Stress as correlate to academic performance of student midwives in school of midwifery, St Philomena Catholic Hospital, Benin City, Edo State.

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Abstract
This study investigated stress as correlate to academic performance of student midwives in School of Midwifery, St. Philomena Catholic Hospital, Benin City, Edo State. Stress is a general experience in the lives of every individual irrespective of race or cultural affinity. Student midwives are prone to stress because of their different responsibilities: Although a lot of researches have been carried out on the variables that determine the academic proficiency of student midwives but it seems stress in relation to student midwives' academic performance have not received much attention in research context. The study used cross-sectional descriptive survey research type of ex-post facto design; two hundred (200) student midwives were drawn through convenient sampling procedure from St. Philomena, School of Midwifery, Benin City. Stress Knowledge and Management Questionnaire(r = .682) was used to gather information in this study. Five hypotheses were stated and tested. The data obtained were analysed using correlation and multiple regression analysis at 0.05 level of significance. There was significant negative association between student's level of study and knowledge of stress($r = -0.144, p < 0.05$). Also, the result reveals that religion was not significant on stress coping Mechanism($r = .035, p > 0.05$).In addition, the finding shows that student's level of study was not significant on experienced of stress($r = .014, p > 0.05$). Similarly, the finding reveals that age was not significant on coping mechanism of Stress ($r = - .020, p > 0.05$).The multiple correlation coefficients (R) of all the combined independent variables with academic performance of student midwives was 0.290. This implies that there is 29% association among level of stress knowledge, stress experience, coping mechanism and academic performance of student midwives. R square = .084. The adjusted Rsquare which estimates the variance on dependent variable measure accounted for by the combination of independent variables is 0.070. This implies that, all the independent variables: (level of stress knowledge, stress experience and coping mechanism) made 7% contribution to the variance in academic performance of student midwives. The researcher submitted that the student midwives should develop effective stress coping mechanism to avoid poor academic performance.

Key words: Stress, Coping-mechanism, Knowledge of stress, Academic-performance.

Introduction

Stress is a general occurrence. People from different background experience stress.

There are different areas where an individual can experience stress; parenting, secular job demands resulting from heavy workload, stress as a result of drill and training which may affect an individual positively or otherwise to mention but a few. Critical explanation of the word stress is significant, since, it provides a clue on how individuals react to everyday vicissitudes.

Stress is a procedure through which the individual perceives and copes with different perplexity. Webster (2006) asserted that stress is a state that is normally depicted by signs of mental and physical nervousness, as downheartedness which may be as a result of reaction to condition an individual perceives endangered. Empirical studies carried out to investigate causes of academic related strain of midwive students discovered that clinical rotations shift, deficiency of rest, and nature of supervisor who oversees the academic commitment of the students as well as individual stress coping level determine the effect of stress (Kuhn, etal., 2005) cited in Watson, Yanhua, Smith, Wong, and Deary (2013).

On the issue of stress, Aluja and Blanch (2004) discovered that stress encountered by student midwives in clinical training increase as they advance in the programme. Similarly the result corroborates Stecker (2004) who asserts that nursing learners obtained higher academic and exterior stress than learners in physical therapy, pharmacy, dentistry and medicine. Angel and Huan (2006) claim that stress experience varied based on the study level. That fresh student midwives were predisposed to heavy strain in contrast to other study level. This may be as a result of the transition from home to take up a new tasking responsibility.

Similarly, Baker (2003) discovered that the s tudent midwives experience many interpersonal, social and academic challenges in the period of their transition for training in midwifery. Baldwin (2000) is of the opinion that majority of the student midwives take the challenge of making decisions out their career, identifying those to associate with and new realities that change their former orientation as well as missing family ties thus forming major stressors for them. Baker (2003) further posited that the ability of student midwives to manage the period of transition and technically handle their strain determine their progress in their academics and choice of career and academic. Gurung (2005) was of the opinion that the only antidotes for stress during period of transition into midwifery training, is social succor from different relations that cushion the negative effects of stress.

