

Sources of Stress among Nursing Students in South-East Nigeria

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Abstract

The study examined the sources of stress among nursing students in the South-East Nigeria. Two research questions and two null hypotheses guided the study. The study adopted a descriptive, cross-sectional survey design. From a population of 1,855 respondents, 300 respondents were drawn using simple random sampling technique. Using a standardised questionnaire, the Perceived Stress Scale Questionnaire (PSSQ) was adopted. Mean and standard deviation were used to answer the research questions while t-test statistic was used to analyze the null hypotheses at 0.05 level of probability. Results of the study indicated that year of study has significant influence on nursing students' sources of stress while gender does not have significant influence on sources of stress. Findings of the study imply that stress has far reaching influence on nursing education and the general public with respect to shortage of manpower and inefficient delivery of health care services due, especially at primary and secondary health systems in South-East Nigeria. Recommendations were made which include provide students with effective coping strategies to deal with the inevitable sources of stress present during nurse education and training.

Keywords: Stress, Sources, Nursing Students, Nigeria

INTRODUCTION

Work and academic stress is recognised world-wide as a major challenge to workers' and students' health and the healthiness of their organizations (International Labour Organisation (ILO, 2016). People who are stressed are also more likely to be unhealthy, poorly motivated, less productive and less safe at school and work. Their organizations are less likely to be successful in a competitive market.

The common description of stress from various school of thoughts is that stress is a situation where environmental demands exceed the capacity for effective response by the individual and can potentially have physical and psychological consequences (Rout & Rout, 1993; Aesha, Saad Abdullah, Assaf & Khalid, 2017). Similarly, stress refers to a dynamic interaction between the individual and the environment (Kohler et al. 2006; Asani, Farouk & Gambo (2017). In this interaction, demands, limitations and opportunities related to work may be perceived as threatening to surpass the individual's resources and skills. Drawn from the above definitions, current study adopts definition of stress offered by Sravani, Manisha and Rupali (2016). Sravani,

Manisha and Rupali states that stress is a mental, physical, emotional, and psychological strain resulting in an undue, exaggerated and detrimental body response. This definition is preferred because it presents stress in three perspectives: as response-based (resulting from an individual's reactions to stressors); stimulus-based (outcomes of stressors); or as interactive (resulting from interplay between stressors and human's reactions). Interaction between nursing students and lecturers, as well as their responses to interaction, events and demands exposed them to stressors from different sources. However, Mofida, Mona, Elham, and Abdelkader (2011) and Pallavi, Biju and Vineetha (2017) argued that students may respond differently depending on many conditions including their ability to cope and perception of the stressor(s). Indeed, Shaban, Khater, Akho-Zaheya (2012) found that many undergraduate nursing students' showed lack of coping behaviors in all the identified stress sources during their initial period of clinical training: a Jordanian perspective.

The impact of stress on health can vary according to individual response; however, high stress levels can contribute to developing health-related impairments, including mental and behavioural disorders such as exhaustion, burnout, anxiety and depression, as well as other physical impairments such as cardio-vascular disease and musculoskeletal disorders. Growing attention is also being paid to the impact of emerging coping behaviours such as alcohol and drug abuse, smoking, unhealthy diet, poor sleep, as well as to their relation with an increasing rate of workplace accidents and non-communicable diseases (Behere, Yadav & Behere, 2011; Atindanbila & Bayem, 2011).

Nursing students face stress during their training in school or clinical practice. An important interest in research on nursing students is their sources of stress, or stressors, which interact and contribute to the onset of stress in nursing institutions and clinical settings. In the 21s century however, research on medical students, nursing students and health workers has clearly evolved from a focus on the prevention of physical risks to psychosocial risks. In this context, emergent psychosocial risks such as academic and clinical related stress is of particular interest, hence the urgency for this study.

