

WORK-RELATED STRESS AND COPING STRATEGIES AMONG NURSING STUDENTS IN NORTHERN GHANA

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Abstract

The study investigated the levels of stress and coping strategies among nursing students in Nalerigu College of Nursing and Midwifery in the North East Region. The objectives of the study were to identify the stress level of nursing students of Nalerigu College of Nursing and Midwifery and the coping strategies of nursing students. Descriptive survey design was employed. Perceived Stress Scale and Afro-cultural Coping Inventory were adapted and used to assess stress and coping. Their reliability coefficients were 0.78 and 0.80 respectively. A sample size of 113 was selected from second year students using simple random sampling. Data was analysed using Chi-Square Test and Multivariate Test (MANOVA). Findings indicated that second year nursing students experienced high levels of stress which was statistically significant. It also emerged from the findings that the students' stress levels did not differ in terms of the coping strategies they adopted. It was recommended that college authorities as part of the orientation of new students, should emphasise on the stressors of college life and the need to employ pragmatic coping strategies. It was further recommended that management should provide opportunities for peer counselling, student support groups, and adequate faculty advising to enhance active coping among nursing students. Implications of the study have been discussed, conclusions have been drawn and suggestions made.

Keywords: Work-related stress, coping strategies, nursing students, midwifery

Introduction

Globally, workplace stress impacts employees' well-being, productivity, and performance negatively (Panigrahi, 2017). Research reported 80% of workers, including nursing students, feel stressed, with 42% requesting help from colleagues to manage stress (Drury, 2015; Galbraith & Brown, 2014). A plethora of studies have found that the amount and sources of stress have increased among nursing students in the Western world in recent years (da Silva et al., 2014; Drury, 2015; Galbraith & Brown, 2014). According to Demir et al. (2014), stress is a significant psychological element that impacts students' academic performance and well-being. Wolf et al. (2015) found that both academic and clinical components of nursing programmes contribute to students' high stress levels. This is because most nursing students begin their training with little knowledge of the duties ahead, complicating their adjustment processes (Kumar, 2011; Nesrin et al., 2016). Nursing students face stress from academic obligations, physical surroundings and colleagues, resulting from clinical, academic and personal sources, hindering learning and performance (Shultz, 2011; Solanky et al., 2012). Hamaideh et al. (2015) also affirmed that nursing students experience high stress levels during their clinical training.

Nursing school demands for practical components, such as dusting, wound dressing, medicine and vital signs, can cause stress and make students more susceptible to stress. Nursing students in Saudi

Arabia, Hong Kong, and the United States experience higher levels of stress during the academic year, according to Al-Barrak et al. (2011). A study revealed high levels of anxiety and depression among nursing students, highlighting the pressure they face and the silent killer effects of stress (American Psychological Association, 2013). Stress causes vary among individuals, including work, home and social pressures (National Institute of Mental Health, 2023). Nursing students face academic pressure, success obligations, uncertain futures and system integration difficulties (Al-Sowygh, 2013; Sharma & Kaur, 2011). Hernman et al. (2009) found that South African nursing students experience high stress levels year-round.

Moreover, a study in Egypt on stress among Mansoura baccalaureate nursing students found high levels of stress and depression at 40.2%, 46.6%, and 27.9%, respectively, and on average, each student reported a mean of 4.6 stressors, with academic pressures being the most frequent stressors (Amr et al., 2011). Robotham (2008) study on nursing students in five countries found that academic elements were more stressful in Brunei and Malta, while clinical features were less so in the Czech Republic, Wales and Albania, with no significant differences in stress levels. Stress is linked to absenteeism, lack of commitment, concentration problems, ill-health and poor performance in nursing students, with unhealthy coping strategies often used instead of seeking professional support (Crompton, 2011; Kumar, 2011). Relatedly, in a study to investigate the stress and coping mechanisms of nursing students during clinical practice in Ghana, it was found that the level of stress decreased with increasing age and year of study, and mature students experienced a lower level of stress compared to their generic counterparts (Bam et al., 2014). The study further reported that receiving moral support from family, developing cordial relationships with nurses and praying were among the common coping mechanisms identified. Tawiah et al. (2015) reported in their study that there is no difference between male and female student nurses with regards to stress coping strategies at the Sunyani Nurses' Training College.

Despite nursing being a noble profession, students worldwide face significant stress during their education due to academic and practical demands, which can impact their physical, psychological, and social health thereby causing an increase in their risk of psychological distress when ineffective coping is not maintained (Reeve et al., 2013; Shaban et al., 2012). Over two-thirds of college students experience stress, with high stress levels impacting academic performance negatively (Egan & Moreno, 2012). Stress disorders are a major concern for tertiary education and nursing students, with extensive investigations highlighting the negative impact of academic stress (Gibbons, 2010; Kumar, 2011; Othman et al., 2013).

