Research Article

STRESS AND COPING STRATEGIES AMONG BACCALAUREATE NURSING STUDENTS IN TWO SELECTED UNIVERSITIES IN NIGERIA

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ABSTRACT

Stress is a public health concern and about one-third of individuals experience it worldwide. It has been established that stress is a major health concern among students.The study aimed to assess the level of stress,and identify the sources of stress and coping strategies utilized by thebaccalaureate nursing students in two selected universities in Nigeria. A cross-sectional descriptive design was utilized. The study settings were the Departmentsof Nursing Science University of Ibadan, Ibadan, and Obafemi Awolowo University, Ile-Ife. A total of 219 baccalaureate nursing students in 300 – 500 levels were sampled using a multi-stage sampling method. Ethical approval for the study was obtained from UI/UCH Ethics Committee. A well-structured questionnaire was used for data collection. Data were analyzed using SPSS version 23. Findings showed that 11.4% of the respondents had a low-stress level, 68.5% had moderate stress, and 20.1% had a high-stress level. The students' predominant stress sources were academic workload (73.1%) and financial difficulties (55.7%). The common coping strategies used among the students were self-distraction and instrumental support; means being 41.6 ± 8.37 SD and 33.3 ± 7.23 SD respectively. Respondents' coping strategies were significantly related to their level of stress (X^2 = 6.091; p = 0.05). There was no significant difference between sources of stress among students of both universities (t (217) = 1.588; p = 0.114). It is imperative for students to be exposed to stress management techniques and effective coping strategies during stress.

Keywords: Stress, coping, strategies, baccalaureate, nursing, students.

INTRODUCTION

Stress is a public health concern and about one-third of individuals experience it worldwide(Hafner, 2019). The American Institute of Stress statistics (2019) indicated that about 33% of individuals report feeling extreme stress, 77% experience stress that affects them physically, 73% have stress that negatively affects their mental health, and 48% have sleeping problems associated with stress. It has been established that stress is a major health concern among students and 75% of people experience moderate to severe stress in the United State of America (Stress Facts and Statistics, 2022).

In Nigeria, Oku *et al.,* (2015) opined that stress is highly prevalent among university students. Kio *et al.,* (2015) established that common stressors among students are academically related. It was reported that over 16% of nursing students in Nigeria's schools experience severe levels of stress due to assignments and academic workload. Other factors such as poor socioeconomic status, an unconducive learning environment, poor standard of clinical practices, etc. also contribute to stress among students (Ajibade *et al.,* 2016). Oku *et al.,* (2016) also reported that over 94% of medical students perceived their training as being stressful.The magnitude of stress among students, however, may vary according to age, sex, choice of course, academic year, family size and socio-economic status, cultural background, and available social support (Deng *et al.,* 2022). Stress does not only negatively affect the students; it also has demerits on organizations or institutions. Stress results in a high rate of absenteeism, low quality of work, and low productivity in an institution (Samuel, 2018).

Pascoe *et al.,* (2019) opined that the common stressors among students include academic workload, time pressure, decision-making, continuous changes, and economic mistakes. These stressors tend to negatively impact them physically, psychologically, academically, and socially. Algorani& Gupta (2022) established that the coping strategies individuals employed during stress is very vital to the successful management of the situation and can assist them to adapt. This adaptation helps to promote health and improve psychological well-being and functioning. The Semel Institute for Neuroscience and Human Behaviour (2023) stated that coping mechanisms can be either active or avoidant. While active coping mechanisms assist and equip an individual with psychological and behavioral mechanisms to alter the nature of the stressors, avoidant coping strategies tend to make individuals employ negative mechanisms (such as drinking, sleeping, withdrawal, etc.) when stressed.

However, the negative effects of stress become more pronounced when the individuals concerned do not have adequate capacity to cope with the stressful environmental demands. Consequentially, the inability to adopt effective and efficient coping strategies when stressed can lead to increased physical and psychological health breakdowns among students, especially during the examination period. This formed the premise on which the researcher sought to assess the level of stress among baccalaureate nursing students and the coping strategies they employ when stressed. The findings of the study will add to the existing body of knowledge on the subject of stress and stress-related symptoms among nursing students in Nigeria and by so doing bridge the gaps in knowledge.