According to Kuh (2000) the source of stress for student midwives is feasibility of meeting up with the assignment time limit. However, Kyoshaba (2009) discovered that student midwives perceived that course work load in the first year is a major stressor and that substantial association exists between course work load and examination strain as well as anxiety (Kyoshaba, 2009).

Again, Lumleg and Provenzan (2009) discovered that everyday routine are the major stressor among student midwives. Davonport and Lane (2006). Bang and Zeidner (2000) asserted that there is association between relational difficult and many other strain, indicating that the more relational challenges an individual has, the more the magnitude of stress such will experience. Stecker (2004) discovered that students midwives who are working alongside training may likely experience more strain than their counterparts that are running the programme on full time basis.

Baldwin and Bradley (2009) accentuated that on the job, learners experience large strain during end of semester and final qualifying examinations compared to other periods during the academic programme cycle. This emanated from non-appearance in the lesson as a result of work requirement. Stress in academic is acknowledged to have numerous discouraging consequences on academic as well as students' well-being. Academic strain is perceived to hamper students' physical life, thinking procedure and familiarization conduct Baldwin (2000). The academic strain experienced by most learners is attached to non-productive study practice, such as inefficient study time administration (Atibuni, 2012). However, Abidgnit and Ahamad (2006), Abouserie (1994) and Crede and Kuncle (2008) Rayle and Cung (2008), and Surridge (2008) found that productive stress coping mechanism such as spiritual exercise was discovered to be a solution to stem stress in academic. (Baldwin, 2000). Similarly, Smith and Renk (2007) asserted that long years of training is the stressor among student midwives

Early researchers such as (Jimenez, Navia-Osorio, and Diaz, 2009; Garrett, 2011; Watson, Yanhua, Smith, Wong, and Deary, 2013) asserted that stress symptoms are: headache, ulcers and high blood pressure, anxiety, low self-respect and anger.

It is a rampant complaint among student midwives, that the workload often causes them frequent headache, insomnia and fatigue which inhibit their study habit and has a flow of influence on the students' achievement. Although a lot of empirical investigations have been carried out on the variables that determine the academic proficiency of students midwives but seem stress in relation to their academic performance had not received much attention in research context. All these problems that are

faced by student midwives in School of Midwifery, St. Philomena, Benin City propelled the researcher to embark on investigation of stress as correlate to academic performance of student midwives in School of Midwifery, ST. Philomena Catholic Hospital, Benin City, Edo State.

Hypotheses

Consequent to the problem identified in this study, the following hypotheses were stated and tested.

1. There is no significant relationship between the student's level of study and their level of knowledge of stress.
2. There is no significant relationship between the student's level of study and the experienced of stress.
3. There is no significant relationship between religion and coping mechanism of stress.
4. There is no significant relationship between age of the students and coping mechanisms.
5. There is no significant composite and relative contribution of stress indices (level of stress knowledge, stress experience and coping mechanism) to academic performance of student midwives.

Methodology

The Design: The study adopted an ex-post facto design of cross-sectional descriptive survey research type. This research type was chosen because the researcher does not have control over the variables as their manipulation had already occurred.

Population: The target population of this study is the students of St. Philomena Catholic Hospital, School of Midwifery, from year 2, year 3 and final year. The population comprises of four hundred (400) female students undergoing Midwifery training.

Sample: Simple random sampling procedure was employed to select two hundred students out of the total population of four hundred (400) students of St. Philomena, School of Midwifery, Benin City. The selected two hundred (200) students was calculated using Yaro Yemane statistical method.

$$n = \frac{N}{1 + N(e^2)}$$

Where N = Total Population

n = Sample size

e = 0.05

$$n = \frac{400}{1 + 400\,(0.05^2)}$$

$$n = \frac{400}{1 + 400 \times 0.025}$$

$$n = \frac{400}{1 + 1.0025}$$

$$n = \frac{400}{2 + 0.0025}$$

$$n = \frac{400}{2.0025}$$

n = 200

is the required

N = Sample size is the total

N = Sample population

E = Error of tolerance (0.05)