In Ghana, nursing students experience moderate stress, influenced by study year and age, due to differences between theory and clinical instruction and feeling ignored (Abasimi et al., 2015). Relatedly, Sossah et al. (2015) study found that stress management strategies adopted by junior and senior nursing students include emotional support, spiritual involvement and physical or school activities. Anecdotal evidence from Nalerigu College of Nursing and Midwifery suggests that stress affects nursing students negatively, hindering growth and development. Stress causes feelings of indifference, helplessness, and physiological discomfort, leading to harmful coping mechanisms like denial, avoidance, internalizing feelings, and alcohol consumption. These often lead to poor academic performance, panic attacks, inability to cope, fear of academic failure, headaches, increased blood pressure, hostility, unhappiness, loneliness, sleep disorders, depression, and general anxiety disorders.

Nursing college students face challenges like inadequate infrastructure and high enrolment, which affect their lives and campus stays. Since its inception, many have been admitted to psychiatric

hospitals for psychiatric-related conditions. Many college students stop courses or engage in social vices due to sudden changes, unfamiliar environments, financial demands, family turmoil, and social obligations, which can lead to stress if not managed well. Nursing students often use psychoactive substances like alcohol and tobacco to cope with stress, with 93% admitting to having consumed alcohol in the last month (Kim & Park, 2015; Soares & Felipe, 2013). In spite of yearly orientation programmes for newly admitted student nurses in Ghana, stress remains prevalent among them, leading some to resort to unhealthy coping strategies (Abasimi et al., 2015). In line with this, Forné-vives et al. (2016) reported that there is the need for further studies on students' stress level and coping due to continuous changes in stress and coping experienced by nursing students during their study period, the justification for this study.

Research Questions

1. What is the stress level of nursing students of Nalerigu College of Nursing and Midwifery?
2. What are the coping strategies of nursing students of Nalerigu College of Nursing and Midwifery?