Academic stress, among college students in particular, has been a topic of interest for many years. Indeed, there is evidence that medical students face unique academic challenges that render them more vulnerable to stress and anxiety than students of other disciplines (Chan, & Fong, 2009; Samira et al. 2015). College students, especially freshmen, are known to be particularly prone to stress due to

the transitional nature of college life, where college life compels students to acquire entirely new social skills and also to take responsibility for their own personal needs (Shield, 2001).

Stress level and sources of stress among nursing students were studied in Jordan (Wejdan, Laila & Insaf, 2014), Anambra State of Nigeria (Nwambo, Clementine, Agbapuoonu & Nwankwo, 2016) and Enugu state (Ada, Amara & Chima, 2017). Their separate result found increasing number of sources of stress among health workers, especially nurses, with negative consequences on their health than among workers in other professions. Put differently, students are predisposed to stressors from a wide range of sources in their academic and clinical practice. In their study, as also marked by Prymachuk and Richards (2007), three identified sources of stress among nursing students were: academic source include continuous assessments and examinations, the workload, and fear of failure; clinical source incorporate initial clinical experience, fear of committing errors, death and dying of patients, and students' relations with other health care providers; and personal/social sources incorporate lack of free time and finances. This suggest that stressors for student nurses included adjusting to a rigorous program of theory, long hours of study and pressures of student clinical practice requiring emotional and personal maturity.

Gender of a person may be a factor in his or her stress level. Mofida, Mona and Elham (2011) study identified sources of stress as perceived by female undergraduate nursing students at College of Nursing, King Saud University. The major sources of stress were the academic followed by intrapersonal, then environmental and the last was interpersonal. Thus, nursing education either in the training college, university or clinical practice is stressful for female. The result may be different when male students and level of study are examined.

Further research on gender related issue showed similar result. In assessing the prevalence and magnitude of stress among Saudi undergraduate medical students, Aesha, Saad Abdullah, Assaf, Khalid (2017) study found that female medical students have significantly more stress than their male counterparts. Similarly, Samira, Ali, Alaa, Sajida, Saeed and Nadia (2015) explored the perceived stress, stressors, and coping strategies employed by medical students studying in a problem-based learning curriculum. Perceived stress scores were statistically significantly high for specific stressors of: studying in general, worrying about future, interpersonal conflict, and having low self-esteem. Female students were found to be more stressed than males but female students employed more coping strategies as well. This imply that stress is very common among medical students. Other researchers who found similar results include Kirkland, (1998), Edward, Samuel, Michael and Xiaosong (2015), and Aesha, Saad Abdullah, Assaf and Khalid (2017).

Contrary to these findings that gender predisposes individuals to perceive situations and events as being stressful, Asani, Farouk and Gambo (2017) study determined the prevalence of stress among undergraduate clinical students of Bayero University Kano Medical School found no significant difference between gender types on sources of stress.

More so, research has shown that when nursing students are evaluated within the professional socialization theory, they are more to be affected by specific sources of stress more negatively. The effect may be dependent on year of study as well. For example, Hatis and Besti (2013) study determined the stress sources of second year nursing students. As a result of the interviews, themes as sources of stress regarding the clinical practice were identified. The themes under the theoretical training category were stress sources experienced with trainer, student, and other students; under the social life category were accommodation, school environment life and family attitude; and lastly, under the personal life are under self-confidence, not being able to control the emotions, time management, and opinion mistakes.

The above result imply that the stress sources of students are both internal and external but it may likely be influenced by students' year of study. Basically, the first and second year students are assumed inexperienced about nursing practice since most of the candidates are freshmen from secondary schools. Meanwhile, third and fourth year or those who have gone for practical all may also be considered experienced. Perceptions of these two categories of nursing students about their sources of stress need closer examination.