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RESEARCH QUESTIONS

The questions answered by this study include:

1. What is the level of stress among the baccalaureate nursing students at the University of Ibadan (UI), Ibadan, and Obafemi Awolowo University (OAU), Ile-Ife?
2. What are the sources of stress among baccalaureate nursing students in UI, Ibadan, and OAU, Ile-Ife?
3. What are the coping strategies adopted by baccalaureate nursing students when stressed?

HYPOTHESES

1. There is no significant relationship between baccalaureate nursing students' coping strategies and their stress levels.
2. There is no significant difference between the sources of stress of baccalaureate nursing students of the University of Ibadan and those of the Obafemi Awolowo University.

METHODS

Research Design

A cross-sectional descriptive design was employed in this study to assess stress and coping strategies among students in baccalaureate nursing programmes in two selected Universities in Nigeria.

Research Settings

The study settings were the Departments of Nursing Science Obafemi Awolowo University, Ile-Ife, and the University of Ibadan, Ibadan, Nigeria.

Study Population

The study population comprised 300-500 levels baccalaureate nursing students in the Departments of Nursing, UI, and OAU, Ile-Ife during the 2017/2018 academic session.

Sampling Techniques

A multistage sampling technique was used for sample selection. 219 nursing students were sampled in the study. The proportion of the respondents from the two universities was stratified based on the study levels i.e. 300, 400, and 500 levels. Then, systematic sampling was used to select the required sample size from the sampling frame of the students in both settings using a sampling interval 'nth' calculated to be two (2) for each stratum.

Instruments for Data Collection

A well-structured questionnaire composed of five (5) sections was used for data collection. Section '1' focused on the socio-demographic characteristics of nursing students; Section '2' utilized the Perceived Stress Scale (PSS) to establish the level of stress experienced by the nursing students. Section '3' asked questions on actual sources of stress among the students, while Section '4' employed the Brief COPE scale to assess the coping strategies employed by nursing students when stressed. The Cronbach's alpha reliability of the instrument was 0.753.

Procedure for Data Collection

The questionnaires were coded before administration to the students in order to allow for easy sorting during collation. A verbal explanation was given to the respondents to describe the questionnaire before they answered the questions. Questionnaires were administered and retrieved on the spot after respondents have adequately completed them in order to reduce the attrition rate related to missing or partially completed questionnaires.

Methods of Data Analysis

Descriptive statistics such as frequencies, percentages, means, and standard deviations were used to summarize data. The level of significance was set at a p-value of 0.05. Statistical package for Social Sciences (SPSS) version 23.0 was used for the analysis of data.

Ethical Consideration

Ethical approval was obtained from UI/UCH Ethics Committee. The ethical clearance number for the study was 'UI/EC/18/0321'.

RESULT

Table 1 Socio-demographic Information of the Students (N = 219)

Socio-demographic characteristics	Frequency	Percent
Age		
Younger students (18-25 years)	181	82.6
Older students (26-33 years)	38	17.4
Sex		
Male	30	13.7
Female	189	86.3
Marital status		
Single	207	94.5
Married	12	5.5
Year of Study		
Year 3	71	32.4
Year 4	78	35.6
Year 5	70	32.0
Ethnicity		
Yoruba	202	92.2
Ibo	16	7.3
Hausa	1	0.5
Mode of Entry		
UTME	132	60.3
Pre-degree	42	19.2
Direct Entry	45	20.5
Current Institutions		
OAU	147	67.1
UI	72	32.9

In Table 1 below, the ages of the students ranged from 18 – 33 years; their mean age was 23 years $\pm$ 2.7 SD. The younger students were between ages 18 – 25, while the older students were between ages 26 – 33. Out of the 219 students sampled, 189 (86.3%) were females, and 12 (5.5%) were married. With respect to the level of study of respondents, 32.2% were in 300, 35.6% in 400, and 32% in 500 level. Of the entire study population, 92.2% were Yoruba, 7.3% were Ibo, and 0.5% were Hausa.