Instrumentation: The data for this study was collected by means of self-structured questionnaire designed by the researcher and was given to the experts in research instrument construction for face validity. The questionnaire comprises of five *sections, from section A-E. Section* A: Demographic data of the participants, Section B: contains six items on knowledge of stress among student nurses, Section C: contains seven items on level of stress experienced by students, section D: contains seven items on coping mechanism used by mid-wives in school, Section E: contains five items on stress as

correlate of academic performance. The participants responded to the items in the questionnaire, using the following categories: Strongly Agree = SA, Agree = A, Disagree = D, Strongly Disagree = SD and No Stress =NS, Slight Stress =SS, Moderate Stress =MS, High Stress =HS.

Validity and Reliability of Instrument

Evidence of validity was achieved by giving a copy of the instrument each to four medical experts for face validity, essential amendment and adjustment were made. It was further validated by the researcher on a similar sample of thirty (30) respondents that were not included in the study; the reliability; content and construct validity of this instrument was established using Cronbach Alpha and the resulting reliability co-efficient was 0.68.

Result

Table 4.0.1: Summary of Participants Bio-data by Age Bracket

Age Bracket	Frequency	Percent	Valid Percent	Cumulative Percent
12-16years	5	2.5	2.5	2.5
17-21years	99	49.5	49.5	52.0
22-26years	65	32.5	32.5	84.5
27years and above	31	15.5	15.5	100.0
Total	200	100.0	100.0	

Table 4.0.1 revealed the distribution of participants by their age bracket. It was discovered that the participants in age bracket 12 and 16 years were (3%). Similarly, the participants with age bracket 17 – 21 years were (49%). Besides, the participants with age bracket 22 – 26 years were (33%). Moreover, participants with age bracket 27 years and above were (16%). This implies that a larger percentage of the participants are mature enough to give information to the researcher and majority of them are between age 17 to 26years.

Table 4.0.2: Summary of Participants Bio-data by Gender

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Female	200	100.0	100.0	100.0

Table 4.02 revealed the distribution of the participants by their gender. It was observed that the entire participants were female, this may be as a result of the profession (Midwives) considered in this study.

Table 4.0.3: Summary of Participants Bio-data by Type of Study

Type of Study	Frequency	Percent	Valid Percent	Cumulative Percent
Basic	178	89.0	89.0	89.0
Post-basic	22	11.0	11.0	100.0
Total	200	100.0	100.0	

Table 4.0.3 revealed the distribution of the participants by their type of study. It was observed that participants in basic study type was 89% of the total participants as against 11% who are participants in post-basic study type.

Hypothesis One:There is no significant relationship between the student's level of study and their level of knowledge of stress.

Table 1: Correlation betweenStudent's Level of Study and their Level of Knowledge of Stress

Variables	No	?	SD	(r)	P	Remark
Student's Level of Study	200	2.97	0.96	-.144	< 0.05	Significant ?
Level of Knowledge of Stress	200	19.23	2.58			

Significant at 0.05

Table 1 presents the Pearson product moment correlation result of the relationship between student's level of study and level of knowledge of stress. The table reveals negative low significant relationship between the variables at ($r = -0.144$, $p < 0.05$). This implies that student's level of study does not singly determine student midwives' knowledge of stress and the null hypothesis one which stated that: There is no significant relationship between the student's level of study and their level of knowledge of stress was not rejected

Hypothesis Two: There is no significant relationship between the student's level of study and the experience of stress.

Table 2: Correlation between Student's Level of Study and Experience of Stress

Variables	No	?	SD	(r)	P	Remark
Student's Level of Stud y	200	2.97	0.96	.014	> 0.05	Insignificant ?
Experienced of Stress	200	14.37	4.22			

Significant at 0.05

Table 2 presents the Pearson product moment correlation result of the association between students' level of study and experienced of stress. The table reveals positive low insignificant relationship between the variables at ($r = .014$, $p > 0.05$). This implies that student's level of study does not singly determine the level of stress experienced among student midwives. Therefore, the null hypothesis two which stated that: There is no significant relationship between the student's level of study and the experienced of stress was not rejected.