Conceptual Framework

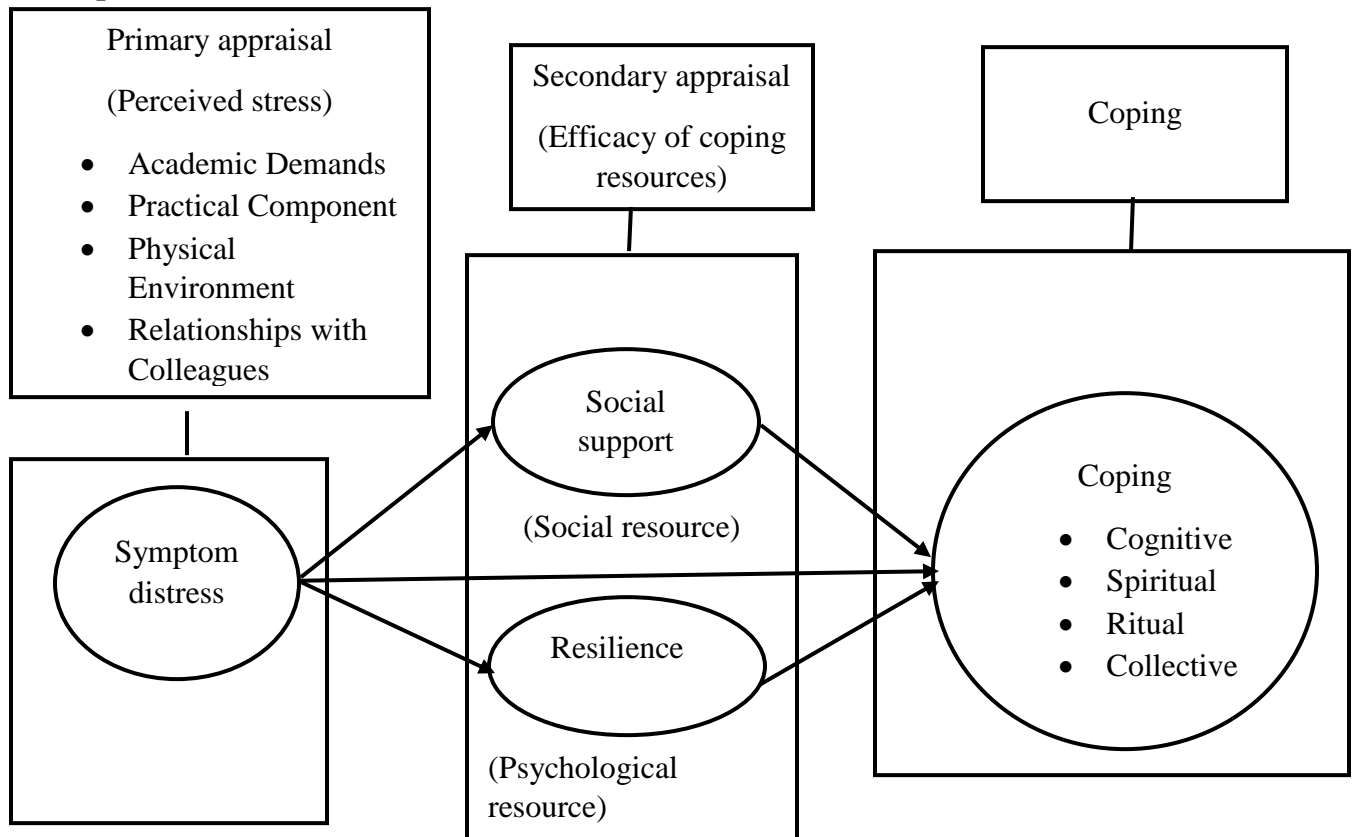


Figure 1: Transactional Theory of Stress and Coping Model adapted from Lazarus and Folkman (1984)

From the figure above, the commonest stressors during the nursing practice include academic demands, practical component of their course, physical environment and relationship with

colleagues. These stressors if not well managed will trigger stress and the individual will have to use coping strategies to be able to deal with it. When faced with stressful situations, these students adopt cognitive coping which include mindfulness and reappraisal training; spiritual coping which involves praying, fasting and positive affirmation; ritual coping involving taking a deep breath, directing your intention and creating the right mindset. Finally, some also adopt the collective coping which include promoting safety, promoting connectedness and instilling hope.

Theoretical Review

This study is underpinned by transactional theory of stress and coping developed by Lazarus and Folkman (1984). This theory posits that acute and chronic stress outcomes are contingent upon individual and environmental factors. Relationships between stressor exposure and stress outcome are mediated by threatening, harmful or challenging those factors are deemed by the individual (primary appraising) and the degree to which the individual feels capable of dealing with threatening and harmful situations (secondary appraising) which includes coping using self-efficacy. These appraisals are turn mediated by the coping strategies the individual employs to adapt to other than neutral appraisals.

METHODOLOGY

Research Design

In this study, the researchers employed the descriptive survey design to identify students' perceptions of the causes of work-related stress among nursing students of Nalerigu College of nursing and midwifery. Also, this design ascertains prevailing conditions of facts in a group under study that gives quantitative descriptions of the general characteristics of the group as results (Calderon, 2006). It enables researchers to obtain reliable information concerning current status of the situation (Polit & Beck, 2014). This design was chosen because it provided detailed information of the factors that contributed to work-related stress among nursing students of Nalerigu College of nursing and midwifery and the coping strategies adopted in dealing with it.

Population

The population of the second year registered general nursing diploma students of Nalergu College of Nursing and Midwifery for 2021/2022 academic year was approximately 159. The second-year students were deemed appropriate for the study because having gone half way into the course of study, it was assumed that they had acquired enough experience to be able to give detailed accounts of moments of stressful situations they encountered and how they were able to cope with those stressful situations.

Sample Size and Sampling Procedures

Extreme case sampling method was used to select the Nalerigu College of Nursing and Midwifery because anecdotal evidence from the college suggest that nursing students are continuously been exposed to a lot of stressors for five continuous years. The study used simple random sampling method to select 113 students for the study. Miller and Brewer's (2003) formula was used to calculate the sample size since the target population is known. By the formula, $N = 159$ and $\alpha = 0.05$.

Therefore;
$$n = \frac{N}{1+N(\alpha)^2}$$

Where N is the sample frame, n is the sample size and α is the margin of error (fixed at 5%). The sample size n , becomes;

$$n = \frac{159}{1+159(0.05)^2}$$
$$n = \frac{159}{1.3975}$$
$$n = 113$$

In all, 113 participants were sampled to participate in the study.

Research Instruments

In this study, two instruments namely; Perceived Stress Scale (PSS) and Afrocultural Coping System Inventory (ACSI) were adapted for data collection.