Table 2Stress that participants had been experiencing in the last month (N = 219)

In the last month before data collection, how often had you been experiencing these?	0		1		2		3		4	
	N	(%)	N	%	N	%	N	%	N	%
Being upset due to unexpected happenings	10	(4.6)	32	(14.6)	83	(37.9)	57	(26.0)	37	(16.9)
Being unable to control important things in your life	29	(13.2)	51	(23.3)	85	(38.8)	35	(16.0)	19	(8.7)
Feeling nervous and stressed	2	(9.0)	33	(15.1)	78	(35.6)	59	(26.9)	47	(21.5)
Feeling confident of your ability to handle personal problems	57	(26.0)	37	(16.9)	59	(26.9)	35	(16.0)	31	(14.2)
Feeling that things were going your way	33	(15.1)	56	(25.6)	67	(30.6)	46	(21.0)	17	(7.8)
Found out that you could not cope with all the things that you had to do	19	(8.7)	64	(29.2)	85	(38.8)	40	(18.3)	11	(5.0)
Being able to control irritations in your life	21	(9.6)	64	(29.2)	77	(35.2)	40	(18.3)	17	(7.8)
Feeling that you were on top of things	17	(7.8)	51	(23.3)	84	(38.4)	47	(21.5)	20	(9.1)
Being angered because of things that were beyond your control	11	(5.0)	45	(20.5)	83	(37.9)	60	(27.4)	20	(9.1)
Feeling that difficulties were piling up so high that you could not overcome them	23	(10.5)	75	(34.2)	69	(31.5)	30	(13.7)	22	(10.0)

Key: 0 = Never; 1 = Almost never; 2 = Sometimes; 3 = Fairly often; 4 = Very often

Table 3Levels of stress among the students

Level of stress	Frequency	Percent
Low	25	11.4
Moderate	150	68.5
High	44	20.1
Total	**219**	**100.0**

Table 4Comparison of stress level among students in both Universities

Institution	Levels stress			X2	df	Pv
	Low	Moderate	High			
OAU	7	103	37			
	(28.0%)	(68.7%)	(84.1%)	23.242	2	0.001
UI	18	47	7			
	(72.0%)	(31.3%)	(15.9%)			

Research Question 1: What is the level of stress among the baccalaureate nursing students in UI, Ibadan, and OAU, Ile-Ife?

This question was answered by determining the frequency count/percent of each of the participant's responses to the items on the Perceived Stress Scale (PSS) as shown in Table 2. The students' responses to the items listed with respect to their experiences of stress during the last month before data collection. Results show, that 11.4% of the respondents had a low level, 68.5% experienced a moderate level and 20.1% had a high level of stress during training (Table 3). Overall, findings show that 84.1% of OAU students experienced a high level of stress compared with 15.9% among UI students (Table 4).

Research Question 2: What are the sources of stress among baccalaureate nursing students in UI, Ibadan, and OAU, Ile-Ife?

In answering the above question, the frequency count/percent of actual sources of stress experienced by the nursing students of both universities was conducted as shown in Table 5. The predominant sources of stress among the students were academic workload (73.1%), financial difficulties (55.7%), worries about the future

(47.5%), and appetite change (47.5%). However, 34.2 % reported that they were stressed by poor learning environments and transportation problems.

Table 5Sources of stress among baccalaureate nursing students (N = 219)