The increasing need to achieve health objectives, principles and policy direction has led to establishment of more health care across South-South Nigeria. A number of health institutions to provide adequate manpower in the health sector have also been established. They include General Nursing (SRN), Community Health Nursing (CHN) and Midwifery programmes. This development led to increase in enrolment of students into nursing programmes. Transition of students from secondary to nursing school environment could cause a psychological, academic and social shock to nursing students, since this educational system has huge differences: the student will face new methods of teaching, new academic requirements, new type of relations between students and faculties and even new relations among students themselves. In South-East Nigeria, many schools are unisex so students co-education will have new types of relations with the opposite sex. Due to these changes, students can potentially experience different types of stress that can affect their mental and social health and their academic achievement. They must be able to adapt to the numerous challenges of college life and maintain high level of academic standards so that they will not be withdrawn. These demands are potentially stressful.

Considering these insights, it is worrisome that qualitative and quantitative research studies on sources of stress among nursing students, especially with regards to gender and level of study are lacking. The implication of this is that administrators of nursing institutions, planners and policy makers lack empirical evidence to guide their policy direction for management of students' health that makes reference to academic and clinical practice stress. It is therefore, important to examine the sources of stress among this cohort. The present study sought to examine sources of stress among nursing students in accredited nursing institutions in the South-East by the Nursing and Midwifery Council of Nigeria (2017).

RESEARCH QUESTIONS

1. What is the mean score difference in the sources of stress among nursing students in South-East Nigeria with regards to year of study?
2. What is the mean score difference in the sources of stress among nursing students in South-East Nigeria with regards to gender variable?

Hypotheses

The following hypotheses were tested at 0.05 level of significance.

HO₁ There is no significant mean score difference in the sources of stress among nursing students in South-East Nigeria with regards to year of study; and

HO₂ There is no significant mean score difference in the sources of stress among nursing students in South-East Nigeria with regards to gender variable.

METHODOLOGY

A descriptive survey design was used in the study to examine sources of stress among nursing students in South-East Nigeria. South-South states include Abia, Anambra, Ebonyi, Enugu and Imo states with 44 approved nursing institutions. These institutions are approved to admit a total of 1,855 students (Nursing & Midwifery Council of Nigeria, 2017). Using simple sampling technique, a sample of 300 respondents was drawn from Department of Nursing, University of Nigeria, Enugu Campus, School of Post Basic Midwifery, Afikpo, School of Basic Midwifery, Umuahia, FETHA Provisional, School of Nursing University of Nigeria Teaching Hospital, Enugu, Nnandi Azikiwe School of Post Basic Midwifery, Nnewi, Enugu State University of Technology Teaching Hospital, School of Psychiatric Nursing, Aba, Enugu State University of Science Technology Teaching Hospital, Parklane, and School of Psychiatric Nursing, Aba.

Instrument

The study utilized a standardised questionnaire referred as Perceived Stress Scale (PSS). The Perceived Stress Scale (PSS) was developed by Sheu et al. (1997) in order to examine nursing students' stress levels and types of stressors. It consists of 29 items of 5point likert scale. The five possible responses range from "never" to "Very Frequent" and are scored from 0-5. Items in the scale grouped into six factors related to the sources of stress. The factors include stress from taking care of patients (8 items), stress from teachers and nursing staff (6 items), stress from assignments and workload (5 items), stress from peers and daily life (4 items), stress from lack of professional knowledge and skills (3 items), and stress from the clinical environment (3 items). The total score range from 0-116. Reliability of the instrument revealed Cronbach's alpha of .86-.89 (Chan et al., 2009; Sheu et al., 2002); and the content validity index was .94 (Chan et al.,

2009). In the current study, Cronbach's alpha is (.90). The researcher and two assistants approached nursing students during waiting moments in lecture rooms and clinical practice, so that the data collected could prove to be more representative for the perceived stress source. Only students who had answered the questionnaires entirely were included in the definitive sample. Mean and Standard Deviation were used to answer the research questions while t-test was used to test the hypotheses at 0.05 level of significance

DATA ANALYSIS RESULTS

Research Question One

What is the mean score difference in the sources of stress among nursing students in South-East Nigeria with regards to year of study?