Hypothesis Three: There is no significant relationship between religion and coping mechanism of stress.

Table 3: Correlation between Religion and Coping Mechanism of Stress

Variables	No	?	SD	(r)	P	Remark
Religion	200	1.04	0.19	.035	> 0.05	Significant ?
Coping Mechanism of Stress	200	19.39	2.81			

Significant at 0.05

Table 3 presents the Pearson product moment correlation result of the association between religion and coping mechanism of stress. The table reveals positive low insignificant relationship between the variables at ($r = .035$, $p > 0.05$). This implies that student's religion does not singly determine the coping mechanism of stress among student midwives. Therefore, the null hypothesis two which stated that: There is no significant relationship between religion and coping mechanism of stress was not rejected.

Hypothesis Four: There is no significant relationship between age of the students and coping mechanisms.

Table 4: Correlation between Age of the students and Coping Mechanism of Stress

Variables	No	(r)	P	Remark
Age	200	- .020	> 0.05	Significant
Coping Mechanism of Stress	200			

Significant at 0.05

Table 4 presents the Pearson product moment correlation result of the relationship between age and coping mechanism of stress. The table reveals positive low insignificant relationship between the variables at ($r = -.020$, $p > 0.05$). This implies that student's age does not singly determine the coping mechanism of stress among student midwives. Therefore, the null hypothesis two which stated that: There is no significant relationship between age of the students and coping mechanisms was not rejected.

Hypothesis Five: There will be no significant composite and relative contributions of stress indices (level of stress knowledge, stress experience and coping mechanism) to academic performance of student midwives.

Table 5: Regression Summary and ANOVA of Level of Stress Knowledge, Stress Experience and Coping Mechanism and Academic Performance of Student Midwives

R = .290
R^2 = .084
Adj R^2 =.070
Standard Error = 2.042

Analysis of Variance

Source of Variance	Sum of Square	Df	Mean Square	F	Sig.
Regression	75.287	3	25.096	6.016	.001
Residual	817.588	196	4.171		
Total	892.875	199			

*** Significant @ p < .05; n = 200*

Table 5 shows that the multiple correlation coefficients (R) of all the combined independent variables with academic performance of student midwives was 0.290. This implies that there is 29% association among level of stress knowledge, stress experience, coping mechanismand academic performance of student midwives. R square = .084. The adjusted Rsquare which estimates the variance on dependent variable measure, accounted for by the combination of independent variables is 0.070. This implies that, all the independent variables: (level of stress knowledge, stress experience and coping mechanism) made 7% contribution to the variance in academic performance of student midwives. Regression ANOVA produced ($f_{(3, 196)} = 6.016$, $p < 0.05$). This indicates that a composite relationship of the entire predictor variables (level of stress knowledge, stress experience and coping mechanism) considered in this study to academic performance of student midwives is statistically significant.

Table 6: Relative Contribution of Level of Stress Knowledge, Stress Experience and coping Mechanism in the Prediction of Academic Performance of Student Midwives

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	8.728	1.771		4.929	.000
Level of Knowledge	.021	.059	.025	.348	.728
Stress Experience by Students	.030	.037	.060	.822	.412
Coping Mechanism	.027	.054	.276	3.872	.000

*** Significant @ p < .05; n = 200*

Table 6 shows the relative contribution of independent variables on criterion variable (academic performance of student midwives). The entire independent variables considered contributed significantly different to economics. These are, coping mechanism (β = .276, t = 3.872, P < 0.05), However, level of knowledge (β = .025, t = 0.348, P > 0.05) and stress experience by students (β = 0.060, t = 0.822, P > 0.05) did not contribute significantly to the prediction of academic performance of student midwives. The value of the standardized regression weight associated with the three variables shows that coping mechanism is the potent predictor of academic performance of student midwives. This implies that only one out of the three independent variables considered in this study is the major predictor of academic performance of student midwives.

