



# Stress Factors as Predictor of Academic Performance of Undergraduate Students in University of Benin, Edo State, Nigeria

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## Abstract

*The study investigated stress factors and academic performance of undergraduate students. It employed a survey research design. Three hypotheses were formulated. Stratified random sampling technique was used to obtain a sample of 90 students from the different departments in the faculty of education. Student Stress Inventory was used to collect the relevant information from the respondents. Using Cronbach Alpha statistics, the reliability co-efficient of .68, .57, 87 and .68 were obtained for sections A, B, C and D of the instrument respectively. The content validity of the instrument was ascertained by 3 experts (lecturers). Analysis of Variance (ANOVA) was used to analyse the data. The findings revealed that stress factors significantly predict the academic performance of male undergraduate students. It was recommended that school counselling unit should organize seminars, workshop and symposia periodically for the students to address the stress factors.*

**Key words:** *Stress factors, Academic performance, Undergraduate students.*

## Introduction

Stress has been closely associated with the cognitive functioning of students. Studies like; Awino and Agolla, (2008); Fairbrother and Warn, (2003); Ongori, (2007) have shown that students including University undergraduates experience different types of stress in their course of study. Laurence, Williams and Eiland (2009) attributed it to fear of failing examinations and prompt reduction in recreational activities. Bataineh (2013) and Adubule (2014) attributed it to academic pressure and inability to manage personal time properly. Fairbrother and Warn (2003) associated it to too many assignments, competition with other students, and lack of finance (pocket money). While Ongori (2007), Awino and Agolla (2008); Decoste and Israel (2011) identified institutional issues like overcrowded lecture halls and inadequate resources, excessive homework, sitting for examinations and peer competition as universal academic sources of stress. Besides, academic related issues like pressure to submit assignments on deadlines and pressure to excel in tests or examinations could put students under undue stress. Therefore, Wong, Wong and Scott (2006)

noted that academic stress is a pervasive problem across cultures, ethnic groups and must be viewed in its context. So, students could face academic related issues that automatically impose stress on them. However, Lou and Chi (2000) posited that academic stress can be conceptualized as interaction between students' environmental stress factors, students' cognitive appraisal of the environment and coping with the academic related stress factors. Hence Gibbons and Gibbons (2007); McCarty, Zhao and Garland (2007) noted that stress is associated with how an individual appraises situations and the coping strategies adopted.

Although students' academic performance has been attributed to various factors such as poor study habit and poor time management, Ahem and Norris (2011) posited that academic demands of University students are potentially damaging to students as stress has been reported as the most common factor affecting academic performance amongst University students. Hence Akgun and Ciarrochi (2003) asserted that academic stress is related to poor academic outcomes or achievement and it impairs students' ability to work effectively and efficiently. In this regards, Leung Yeung and Wong (2010) associated academic stress with psychological and somatic impairment in students.

The degree of stress' influence on academic performance is very vital. Khan, Gulzar and Yahya (2013) asserted that stress can affect students' academic success and every part of life unless they learn to cope with it appropriately. In other words, the level of stress can hinder work efficacy and lead to poor academic performance. In a study of Vaez and Laflamme (2008) on a sample of students at Swedish University, revealed that stress resulted in students' inability to cope with academics and lack of studying for students' academic performance. Similarly, Malefo (2000) findings revealed that individuals who experience high level of stress also experience difficulty in coping with academic demands associated with the university programme. In the light of this Misra, Mckean, West and Russo (2000) asserted that students expressed the requirement to meet assessment deadlines as a major source of students' stress. Besides, Alginahi, Ahmed, Tayan, Siddiqi, Sharif, Alharby and Nour (2009) asserted that university students are not only under enormous pressure to achieve academically in order to obtain a degree, but they are also subjected to copious amount of work, time limitations, tests and assignment as well as crucial decisions regarding their future and career paths.

Stress resulting from student financial difficulties is worth exploring as it is the inability to meet their financial obligations or commitment could have some effect on them. Some research findings like Northern, O'Brien and Goetz (2010) posited that financial difficulties are cited among sources of students' stress. Hence, Trombitas (2012) opined that personal finances of students remain the fourth of the five major sources of stress to the students. In the light of this Brougham, Zail, Mendez and Miller (2009) found that female were more likely to report financial stress than men. This assertion notwithstanding, little is known about the factors associated with financial stress among students. However, understanding the occurrences of financial stress among students, Heckman and Montacto (2014) posited that the experience of financial stress could exact a long - term impact on the students' academic performance.