Table 1: Mean Scores and Standard Deviations of Respondents on Sources of Stress with regards to Year of Study

Source of Stress	Yr of Study	N	Mean	Std. Deviation
Taking care of patients	3rd and 4th year	133	4.1767	.21658
	1st and 2nd year	161	3.7834	.25684
Assignment and workload	3rd and 4th year	133	4.1714	.38070
	1st and 2nd year	161	4.1702	.35229
Lack of Professional Knowledge	3rd and 4th year	133	3.1980	.53817
	1st and 2nd year	161	4.0663	.37790
The environment	3rd and 4th year	133	2.5414	.52641
	1st and 2nd year	161	4.0166	.40961
Peers and Daily lives	3rd and 4th year	133	3.9248	.44593
	1st and 2nd year	161	4.0590	.39083
Teachers and Nursing staff	3rd and 4th year	133	2.7882	.43622
	1st and 2nd year	161	3.0404	.30944
Overall Mean	3rd and 4th year	133	3.5834	.17634
	1st and 2nd year	161	3.7877	.11691

The results of the study as presented in Table 1 show the mean and standard deviation of respondents from 1st and 2nd year, and 3rd and 4th year in nursing schools sampled for the study. Apart from variability in 3rd and 4th year students on Lack of Professional Knowledge with a mean of 2.5 (SD .5264) and 3rd and 4th year students on peers and daily lives with a mean of 2.9 (SD .43622), the sampled nursing students experience stress from all the sources examined having achieved a mean criterion rating level of at least 3.00.

Research Question Two: What is the mean score difference in the sources of stress among nursing students in South-East Nigeria with regards to gender variable?

Table 2: Mean Scores and Standard Deviations of Respondents on Sources of Stress with regards to Gender

Sources of Stress	Gender	N	Mean	Std. Deviation
Taking care of patients	Male	114	3.9331	.30034
	Female	180	3.9792	.31421
Assignment and workload	Male	114	4.1544	.37254
	Female	180	4.1811	.36044
Professional Knowledge and Skills	Male	114	3.7573	.56840
	Female	180	3.6204	.66083
The environment	Male	114	3.5058	.87602
	Female	180	3.2500	.85430
Peers and Daily lives	Male	114	4.0219	.37417
	Female	180	3.9833	.44893
Teachers and Nursing staff	Male	114	2.9547	.39496
	Female	180	2.9083	.39048
Overall Mean	Male	114	3.7187	.17058
	Female	180	3.6805	.18223

Results of the study as presented in Table 2 show the mean and standard deviation of respondents with regards to gender in order to answer research question one. The result show that male and female nursing students frequently experience stress from taking care of patients, assignment and workload, lack of professional knowledge, the environment, peers and daily lives, and teachers and nursing staff having achieved a mean criterion rating level of 3.00 by approximation.

Hypothesis One

Table 3: t-test analysis of the significant difference in the mean response of nursing students about their perceived sources of stress in South-East Nigeria with regards to year of study;

Variables	N	\bar{X}	SD	Df	t-cal	Sig	Dec
3 rd & 4 th year	133	3.583	0.763	292	1.88	0.00	NS
1 st & 2 nd Year	161	3.788	0.176				

$\alpha = 0.05$ (Level of significance)

Table 3 shows that a grand t-value of 1.88 with an associated probability value of 0.00 was obtained with regards to the difference in the mean responses of 3rd and 4th year, and 1st and 2nd year respondents on the perceived sources of stress. Since the associated probability value of 0.00 was greater than 0.05 set as the level of significance for testing the hypothesis; it was considered significant and therefore the null hypothesis was not upheld. The conclusion drawn was that, there was significant difference ($P < 0.05$) in the mean response of nursing students about their perceived sources of stress in South-East Nigeria with regards to year of study.

