

Impact of Stress on Learning Outcomes in Business Education Programs

Samuel Odo Nweke

Department of Business Education, Federal College of Education, Eha-Amufu, Enugu State, Nigeria

ABSTRACT

Business Education programmes prepare teachers, office professionals, and entrepreneurs, but students in these programmes face demanding workloads, practical skill requirements, industrial attachment, and mounting financial pressure. This study examined the impact of stress on the learning outcomes of Business Education students in public tertiary institutions in Enugu State, Nigeria. A correlational survey design was adopted. From a population of 2,847 students, a sample of 338 was drawn by proportionate stratified random sampling, and 302 valid responses (89.3%) were analysed. Data were collected using the Perceived Stress Scale (PSS-10), a Sources of Academic Stress Questionnaire, the problem-focused coping subscales of the Brief COPE, and a Business Education Skills Acquisition Scale, while cumulative grade point averages (CGPA) were obtained from departmental records with students' consent. Data were analysed using descriptive statistics, Pearson correlation, multiple regression, hierarchical moderated regression, the t-test, and analysis of variance. Most students (84.4%) reported moderate stress and 12.6% reported high stress, with financial difficulties and academic workload rated as the leading stressors. Perceived stress had a significant negative relationship with CGPA ($r = -.34, p < .001$) and with skill acquisition ($r = -.32, p < .001$). The five sources of stress jointly predicted CGPA, $F(5, 296) = 4.03, p = .001$, but only financial stress was a significant individual predictor ($\beta = -.24, p < .001$). Problem-focused coping significantly moderated the stress-CGPA relationship ($\Delta R^2 = .024, p = .003$): the negative effect of stress was about three times stronger among students with low coping than among those with high coping. Female students and 300-level students reported significantly higher stress. The study concludes that stress meaningfully undermines both academic performance and practical skill acquisition in Business Education, and recommends financial support schemes, workload and assessment reforms, and structured coping-skills training within Business Education departments.

Keywords: *academic stress, learning outcomes, business education, coping strategies, skill acquisition, Enugu State*

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INTRODUCTION

Business Education is a vocational and teacher-education programme concerned with the knowledge, skills, and attitudes needed for office work, accounting, marketing, entrepreneurship, and the teaching of business subjects. In Nigeria, the National Policy on Education positions vocational and technical education, including Business Education, as central to self-reliance and national development (Federal Republic of Nigeria, 2013). Business Education graduates are expected to demonstrate not only theoretical knowledge but also practical competencies in keyboarding and information and communication technology (ICT), bookkeeping and accounting, office practice, and entrepreneurship. Achieving these outcomes requires sustained effort, regular practice, and effective concentration.

Tertiary education, however, is widely recognised as a stressful period (Pascoe et al., 2020; Robotham & Julian, 2006). Students must cope with heavy course loads, continuous assessment, examinations, practical sessions, teaching practice, and industrial attachment, often alongside financial pressure and adjustment to independent living. In Nigeria these pressures have intensified. Prolonged disruptions to academic calendars, including the extended university strike of 2022, have compressed semesters, while rising living costs, higher transport fares, and increases in school charges have placed heavy financial burdens on students and their families. Many students combine study with part-time work or trading to survive.

Stress is not inherently harmful. Moderate levels of arousal can mobilise effort and attention (Yerkes & Dodson, 1908). When demands persistently exceed a student's perceived resources, however, stress impairs attention, working memory, and motivation (Eysenck et al., 2007; Lupien et al., 2009), and may reduce class attendance, practice time, and the quality of learning. For Business Education students, whose programmes combine theory with skill-intensive practical courses, such effects could undermine both grades and the acquisition of employable skills. Whether and how strongly this occurs, which stressors matter most, and whether coping strategies can soften the impact are questions that have received limited empirical attention in Enugu State.

METHODOLOGY

Research Design and Area of the Study

The study adopted a correlational survey design, which is appropriate for determining the direction and magnitude of relationships among variables as they naturally occur, without manipulation. The study was carried out in Enugu State, located in the South-East geopolitical zone of Nigeria, with Enugu as its capital. The state comprises 17 local government areas across three senatorial districts: Enugu East, Enugu West, and Enugu North. Enugu State is a major educational centre in the South-East, with federal and state universities and colleges of education offering Business Education programmes at degree and Nigeria Certificate in Education (NCE) levels. Students in these institutions come from both urban and rural backgrounds and face the academic and economic pressures that characterise Nigerian tertiary education.