Similarly, Misra and McKean (2000) Rayle and Chung (2008) and Bang (2009) asserted that the level of academic related stress differ among male and female students and that female students are more prone to academic stress than male students. Hence Thawalieb and Qaisy p(2012) posited that female students possess more stress level than male students. Similarly, Davonport and Lane (2006) remarked that female students use more emotion focus strategies like venting self blame behavioural disengagement, while male students use more active coping, positive, refraining, planning and accepting the stressor. This could be attributed to the students' cognitive appraisal of the situation. Hence Misra and Mckean (2000) posited that female students have more negative appraisal of stressful events and the attention given to the emotional challenges in the wake of the stressful events.

Similarly, Surridge (2008) opined that female students perform better than male students academically especially in their 1<sup>st</sup> year of study. Conversely, the study of Khan, Gulzar and Yahya (2013) revealed that male students reported higher level of stress, worse psychological wellbeing and having less inclination towards using positive coping approaches.

Besides, studies have revealed that the influence of stress on the students vary by their years of study in the University. Vande-Merwe and Rothmann (2003), Alginahi, Ahmed, Tayan, Siddiqi, Sharif, Alharby and Nour (2009); Kotze and Niemann (2013) asserted that 1<sup>st</sup> year students experience greater stress than other students. This could be attributed to the fact that some of the 1<sup>st</sup> year students are leaving home for the very 1<sup>st</sup> time and so need to adjust to the new environment. Contrary to the above assertion, Shaikh, Kahloon, Kazmi, Khalid, Nawez, Khan and Khan (2004) postulated that senior students experience higher level of stress between 95% and 98% for fourth and final year students respectively. This could be attributed to their heavy academic demands. Besides, final year students are required to write their research dissertation which exposes them to additional stress.

### **Statement of the Problem**

University students represent a unique sample with concerns, burdens and worries that differ from other group of people. They experience different situations, although often exciting and stimulating but also stressful. Researchers have considered different factors that influence student's performance as they are faced with issues ranging from personal, social, environmental and emotional. Centre to this, is the academic performance of the students which their future career is dependent on. From available literature students' academic performance appears to be dwindling and various factors have been attributed, such as; achievement motivation, socio-economic status of parents, study habit skills as well as social support. However, Sinha, Sharma and Nefal (2001) and Brausch (2011) identified academic related stress as one of the key factors influencing students' academic performance. Sinha, Sharma and Nepal (2001) asserted that 10-30 percent of students experience academic stress which affects their academic performance. Though, there are different means of determining students' academic performance, the conventional means is the Grade Point Average (GPA) which depicts the overall performance of an individual student. The academic performance of students has been a major concern to all

stakeholders and educationalists. Factors like study habit skills and parenting styles have not been found to significantly predict their academic performance (Adubale, 2014). Hence, this study on stress factors as predictor of academic performance of undergraduate students in Benin City, Edo State, Nigeria. In the light of this, the following hypotheses were formulated.

### **Hypotheses**

1. Stress factors (emotional, family, academics and financial) will not significantly predict the academic performance of undergraduate students in the Faculty of Education.
2. Stress factors (emotional, family, academics and financial) will not significantly predict differently the academic performance of male and female undergraduate students in the Faculty of Education.
3. Stress factors (emotional, family, academics and financial) will not significantly predict the academic performance of undergraduate students by their years or level of studies in the Faculty of Education.

### **Methodology**

The study is a survey research design meant to establish the relationship between stress factors and undergraduate students' academic performance. Stratified random sampling technique was used to obtain the sample of 200 students from the population of four thousand (4,000) students in the Faculty of Education. Two thousand five hundred and fifty (2,550) were female students while one thousand four hundred and fifty (1,450) were male students. A sample of five percent (5%) of the population which was 200 was taken. Twenty five (25) students were randomly selected from each of the department except in one of the new departments that did not have undergraduate students at the time of this study. A total of 175 students constituted the sample of the study. At the end, only 89 respondents questionnaire could be analysed.