Hypothesis Two

Table 4: t-test analysis of the significant difference in the mean response of nursing students about their perceived sources of stress in South-East Nigeria with regards to gender;

Variables	N	\bar{X}	SD	Df	t-cal	Sig	Dec
Males	114	3.719	0.170	292	1.796	0.99	NS
Females	180	3.681	0.182				

$\alpha = 0.05$ (Level of significance)

Table 4 shows that a grand t-value of 1.796 with an associated probability value of 0.99 was obtained with regards to the difference in the mean responses of males and female respondents on the perceived sources of stress. Since the associated probability value of 0.99 was greater than 0.05 set as the level of significance for testing the hypothesis; it was considered not significant and therefore the null hypothesis was upheld. The conclusion drawn was that, there was no significant difference ($P < 0.05$) in the mean response of nursing students about their perceived sources of stress in South-East Nigeria with regards to year of study.

DISCUSSION

The present study examined the level of stress with regards to the demographic characteristics of respondents such as year of study and gender. Based on these objectives a number of hypotheses were tested. The findings were discussed in the light of the objectives and hypothesis as follows. The first objective of the study was to examine the sources of stress among nursing students with respect to year of study. The null hypothesis based on this objective stated that there is no significance mean score difference in the sources of stress among nursing students with respect to year of study. The results indicated that there is no significance mean score difference in the sources of stress among nursing students with respect to year of study, thus upholding the hypothesis. The study found that the mean stress score varies throughout the years of study. Senior nursing students (3rd and 4th year) have less stresses sources than junior students (1st and 2nd year) except for the environment. Results of this study are consistent with previous studies, which emphasize the fact that as students obtain more experience through their studies, they perceive less stress (Chan et al., 2009; Kirkland, 1998; Sheu et al., 2002). But statistical mean also show that nursing students at higher levels of study also suffer stress to some extent. Indeed, instructors' expectations from senior students is relatively higher as they are being considered to have all the skills and knowledge to act as registered nurses. Towards graduation, nursing students are expected to be acting as working nurses, which might increase their stress as they strive to meet others' expectation. What's more is that they perceive themselves to be subjected to criticism from working nurses who expect them to be more professional and to act as working nurses.

Consistent with other studies (Chan et al., 2009, Shaban et al., 2012, Sheu et al., 2002), the current study results show

that the stress faced by 1st and 2nd year nursing students are mainly from assignment work, followed by lack of professional knowledge, the environment and peers and daily life. However, sources of stress vary throughout years of study. For example, an analysis of current study indicated that Junior nurses' stress is mainly related to having assignments followed with stress from taking care of patients, whereas Senior nursing students' stress is from taking care of patients and assignment and workload. These findings indicated that junior nursing students as they are newly exposed to a highly technological environment combined with the stress of completing new unfamiliar assignments and paper work, could have higher stress. On the other hand, it was noticed that senior nursing students, as they gained more knowledge and skills became more stressed about not being able to take care of patients as was expected by their instructors, as well as working nurses.

Another point that is certainly worth mentioning is that, occasionally, schools of nursing in Nigeria usually outsource consultants from other institutions and hospitals to offer build capacities of nursing students through training and practical work. The experts are known as preceptors. This teaching methodology is convenient for nursing students at the senior 3rd, and 4th levels. The use of preceptors to assist in teaching nursing students clinical skills is a known practice in the literature (Forneris & Peden-McAlpine, 2009). Although preceptors might stimulate students' critical thinking, they also increase the workload on students in terms of taking care of patients more than clinical instructors working at school. Moreover, students may consider preceptors as outsiders from their schools and being unfamiliar with their teaching style, they could perceive them as a source of stress.

This findings may be helpful for clinical educators and clinical staff in appreciating the complexity of students' responses to stress and should not follow general principles in dealing with students in their clinical practice. More specifically, findings indicated that junior nurses have a stress level from assignment and from clinical environment as well. Clinical instructors need to acknowledge that junior students, as they are newly exposed to high technological environments, need much support in their clinical learning. In addition, they are supposed to complete an assignment that needed by a due date. Therefore, minimizing assignments and the work load for junior nursing students is necessary in order to create a motivating clinical environment and to allow them more time to explore this high technological environment. Moreover, giving the students more time in clinical practice in one particular ward would familiarize them with the setting instead of scheduling them to short placements in more than one ward.