Perceived Stress Scale (PSS)

PSS is a 14-items scale that was developed by Cohen et al. (1983) which is measured on a 5-point Likert scale. It assesses one's perceived level of stress especially on the nursing college system. The items are arranged on a 5-point Likert scale: "0 = Never", "1 = Almost Never", "2 = Sometimes", "3 = Fairly often", "4 = Very often". It yielded a Cronbach's alpha value of .78. The instruments were pilot tested on 25 students in the Winneba College of Nursing and Midwifery in the Central Region. This college was selected because it has similar characteristics with the actual study sample. Its Cronbach's alpha value was .82. In terms of validity, the modified version of the questionnaire was given to research experts who read, made corrections and offered suggestions and recommendations which were duly incorporated into the final version of the instrument before the actual administration.

Afrocultural Coping System Inventory (ACSI)

ACSI is a 30-item instrument developed by Utsey et al. (2000) which is scored on a 4-point Likert scale. Responses are made on a 4-point response scale: "0 = Does not apply or Did not use", "1= Used a little", "2= Used a lot", "3 = Used a great deal". These coping subscales include Cognitive/Emotional Debriefing (11 items), Spiritual Centered Coping (8 items), Collective Coping (8 items), and Ritual-Centered Coping (3 items). The instruments were pilot tested on 25 students in the Winneba College of Nursing and Midwifery in the Central Region. This college was selected because it has similar characteristics with the actual study sample. Its Cronbach's alpha value was .78. In order to ensure validity of the instrument, the modified version of it was sent to research experts who read, made corrections and offered suggestions as well as recommendations which were duly incorporated into the final version of the instrument before the actual administration.

Data Collection Procedure

After permission was sought from the gatekeepers of the college, the questionnaires were administered personally to the 113 participants by one of the researchers who comes from the Northern Region. Participants of the study were assured that the findings of the study would be used strictly for academic purposes and the information provided by them would be treated confidentially. The return rate of the questionnaires administered was 100%.

Data Analysis

Research questions 1 and 2 were analysed using Chi-Square test and Multivariate Analysis of Variance (MANOVA) test. Table 1 below presents the gender distribution of the respondents.

Table 1: Sex Distribution of Respondents

Sex	Frequency	Percentage
Males	65	57.5
Females	48	42.5
Total	113	100

Field Data (2023)

From Table 1 above, the male students were 65 representing 57.5% and consisted majority of the study respondents while the female students were 48 which represented 42.5 % of the sample.

Ethical Consideration of the Study

In adherence to the principle of informed consent in social science research, consent was sought from the gatekeepers of Nelerigu College of Nursing and Midwifery before the administration of the questionnaires. The purpose of the study was clearly explained and what was required of the respondents and the colleges' authorities. To ensure confidentiality, the respondents were assured that their identities would be concealed and they would remain anonymous. In order to achieve the stated purpose of the study, nursing students were given numbers that they wrote on their questionnaire sheets instead of their real names, which made it difficult for people to identify the respondents. Individual respondents were assured of voluntary withdrawal from the study at any point in time as the study progresses.

RESULTS

Research Question 1: What is the stress level of nursing students of Nalerigu College of Nursing and Midwifery?

Research question one sought to find out the stress level of second year nursing students. Chi-Square test was used for the data analyses as shown in Table 2 below.

Table 2. Summary of Chi Square indicating levels of stress of students

Stress			df	χ^2	P
Mild	Moderate	High			
2	3	108	2	197.01	≤ .001

Significant level is at $p < 0.05$

Field Data (2023)

Chi-Square test results indicates that when 113 second year students stress levels were assessed, 108 of them were found to have high levels of stress which was statistically significant, (χ^2 (2), n= 197.01; $p \leq .001$). This therefore calls for immediate attention to continuously provide psychoeducation to enable students to be able to manage with stress associated with their training and be able to concentrate on their studies. In this study, second year nursing students at the college of nursing overall mean score for stress was at a high level. This suggests that majority of the second-year nursing students reported high levels of stress with 108 (95.6%), moderate stress 3 (2.7%) and mild 2 (1.8%) respectively.

Research Question 2: What are the coping strategies of nursing students of Nalerigu College of Nursing and Midwifery?

This research question sought to find out the coping strategies of nursing students adopt in dealing with stress-related to the nursing work while on training. Descriptive statistics such as means and a Multivariate test (MANOVA) were used for the data analyses. The results are presented in Table 3 and Table 4 respectively.