Population and Sample

The population comprised 2,847 Business Education students in four public tertiary institutions in Enugu State (two universities and two colleges of education) that offered the programme during the 2025/2026 academic session. A sample of 338 students was determined using the Krejcie and Morgan (1970) table. Proportionate stratified random sampling was used, with institution and level of study as strata, to ensure fair representation. Of the 338 questionnaires administered, 302 were completed and valid, a return rate of 89.3%. The final sample consisted of 195 female (64.6%) and 107 male (35.4%) students, distributed across 100 level (92), 200 level (77), 300 level (68), and 400 level (65).

Instruments

Five instruments were used. The Perceived Stress Scale (PSS-10; Cohen et al., 1983) measured overall perceived stress on a five-point scale from 0 (never) to 4 (very often), producing total scores from 0 to 40; scores of 0-13, 14-26, and 27-40 were interpreted as low, moderate, and high stress respectively. The Sources of Academic Stress Questionnaire (SASQ), developed by the researchers from the literature, contained 25 items in five clusters (financial difficulties, academic workload, examinations and assessment, lecturer-student relationship, and learning environment and facilities), rated on a four-point scale from 1 (not stressful) to 4 (extremely stressful), with a mean of 2.50 and above interpreted as a major source of stress. The eight problem-focused coping items of the Brief COPE (Carver, 1997), covering active coping, planning, positive reframing, and use of instrumental support, were rated on a four-point scale. The Business Education Skills Acquisition Scale (BESAS) contained 20 items on ICT and keyboarding, accounting, office practice, communication, and

entrepreneurship skills, rated on a four-point competence scale. Finally, students' CGPA on a five-point scale was obtained from departmental records with their written consent.

The SASQ and BESAS were face- and content-validated by three experts, two in Business Education and one in measurement and evaluation. A pilot test with 30 Business Education students in Ebonyi State yielded Cronbach's alpha coefficients of .81 for the PSS-10, .78 to .86 for the SASQ clusters, .79 for problem-focused coping, and .88 for the BESAS.

Method of Data Collection and Analysis

The instruments were administered in person by the researchers with the help of four trained research assistants during lecture periods, after approval by the heads of department. Participation was voluntary and anonymous, and CGPA records were linked to questionnaires using coded identifiers that were destroyed after matching, in line with the Nigeria Data Protection Act 2023. Research questions were answered using frequencies, percentages, means, and standard deviations. H01 and H02 were tested using Pearson's correlation, H03 using multiple regression, H04 using hierarchical moderated regression with mean-centred predictors (Hayes, 2018), and H05 using the independent-samples t-test and one-way analysis of variance (ANOVA) with Tukey's post hoc test. Regression assumptions were checked: variance inflation factors ranged from 1.01 to 1.02, the Durbin-Watson statistic was 1.93, and residuals were approximately normally distributed. Effect sizes were interpreted following Cohen (1988).

RESULTS

Level of Perceived Stress

Distribution of Perceived Stress Levels and Mean Learning Outcomes

Table 1

Stress Level (PSS-10)	n	%	CGPA M (SD)	Skill Acquisition M (SD)
Low (0-13)	9	3.0	3.51 (0.71)	3.36 (0.32)
Moderate (14-26)	255	84.4	3.28 (0.54)	2.85 (0.47)
High (27-40)	38	12.6	2.94 (0.65)	2.64 (0.34)
Total	302	100.0	3.24 (0.57)	2.83 (0.47)

Note. Overall PSS-10 M = 20.94, SD = 4.33. CGPA is on a 5-point scale; skill acquisition on a 4-point scale.

Sources of Stress

Mean Ratings of Sources of Stress and Their Correlation with CGPA

Table 2

Source of Stress	M	SD	Remark	Rank	r with CGPA
Academic workload	3.10	0.46	Major source	1	-.06
Financial difficulties	3.05	0.53	Major source	2	-.23*
Examinations and assessment	2.90	0.53	Major source	3	-.04
Learning environment and facilities	2.74	0.61	Major source	4	.02
Lecturer-student relationship	2.50	0.59	Major source	5	-.01

Note. Criterion mean = 2.50. $p^* < .001$.