Stress inventory by Khan, Gulzur and Yahya (2013) was modified by the researcher as Student Stress Inventory and adapted for the study. The instrument was divided into two parts. Part A contained the demographic information, while part B has four sections that contained the questionnaire structured with 32 items which included section A (family stress), section B (emotional stress), section C (financial stress) and section D (academic stress). It was a four point forced choice likert scale questionnaire which varied from strongly agree, agree, disagree and strongly disagree with items 10, 8, 8 and 6 respectively. To ensure the internal consistency of the instruments, it was administered to 40 students. Using Crombach Alpha statistics, reliability coefficient of .68, .68, .57 and .87 was obtained for section A, B, C and D respectively. The content validity was ascertained by 3 experts in the field of measurement and evaluation and Counselling Psychology, Faculty of Education. Their comments were included in the modified version to suit the purpose of this study.

The instrument was administered with the assistance of some colleagues to the study sample of two hundred students in a classroom situation. The academic performance of the students was the Grade Point Average (GPA) of the last semester course work and examinations which were obtained through the examination/result unit of the different departments. The GPA was used in line with Plant, Ericsson, Hill and Asberg (2005) assertion that academic performance of University students is best measured using their Grade Point Average. This is attributed to the fact that GPA is considered as summary of students learning and it can be used to arrive at an important academic decision about them. The data of the study was analysed using Analysis of variance (ANOVA).

## Results

The results of the study are presented in the following tables

Hypothesis 1: Stress factors (emotional, family, academics and financial) will not significantly predict the academic performance of undergraduate students in the Faculty of Education

**Table 1 Linear regression of stress factors (emotional, family, academics and financial) on the academic performance of undergraduate students.**

	Sum of Square	Df	Mean Square	F	Sig
Regression	524.784	4	104.957		
Residual	4243.337	85	50.516	2.079	.076
Total	4768.121	89			

  

	SE	Beta	Sig
Family stress	0.232	-0.127	0.239
Emotional stress	0.214	0.217	0.122
Financial stress	0.275	0.079	0.487
Academic stress	0.187	0.440	0.005
Constant	7.213		0.000

R = .332, R<sup>2</sup> = .110 and R<sup>2</sup> adjusted = .06

The data in Table 1a showed an F value of 2.078 and a P value of .076, testing at an alpha level of .05. The P value is greater than the alpha level so the null hypothesis is accepted. The data in Table 1b showed the R<sup>2</sup> value of .110 (11%) as the predictive strength of stress factors on the undergraduate students' academic performance. The table equally showed .005 value of academic stress. This revealed that academic stress was found significant among the stress factors of undergraduate students. Although all the stress factors together did not significantly predict the students' academic performance, the Table 1b revealed that academic stress predicted students' academic performance. Besides, the data revealed that the variables of this study contribute 11% influence to the undergraduate students' academic performance.

Hypothesis 2: Stress factors (emotional, family, academics and financial) will not significantly predict differently the academic performance of male and female undergraduate students in the Faculty of Education.

**Table 2 Linear regress of stress factors (emotional, family, academics and financial) on the academic performance of male and female undergraduate students**

Variable	SS	df	MS	F	Sig
Male: Regression	792.243	4	158.449	3.687	
Residual	1074.374	26	42.975		
Total	1866.617	30			
Female: Regression	517.263	4	103.453	2.310	0.57
Residual	2373.428	54	44.782		
Total	2890.692	58			
Male	SE	Beta	Sig.		
Family stress	.406	-.342	.051		
Emotional stress	.246	.620	.002		
Financial stress	.430	-.100	.558		
Academic stress	.410	-.324	.192		
Constant	11.140		.000		
R = .651, R <sup>2</sup> = .424, R <sup>2</sup> adjusted = .309					
Female	SE	Beta	Sig.		
Family stress	.278	.063	.625		
Emotional stress	.244	.212	.199		
Financial stress	.341	.296	.038		
Academic stress	.200	-.298	.127		
Constant	907		.000		
R = .423, R <sup>2</sup> = .179, R <sup>2</sup> adjusted = .101					

The data in Table 2a showed an F value of 3.687 and a P value of .012 tested at an alpha level of .05 for the male students. The P value is lesser than the alpha level. This means that stress factors significantly predict the academic performance of male undergraduate students. It equally showed the F value of 2.310 and a P value of .057 tested at an alpha level of .05 for the female undergraduate students. The P value is greater than the alpha level which means that stress factors did not significantly predict the academic performance of female undergraduate students.