Table 3. Summary of Descriptive Statistics of Stress Level in Relation to Coping Strategies

Dimension	Stress Level	N	M	SD
Cognitive	Mild	2	21.50	12.02
	Moderate	3	26.00	5.57
	High	108	26.54	31.05
	Total	113	26.43	30.39
Spiritual	Mild	2	22.50	17.68
	Moderate	3	28.67	5.51
	High	108	23.12	5.15
	Total	113	23.26	5.43
Ritual	Mild	2	6.50	2.12
	Moderate	3	8.67	5.06
	High	108	5.99	2.39
	Total	113	6.07	2.52
Collective	Mild	2	23.50	9.19
	Moderate	3	24.67	7.64
	High	108	23.49	5.14
	Total	113	23.52	5.20

Field Data (2023)

Table 3 indicates the means and standard deviation scores of the levels of stress in terms of the coping strategies that College of Nursing and Midwifery students employ to deal with stress. An average ($n=113$; $M = 26.43$; $SD = 30.39$) employed cognitive coping strategy ($n=113$; $M = 23.26$; $SD = 5.43$) employed the spiritual dimension coping strategy. On ritual dimension coping strategy, an average ($n = 113$; $M = 6.10$; $SD = 2.42$) used ritual dimension of coping, while ($n = 113$; $M = 23.52$; $SD = 5.20$) used the collective dimension coping strategy. Therefore, to identify any coping differences in the stress categories, as suggested in the means, a MANOVA test was further conducted and the result is presented in Table 4 below.

Table 4. Summary of MANOVA on stress levels and coping strategies

Index for the Effect of Stress Category	Value of Index	$F(8)$	Sig
Pillai's Trace	.054	.755	.643
Wilk's Lambda	.946	.758	.640
Hotelling's Trace	.057	.760	.638
Roy's Largest Root	.056	1.509	.205

Significant level is at $p < 0.05$

Field Data (2023)

The multivariate test indicated that there was no significant multivariate effect ($8, 214$) = 0.758 on stress category using the Wilk's $\lambda = 0.946$; $p > 0.05$. This therefore indicates that the students' stress levels did not differ in terms of the coping strategies they adopted.

Discussion

The findings revealed that second year nursing students experienced high levels of stress due to inadequate infrastructure, and long walking distances, possibly due to the combination of academic and practical components. The findings are consistent with previous studies that found that nursing students reported high stress levels (Amr et al., 2011; Reeve et al., 2013). This corroborates the findings of Reeve et al. (2013), who posited that nursing students stress emanates from educational preparation as well as academic and clinical components (Wolf et al., 2015). Primary stressors for nursing students include academic failure, clinical ineffectiveness, faculty relationships, and time management issues (Wolf et al., 2015). High stress levels were reported among baccalaureate Mansoura nursing students, with academic pressures being the most frequent (Al-Barrak et al., 2011; Amr et al., 2011). Hamaideh et al. (2015) and Othman et al. (2013) reported that Malaysian health science students and nursing students experience high stress levels due to academic, clinical, and personal sources, primarily during clinical training.

In relation to coping strategies adopted by nursing students in dealing with stress, the study found that second year nursing students, both male and female, used similar coping strategies to manage high levels of stress experience during their training. This is consistent with Tawiah et al. (2015), whose findings found no difference in stress coping strategies adopted by nursing students. This finding is similar to the current findings regarding indifference sex of respondents in their coping strategies. This study confirms Abasimi et al. (2015) findings that student nurses in Ghana use cognitive, behavioural, spiritual, social, and avoidance coping strategies. This is consistent with

Sossah et al. (2015), who also found in their study that students in nursing colleges are somehow resilient and that emotional and spiritual support, along with getting more involved in physical and school activities, are the main strategies used to deal with stress.

Conclusion and Recommendations

The study found that second year nursing students at the College of Nursing and Midwifery experience high stress levels, with a small fraction reporting mild stress. Furthermore, the study found that nursing students did not employ any specific coping strategies to cope with the high levels of stress experience during their training. It was therefore recommended that the college authorities, as part of the orientation for new students, emphasize the stressors of college life and the need to employ pragmatic coping strategies such as cognitive (i.e., identifying negatives and modifying them, self-monitoring, setting and managing goals), spiritual (i.e., praying, fasting, trusting in God), ritual (i.e., deep appreciation, being present, intention), and finally, collective (i.e., information sharing, communal efforts, communal management of emotions). It was further recommended that college management should provide opportunities for peer counselling, student support groups, and adequate faculty advising to enhance active coping among nursing students.

Counselling Implications

College management in collaboration with college counsellors should intensify the orientation services given to students upon gaining admission into nursing colleges. Furthermore, counsellors should organise psychoeducation on the practical component of nursing education on a periodic basis to give enlightenment to students on what is required of them during their training. Since, individual differences exist among the students, these differences should be considered in designing counselling intervention strategies for dealing with campus stress for nursing students. Besides, there should be mentoring programmes for second year nursing students to increase their internal locus of control and active coping with stress.

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