Discussion of Findings

The finding from the study reveals that a significant negative association exists between student's level of study and level of knowledge of stress among student midwives. The finding is in consonance with many authors and researcher assertions on the influence of stress. For instance, Oermann (2008) discovered that stress encountered by student midwives in clinical training advanced as they step forward in the programme. Similarly the result corroborate Stecke (2004) who asserted that nursing learners obtained desirable achievement academically and exterior strain than learners in other medical field. Lumleg and Provenzan (2009) asserted that stress experience varied base on the study level. That fresh student midwives were predisposed to heavy strain in contrast to other study level. This may be as result of the transition from home to take up a new tasking responsibility. The result also support Baker, (2003) who discovered that the midwives students experience many interpersonal, social and academic challenges in the period of their transition for midwives training. Lumleg and Provenzan (2009) were of the opinion that majority of the midwives students are being challenge on making decision on their career, likewise, identification of those to associate with and privy to new hints that change their former orientation as well as missing family tie. Baker in addition posited that the ability of midwives students to manage the period of transition and technically handle their strain determine their progress in their choice of career and academic pursuits. Gurung (2005) was of the opinion that the only antidotes for stress during period of transition into midwives training, is social succor from different relations that cushion the negative effects of stress.

Similarly, the finding from this study shows insignificant association between students' study level and experienced of strain among student midwives. Kuh (2000) asserted that the source of stress for midwives student is feasibility of meeting up with the assignment time limit. However, Kyoshaba (2009) discovered that student midwives perceived that course work load in the first year is a major stressor and that there is a significant association between course work load and examination stress and anxiety (Kyoshaba, 2009).

Resulting from the assertion of earlier researchers, Webster (2006) asserted that stress is a state normally depicted by sign of mental and physical nervousness, as well as downheartedness which may be as a result of reaction to condition an individual perceives endangered. Empirical studies carried out to investigate causes of academic related strain of students midwives discovered that clinical rotations shift, deficiency of rest, and nature of supervisor who is overseeing the academic commitment of the students as well as individual coping level determine the effect of stress (Kuhn, etal. 2005) cited in Watson, Yanhua, Smith, Wong, and Deary, (2013).

The finding shows no significant association between age and stress coping mechanism of student midwives. Nevertheless, Lumleg and Provenzan (2009) discovered that everyday routine are the major stressor among midwives student. Davonport and Lane (2006); Bang and Zeidner (2000) claimed that there is association between relational difficult and many other strain, indicating that the more relational challenges an individual has, the more the magnitude of stress such will experience. Stecker (2004) discovered that students midwives who are working alongside training

may likely experience more strain than their counterpart that are running the programme on full time basis.

Baldwin and Bradley (2009) accentuated that on the job, learners experience large strain during end of semester and final qualifying examinations compare to other period during the academic programme cycle. Stress in the academic environment is acknowledged to have numerous discouraging consequences on academic performance as well as students' well-being. Academic strain is perceived to hamper students' physical life, thinking procedure and familiarization conduct (Baldwin, 2000).The academic strain experienced by most learners is attached to non-productive study practice, such as inefficient study time administration (Atibuni, 2012).

The finding from this study shows that association exist between religion and productive stress coping mechanism among student midwives. However, Abidgnit and Ahamad (2006), Abouserie (1994) and Crede and Kuncle (2008),Rayle and Cung (2008), Surridge (2008) found that productive stress coping mechanism such as spiritual exercise was discovered to be a solution to stem stress in academic (Baldwin, 2000). Similarly, Smith and Renk (2007) asserted that long year of training is the stressor among student midwives.

Conclusion and Recommendations

The paper investigated stress as correlate to academic performance of student midwives in School of Midwifery, St. Philomena Catholic Hospital, Benin City, Edo State.Since there are positive significant composite relationship among stress indices (level of stress knowledge, stress experience and coping mechanism) and academic performance of student midwives when the school administrators put in place various cushion devices that will reduce stress for the student midwives, there is tendency that academic performance of student midwives will increase. Therefore, the students should develop effective stress coping mechanism to avoid poor academic performance; the midwifery school administrators should endeavour to put in place various cushioning devices that will reduce stress for the student midwives; the students should schedule their daily activities to avoid stress.

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