Table 2b shows R<sup>2</sup> value of .424 (42.4%) for the male students. This implies that the independent variables of stress factors contribute 42.4% to the academic performance of the male students. It equally revealed the R<sup>2</sup> value of .179 (17.9%) as the predictive strength of the variables to this study to the academic performance of female undergraduate students. Besides, the Table 2 shows

that emotional stress significantly predicts the academic performance of male students with the P value of .002. Similarly, financial stress was found to significantly predict the female students' academic performance among the stress factors.

Hypothesis3: Stress factors (emotional, family, academics and financial) will not significantly predict the academic performance of undergraduate students by their years of studies in the Faculty of Education.

**Table 3 Linear regression of stress factors (emotional, family, academics and financial) on the academic performance of students by their years of study.**

Year	ss	df	MS	F	Sig
<b>200:</b> level Regression	288.111	4	57.622	1.013	<b>.420</b>
Residual	26872.290	48	56857		
Total	2960.401	52			
<b>300 :</b> level Regression	108.092	2	21.618	.617	<b>.688</b>
Residual	595.200	18	35.012		
Total	703.292	22			
<b>400:</b> level Regression	266.920	4	53.384	.939	<b>.505</b>
Residual	454.809	9	56.851		
Total	721.729	13			
Year	SE	Beta	Sig.		
<b>200:</b> level: Family	.371	-.041	.781		
Emotional	.276	.320	.109		
Financial	.429	-.100	.538		
Academic	.242	-.381	.076		
Constant	10.203		.000		
R = .312, R <sup>2</sup> = .097, R <sup>2</sup> adjusted= .001					
<b>300:</b> level Family	.349	-.031	.894		
Emotional	.570	.141	.684		
Financial	.499	-.074	.804		
Academic	.346	-.496	.206		
Constant	13.911		.002		
R = .392, R <sup>2</sup> = .154, R <sup>2</sup> = -0.95					
<b>400 level</b> Familv	.697	-.310	.447		
Emotional	.588	.251	.492		
Financial	.715	.527	.134		
Academic	.667	-.111	.800		
Constant	23.646		.248		
R = .608, R <sup>2</sup> = .370, R <sup>2</sup> adjusted= -.024					

The data in Table 3a showed an F value of 1.013 and a P value of >.420 for 200 level tested at an alpha level of .05. The P value is greater than the alpha level and so the variables of this study did not significantly predict the academic performance of 200 level students. The Table equally showed an F value of .617 and a P value of .420 for 300 level students, tested at an alpha of .05. The P value is greater than the alpha and so the variables of the study did not significantly predict the academic performance of 300 level students. Similarly, the table revealed an F value of .939

and a P value of .505 for 300 level students tested at an alpha level of .05. The P value is greater than the alpha level and so the variables of the study did not significantly predict the academic performance of 300 level undergraduate students.

Table 3b shows an  $R^2$  value of .097 (9.7%) for 200 level students,  $R^2$  value of .154 (15.4%) for 300 level students and the  $R^2$  value of .370 (37.0%) for 400 level students as the predictive strength of the independent variables on the dependent variable. This implies that although the independent variables were not found to significantly predict the academic performance at these different levels, they however, contributed 9.7%, 15.4% and 37.0% to the academic performance of the undergraduate students in 200, 300 and 400 levels respectively.

### **Discussion of Findings**

Although stress factors as a composite variable did not significantly predict the academic performance of undergraduate students, but the parameter estimate of the regression revealed that academic stress significantly predict the students' academic performance. This finding confirmed the assertions of Agolla and Ongori (2009); Ahem, Yeung and Wong (2010) that academic stress which is manifested in the volume of home work (assignment), overcrowded lecture hall and sitting for examinations are the major academic stressors for the undergraduate students. This could be hue of the respondents of this study as overcrowded lecture halls abound in most departments of the faculties used. Besides, the different course lecturers mandatorily give the students take home assignment as part of the continued assessment. This could often times overwhelm the students especially those who receive lectures in other faculties outside theirs for courses that are not in their own department/faculty. Their inability to control the lecture time table and venue heighten their anxiety and increases their academic stress.