Sources of stress	Experienced		Not experienced	
	N	(%)	N	(%)
Financial difficulties	122	(55.7)	97	(44.3)
Family problems	43	(19.6)	176	(80.4)
Sleeping disorders	56	(25.6)	163	(74.4)
Worries about future	104	(47.5)	115	(52.5)
Problems with studies in general	64	(28.2)	155	(70.8)
Stress of academic workload	160	(73.1)	59	(26.9)
Trouble with my parent(s)	19	(8.7)	200	(91.3)
Trouble with my siblings	12	(5.5)	207	(94.5)
Trouble with my lecturer(s)	21	(9.6)	198	(90.4)
Trouble with my course mates	24	(11.0)	195	(89.0)
Problems with accommodation	49	(22.4)	170	(77.6)
Problems with learning environment	75	(34.2)	144	(65.8)
Conflicts with my roommate(s)	19	(8.7)	200	((91.3)
Problems staying away from home	20	(9.1)	199	(90.9)
Often interpersonal conflicts in school	23	(10.5)	196	(89.5)
Lack of parental supports	12	(5.5)	207	(94.5)
Bad news while in school	20	(9.1)	199	(90.9)
Appetite change	104	(47.5)	115	(52.5)
Transportation problems	75	(34.2)	144	(65.8)
Problems getting life partner	18	(8.2)	201	(91.8)
Low self-esteem	20	(9.1)	199	(90.9)

Research Question 3: What are the coping strategies adopted by baccalaureate nursing students when Stressed?

The question above was answered by determining the mean and standard deviation of each of the coping strategies adopted by the students. Results are shown in Table 6 below.The coping strategies with the highest mean score was "Self-distraction"; mean being 41.6

± 8.37 SD. Other predominant coping strategies used by the students included "Instrumental support" mean being 33.3 ± 7.23 standard deviation"; "Planning" and "Humour" having mean 29.9 ± 6.96 SD respectively; "Venting" mean being 29.5 ± 6.48 standard deviation; "Emotional support" mean being 24.6 ± 5.35; and "Behavioural disengagement" mean being 23.5 ± 5.17 SD.

Table 6 Descriptive statistics of the Coping Strategies used by Participants (N = 219)

Coping strategies	Minimum	Maximum	Mean	Std. Deviation
Self-distraction	19	59	41.6	8.37
Active coping	6	21	13.0	2.75
Denial	6	21	11.9	2.83
Substance use	8	26	16.2	3.68
Emotional support use	11	38	24.6	5.35
Instrumental support use	14	50	33.3	7.23
Behavioural disengagement	11	36	23.5	5.17
Venting	13	45	29.5	6.48
Positive reframing	6	22	14.0	3.38
Planning	12	48	29.9	6.96
Humour	12	48	29.9	6.96
Acceptance	5	20	13.1	3.49
Religion	2	8	6.0	1.80
Self – blame	2	8	3.5	1.50

Key: A mean score of 20.0 was taken as the cut-off point. Hence, a coping strategy with mean above the cut-off was taken as being predominant among the students.

Hypotheses

Table 7 Association between coping strategies and levels of stress among the students

Coping strategies	Levels of stress			X^2	Df	pv	Remark	Decision
	Low stress	Moderate stress	High stress					
Poor coping	9 (36.0%)	79 (52.7%)	15 (34.1%)	6.091	2	0.05	NS	Do not Reject H$_0$
Good coping	16 (64.0%)	71 (47.3%)	29 (65.9%)					

Table 8 Comparison of sources ofstress of the baccalaureate nursing students of the two Universities

	Group Statistics								
Institution	N	Mean	Std. Dev.	Mean diff	F test	T-test	df	Pv	Remark
OAU	147	5.10	3.68	0.776	3.583	1.588	217	0.114	NS
UI	72	4.32	2.72						

Table 7 presents the results of the association between coping strategies and the level of stress experienced by the students using Pearson Chi-square. The finding reveals that the two variables were not significantly related; p-value = 0.05. Therefore, the null hypothesis (H$_0$) was not rejected.

Table 8 shows the findings of the comparison of sources of stress among students in both universities. An independent T-test was used to compare means of the sources of stress between baccalaureate nursing students from both Universities. The finding reveals that there was no significant association between the two variables; p-value > 0.05. Therefore, the null hypothesis (H$_0$) was not rejected.

DISCUSSION

A total of 219 baccalaureate nursing students were involved in the study. The mean age of the students was 23 years $\pm$ 2.7 SD. This is in with the findings of Ajibade *et al.,* (2016) in which the mean age of the students was 20.24 ± 2.3 SD. The majority of the students were female 189 (86.3%) due to the fact that nursing is female-dominated. This finding corresponds with Ajibade*et al.,* (2016) in which 87.7% of respondents were female but lower than that of Saravanan and Wilks (2014) where only 52.5% of respondents were female.