The second objective was to assess the differences in level of stress with regards to the biographical variable of gender. Based on this objective, hypotheses two was stated and tested. Hypothesis two stated that there is no significant mean score difference in the sources of stress among nursing students in South-East Nigeria with regards to gender variable. The findings indicate that there was no statistically significant difference in the reported levels of the various sources of stress among male and female students. This implies that there

was no significant difference in overall stress among the two groups. This findings is consistent with that of Atindanbila and Banyem since they also found no significant differences in stress with regard to gender among undergraduate students of the university of Ghana (Atindanbila & Bayem, 2011). This finding imply that gender of a person is a factor in his or her stress level.

The findings of the current study agrees with Mofida, Mona and Elham (2011) study which identified sources of stress as perceived by female undergraduate nursing students at College of Nursing, King Saud University. The major sources of stress were the academic followed by intrapersonal, then environmental and the last was interpersonal. Again, research on gender related issue and stress showed similar result with earlier researchers. Similarly, Samira, Ali, Alaa, Sajida, Saeed and Nadia (2015) explored the perceived stress, stressors, and coping strategies employed by medical students studying in a problem-based learning curriculum. Perceived stress scores were statistically significantly high for specific stressors of: studying in general, worrying about future, interpersonal conflict, and having low self-esteem. Female students were found to be more stressed than males but female students employed more coping strategies as well. More recently, however, assessing the prevalence and magnitude of stress among Saudi undergraduate medical students, Aesha, Saad Abdullah, Assaf, Khalid (2017) study found that female medical students have significantly more stress than their male counterparts. Thus, nursing education either in the training college, university or clinical practice was thought to be more stressful for female. This imply that stress is very common among medical students. Other researchers who found similar results include Edward, Samuel, Michael and Xiaosong (2015), and Aesha, Saad Abdullah, Assaf and Khalid (2017).

Contrary to these findings that gender predisposes individuals to perceive situations and events as being stressful, Asani, Farouk and Gambo (2017) study which determined the prevalence of stress among undergraduate clinical students of Bayero University Kano Medical School found no significant difference between gender types on sources of stress. Result of the current research study corroborated with findings of former study when male students and level of study were examined. This implies that a unified stress managing strategy is required.

Findings of this study suggested that approximately, over half of respondents, male and female, experienced stress level above the mean level criterion level of 3.00. This finding is in agreement with the findings of a previous study, which was conducted among Jordanian nursing students in their initial period of clinical practice, which indicated that fifty-two percent of nursing students have stress levels above the mean (Shaban et al., 2012).

IMPLICATION

Result of this study has implication for nursing education and the general public. Attrition of student nurses due to high stress level can lead to shortage of manpower and inefficient

delivery of health care services due. Also, academic related stress will prevent quality outcome and output of graduates to the society. There is need to examine and understand the various sources of stress among nursing student and give due attention to each source.

RECOMMENDATIONS

This study points out the importance of teacher and clinical facilitators to be sensitive of these stressors and provide students with effective coping strategies to deal with the inevitable sources of stress present during nurse education and training. The strategies may lead to the reduction of negative psychological symptoms associated with perceptions of stress.

LIMITATIONS

This study is subject to some limitations that may have influenced the results of the study. This study used a self-reported questionnaire. This has the potential of reporting bias, due to personal interpretations of items in questionnaire. In addition, this study did not look at stress levels associated with the clinical setting in detail. This could be a major stress source in and of itself than it is known at present. A longitudinal data collection would be an appropriate methodology to overcome these limitations.

CONCLUSION

The aim of this descriptive study was to descriptively assess sources of stress among nursing students in South-East Nigeria. The high prevalence of stress sources among nursing students worrisome. There is the need for further studies to evaluate the sources of stress among these teachers as well. Identification of these dual sources will assist the students and management to take appropriate steps to combat the stress. This will improve the quality of primary and secondary health care delivery system in South-East, Nigeria.

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