The study revealed that stress factors (family, emotional, financial and academic) significantly predict the academic performance of undergraduate male students. This finding corroborated the assertions of Misra and Mckean (2000), Rayle and Chung (2008) and Bang (2009) that the level of academic related stress differs among male and female students. Moreso, the findings confirmed the assertion Khan, Gulzar and Yahya (2013) that male students experience more academic tress than the female students. This could be attributed to the pressure from the family and the society that place a great demand on the male folk with the responsibility of being the caregiver to other members of the family. While the female students may win the sympathy of their parents and extended family members to prevent them from being abused for want of assistance, the male may be left unassisted as they are perceived to face less danger than the female. However, the finding of this study goes contrary to the numerous research findings of Thawalieb and Qaisy (2012), Rayle and Chung (2008), Misra and McKean (2000) that female students experience more stress than male students. It could be that the female respondents of this study display strength in the face a challenges and adopt a positive appraisal to stressful events.

Besides, the parameter estimate of the regression revealed that male students experienced more emotional stress, as it significantly predict their academic performance. This could be true of the respondents of this study as a good number of the male students engage in self menial jobs which could be physically energy sapping and emotionally demanding on the male folk. This confirmed the postulation of Khan, Gulzar and Yahya (2013) that male undergraduate students experience worse emotional disposition that equally affect their academic performance.

Although stress factors did not significantly predict the academic performance of female students, the parameter estimate of the regression revealed that financial stress significantly predicted their academic performance. This confirmed the assertion of Brougham, Zail, Mendeza and Miller (2009); Heckman and Montato (2014); Northern, O'Brien and Goetz (2010) that female students experienced more financial stress and that financial stress exact a long term impact on the students' academic performance as it plays a major role as a stressor. This could be true of the respondents of this study as most of the female students are on pressure of finance for different reasons. Beside academic materials, a good number of the female students purchase expensive mobile handset, clothing, shoes, wrist- watches, cosmetics and expensive jewelries. The desire for these expensive things especially by those whose parents cannot afford them could be stressful for the female students.

The finding of the study shows that stress factors did not significantly predict the academic performance of the students by their years of study. Although the parameter estimate of the regression shows 15.4% and 37.0% variance of stress factors to 300 and 400 levels students' respectively, they were not sufficient to affect their academic performance. However, it shows that the variables of this study have a degree of contribution on the students' academic performance. This confirmed the assertion of Shaikh, Kahloon, Kazmi, Khalid, Nawez, Khen and Khan (2004) that senior students experience higher level of tress than students of the lower levels. This could be attributed to the volume of academic workload and home assignment which they are engaged in. Being the last year of study, the students could be more concerned with their academic grade and credit units required for good grade at graduation. This could also be attributed to their level of involvement in co-curricular activities in search for means of sustaining themselves as they are at the verge of completing their university studies. In a country like ours (Nigeria), where the universities' graduate thousands of students into the labour market without job every year, the final year students are bound to be emotionally stressed as they leave school to join the teaming Nigerian youth without job.

## **Conclusion**

Based on the findings of this study, it was concluded that undergraduate students experience stress sufficient to influence their academic performance and that male undergraduate students are most affected than the female students.

## **Implications for Counselling**

The variables of this study significantly predict the academic performance of male students and have some implications. It means that University counselling unit and counsellors have a lot of counselling task to embark on for the male students. Counselling intervention programme like Rational Emotive therapy could be employed as an approach to assist the students to overcome the stress factors which interfere with their academic pursuit. Similarly, seminars on cognitive restructuring could assist the male students to manage appropriately the variables of this study. It equally implies that parents and caregivers should handle their male children with care to prevent the possibility of exposing them to more stressful situations.

The variables of this study contributed 37.0% variance to the academic performance of the 400 level students. It implies that the 400 level students are under pressure that imposes threat on their emotional wellbeing. This means that school counsellors should engage the 400, level students in more counselling intervention programmes that could assist them to address the variables of this study in relations to their academic performance.

## **Recommendations**

Based on the findings of this study, it is recommended that school counsellors should organize seminars and symposia periodically on campus for the students. Such should focus on how students can successfully manage the different stress factors on campus. Since male students experience stress more than the female students, counsellors should give special interest and attention to male students on this issue. Individual counselling is highly recommended for the male students. This could assist in addressing both the emotional and academic stress factors.

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