1%) reported by Mahfouz and Alsahli, stress level among nursing students across the studies was mostly moderate. Effective nursing training would require ensuring that stress does not become disturbing.

The study further revealed that the stress management strategies commonly used by nursing students were problem solving, followed by avoidance, staying optimistic, and the least used coping strategy was transference. Alsaqri (2017) also reported that problem solving was the most utilized coping strategy. Similarly, a study conducted by Labrague et al. (2016) revealed that the common coping strategies adopted by the students included problem solving strategies such as developing objectives to resolve problems, adopting various strategies to solve problems and finding meaning to stressful events. Dasguptal et al. (2020) also reported that problem solving was the most adopted coping behavior; however, contrary to transference strategies in this study, avoidance strategies were least practiced among the nursing students. Similarly, a study among young males and females from Rajasthan, Punjab, Uttarpradesh and Gujarat regions of India, revealed that transference such as making friends (80.89%), using social network sites (76.00%), and talking with family members (74.67%); while, other strategies included watching movies, playing games and using the internet were used by majority of the students (Bhargava & Trivedi, 2018). The strategies adopted by majority of students in the various studies varied; however, all the strategies were employed by some students in all the studies.

The fact that there was no significant difference between stressors, stress level and management strategies across the levels of students, may be related to the fact that all the students are at the clinical stage of the Bachelor of Nursing Science (BNSc) programme (300-500 level) and are therefore exposed to similar academic, clinical and social environment. It is pertinent to note however, the more use of optimistic and transference strategies by the 500 level students than at the 300 and 400 levels may be suggestive of experience and maturity.

Implications of Findings

Exposure to high and moderate levels of stress and inability of the students to cope effectively with stress could lead to; physiological problems like insomnia and other diseases; or psychological problems like depression, which could lead to suicidal attempt. High stress level also reduces manpower and inefficient delivery of health care services. Therefore, there is need to strengthen counselling services in the University in order to assist nursing students to cope effectively with stress. Positive stress management strategies like problem solving,

staying optimistic and transference should be encouraged among nursing students while the negative strategies like avoidance should be discouraged so as to improve their mental and physical health.

Conclusion

The study concludes that students were moderately stressed and the source was from academic factors followed by psychosocial factors. The coping skills adopted by some of the students were not adequate as avoidance was the second commonly used strategy after problem solving; which could predispose students to failure in exams and ill health, and could affect the quality of nursing care rendered if they eventually scale through the training. Therefore, there is need to enhance students' coping skills to meet with the demands of the training through counselling services.

Recommendations

Based on the findings of this study, the following recommendations were made:

1. Counselling services in the University should be improved to equip students with adequate coping skills needed for their training and education.
2. Positive stress management strategies like problem solving, staying optimistic and transference should be encouraged among nursing students by the counsellors, educators and clinicians; while the negative strategies like avoidance, should be discouraged so as to improve their mental and physical health.
3. Nurse educators should identify students' needs and facilitate learning both in academic and clinical setting and plan interventions to reduce stress in nursing education and training.
4. Recreational activities should be improved and encouraged in the University to enhance students' coping strategies.



References

- Algaralleh, A., Altwalbeh, D., & Alzayyat, A. (2019). Preliminary psychometric properties of the Arabic version of Sheu and colleagues Perceived Stress Scale among Nursing students at Jordanian Universities. *Dove press*. <https://doi.org/10.2147/IJDH.S214456>
- Alsaqri, S. (2017). Stressors and Coping Strategies of the Saudi Nursing Students in the Clinical Training: A Cross-sectional Study. *Education Research International*, <https://doi.org/10.1155/2017/4018470>.
- Bhargava, D., & Trivedi, H. (2018). A Study of Causes of Stress and Stress Management among Youth. *IRA-International Journal of Management & Social Sciences*, 11(3), 108-117.
- Dasgupta, A., Podder, D., Paul, B., Bandyopadhyay, L., Mandal, S., Pal, A., & Mandal, M. (2020). Perceived stress and coping behavior among future nurses. A cross sectional study in West Bengal, India. *Indian Journal of Community Medicine* DOI: 10.4103/ijcm.IJCM_200_19.
- Essel, G., & Owusu, P. (2017). Causes of students' stress, its effects on their academic success, and stress management by students. Case study at Seinäjoki University of Applied Sciences, Finland Thesis
- Gyambrah, M., Sesay, R., & Amponsah, M. (2017). Stress Levels and Management Strategies among Distance Education Students. *International Review of Social Sciences and Humanities*, 12(2), 33-51.
- Hemamalini, R., Ashok, V., & Sasikala, V. (2018). A Study on Stress Management and its Impact among Students. *International Journal of Academic Research in Economics and Management Sciences*, 7(3), 101-110.
- Jitender, K., & Seema, C. (2019). Academic Stress Among Senior Secondary School Students. *International Journal of Advance and Innovative Research*, 6(2), 81.
- Kupcewicz, E., Grochans E., Kaducakova H., Marzena M. & Jozwik M. (2020). Analysis of the Relationship between Stress Intensity and Coping Strategy and the Quality of Life of Nursing Students in Poland, Spain and Slovakia. *International Journal of Environmental Research and Public Health*, 17(12), 4536.
- Labrague, L. J., McEnroe-Petite, D. M., Gloe, D.M., Thomas L., Papathanasiou, L.V. & Tsaras K. (2016). A literature review on stress and coping strategies in nursing students. *Journal of mental health*, <http://dx.doi.org/10.1080/09638237.2016.1244721>
- Mahfouz, R. & Alsahli H. (2016). Perceived Stress and Coping Strategies among Newly Nurse Students in Clinical Practice. *Journal of Education and Practice*, 7(3) 122.
- Mason, H. (2017). Stress-Management Strategies among First-Year Students at a South African University: A Qualitative Study. *Journal of Student Affairs in Africa*, 5(2),
- Nebhinani M., Kumar, A., Parihar A. & Rani R. (2020). Stress and Coping Strategies among Undergraduate Nursing Students: A Descriptive Assessment from Western Rajasthan. *Indian Journal of Community Medicine*, 45 (2) 172-175,
- Opoku-Acheampong, A., Kretchy, A., Acheampong, F., Barima, A., Ashong, S., Tamakloe, B., & Alexander, K. (2017). Perceived stress and quality of life of pharmacy students in University of Ghana. *BMC Research Notes*. doi:10.1186/s13104-017-2439-6.
- Sethi, R. (2018). A Study Of Placement Stress Of Students Pursuing Professional Courses. *International Journal of Research and Analytical Reviews*, 5(4) 2349-5138



- Sheu, S., Lin, H., & Hwang, S.(2002) . Perceived stress and physio-psycho-social status of nursing students during their initial period of clinical practice: the effect of coping behaviours. *International Journal of Nursing Studies*, 39(2), 165-175
- Tamang, N., Rai, S., Ni, P., & Mao, J. (2020). Perceived Level of stress, stressors and coping strategies among Undergraduate Health Professional Students during their Clinical Education: A comparative Study. *Acta Scientific paediatrics* 3(8), 62-73

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