Results also show that a significant number of the students, 94.5% were not married. This finding is contrary to that of Samson-Akpan, John, Edet and Ella (2017) in which 53.9% of the students were not married. With respect to the year of study, 32.4%, 35.6% and 32% of the respondents were in 300, 400 and 500 levels of study respectively. This is in agreement with the findings of Samson-Akpan *et al.,* (2017) in which 27.2%, 33.8% and 39% of the respondents were in 300, 400, and 500 levels respectively.With regards to the mode of entry into university, findings revealed that majority of the students 60.3% came in through UTME, 20.5% by direct entry and 19.2% through pre-degree. This supported by the study of Samson-Akpan *et al.,* (2017) in which 57.1% of the students entered into the University through UTME, but 40.9% gained admission through direct entry.Based on the level of stress among the students, 11.4% had low level, 68.5% had moderate level, while 20.1% had high level of stress. This was lesser than the findings of Samson-Akpan *et al.,* (2017) in which 52.5% of undergraduates in University of Calabar, Nigeria experienced high level of stress in training. Results also indicate that 21.5% of the respondents were often nervous and stressed, 7.8% felt that things were going out of their ways while 10% reported that difficulties were piling up so high beyond their control in the last month. This was lower than the findings of Bamuhair *et al.,* (2015) who found out 35.9% of their respondents were unable to control the irritations encountered, and 37.8% felt angry due to things beyond their control.Regarding the sources of stress, findings show that 73.1%of the respondents were experiencing stress related to academic workload. This result further substantiates the study of Oku *et al.,* (2015) in which 83.3% of the respondents reported that excessive academic workload was the main source of stress to them. The findings of Bamuhair *et al.,* (2015) also revealed that 82% of students found their study stressful. Also, 55.7% of the baccalaureate nursing students were experiencing stress related to financial difficulties during their training. This is in line with the findings of Al-Dubai, *et al.,* (2011)in which 64.6% of medical students in Malaysia reported that financial difficulty was the primary source of stress to them.

Furthermore, the results indicate that the learning environment was a source of stress to 34.2% of the nursing students. This finding was contrary to that of Abasimi, *et al.,* (2015) in which 74.9% of students reported that poor learning environment was a source of stress to

them. It is also clear from results that 47.5% of the students had worries about their future and this was a source of stress to them in training. This result is contrary to the finding of Bamuhair *et al.,* (2015) wherein a little above 78% of medical students worried about the future. Regarding the coping strategies adopted by baccalaureate nursing student when stressed, 'self-distraction' has the highest mean score; mean being 41.6 ±8.37 SD and instrumental support mean being 33.3 ± 7.23 SD. This is in line with Samson-Akpan *et al.,* (2017) in which the coping strategy with the highest mean score is seeking diversion (27.72 ± 4.27 SD).Study results further showed that Humour and planning coping strategies both have equal means; means being 29.9 ± 6.96 SD. This is contrary to Samson-Akpan *et al.,* (2017) in which being humorous has the smallest mean value (4.07 ± 1.63 SD).

CONCLUSION AND RECOMMENDATIONS

This research established the fact that a significant number of baccalaureate nursing students in UI and OAU experienced moderate to high level of stress, majorly from academic workload and financial difficulties, while in school. It becomes highly imperative therefore, for the students and all stakeholders to be well equipped with positive coping strategies for adaptive functioning when stressed. Entrepreneurship programme should be incorporated into nursing curriculum. This will allow the students to study and work at same time as this will help to reduce (if not totally overcome) the problem of financial incapability. Students should be exposed to positive coping strategies during their orientation activities shortly after admission into higher institutions of learning. Hypotheses testing revealed that the respondents' coping strategies were significantly related to their level of stress (X^2 = 6.091; p = 0.05). There was no significant difference between sources of stress among students of both universities (t (217) = 1.588; p = 0.114).

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