As shown in Table 2, all five clusters met the criterion mean of 2.50. Academic workload ($M = 3.10$) and financial difficulties ($M = 3.05$) were rated the most stressful, followed by examinations and assessment, the learning environment, and lecturer-student relationships. Although workload was rated highest, only financial difficulties correlated significantly with CGPA.

Relationship Between Stress and Learning Outcomes (H01 and H02)

Pearson Correlation Between Perceived Stress and Learning Outcomes

Table 3

Variables	n	r	r ²	p	Decision
Perceived stress and CGPA	302	-.343	.118	< .001	H01 rejected
Perceived stress and skill acquisition	302	-.319	.102	< .001	H02 rejected

Sources of Stress as Predictors of Academic Performance (H03)

Multiple Regression of CGPA on Sources of Stress

Table 4

Predictor	B	SE	β	t	p
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(Constant)	4.448	0.407		10.92	< .001
Financial difficulties	-0.258	0.061	-.241	-4.26	< .001
Academic workload	-0.105	0.070	-.085	-1.49	.137
Examinations and assessment	-0.041	0.061	-.038	-0.68	.498
Lecturer-student relationship	-0.017	0.055	-.018	-0.31	.755
Learning environment and facilities	0.025	0.053	.026	0.47	.641

Note. $R = .253$, $R^2 = .064$, adjusted $R^2 = .048$; $F(5, 296) = 4.03$, $p = .001$.

Moderating Role of Problem-Focused Coping (H04)

Hierarchical Moderated Regression of CGPA on Stress and Problem-Focused Coping

Table 5

Step and Predictor	B	SE	t	p	R ²	ΔR^2
Step 1		.183	.183*			
Perceived stress (centred)	-0.046	0.007	-6.69	< .001		
Problem-focused coping (centred)	0.266	0.053	5.03	< .001		
Step 2		.207	.024**			
Stress $\times$ Coping	0.041	0.014	2.98	.003		

Note. Step 1: $F(2, 299) = 33.53$, $p < .001$. Step 2 F change (1, 298) = 8.87, $p = .003$; overall $F(3, 298) = 25.90$, $p < .001$. All coefficients are from the full (Step 2) model with mean-centred predictors. $p < .001$. $p^* < .01$.

Differences in Stress by Gender and Level of Study (H05)

Perceived Stress by Gender and Level of Study

Discussion of Findings

The finding that most Business Education students experienced moderate stress and about one in eight experienced high stress is consistent with evidence that stress is widespread in tertiary education (Pascoe et al., 2020; Stallman, 2010). The significant negative relationships between stress and both CGPA and skill acquisition agree with Richardson et al. (2012),

Sohail (2013), and Struthers et al. (2000). These results can be explained by Attentional Control Theory (Eysenck et al., 2007): stressed students devote part of their limited working memory to worry, which reduces the efficiency with which they learn during lectures and practical sessions. The effect on skill acquisition is particularly important in Business Education, because skills such as keyboarding, accounting, and computer applications require regular, focused practice. The absence of a curvilinear relationship suggests that, at the levels of stress common among these students, there is little evidence of a beneficial "optimal" zone; any motivating effect of stress appears to be outweighed by its costs.

A notable finding is that, although academic workload was rated the most stressful factor, financial difficulties was the only source of stress that significantly predicted CGPA. This supports Conservation of Resources Theory (Hobfoll, 1989): financial hardship threatens resources that are essential for learning, forcing students to miss classes, delay the purchase of textbooks and materials, lack access to computers and data for practical work, or take on part-time jobs that consume study time. Workload and examinations, on the other hand, are shared by all students and may be perceived as stressful without necessarily reducing performance, as they also structure study effort. The finding reflects the harsh economic conditions that Nigerian students have faced in recent years and echoes Beiter et al. (2015), who identified financial concerns among the leading stressors of students.

The moderating role of problem-focused coping supports the Transactional Model of Stress and Coping (Lazarus & Folkman, 1984), which holds that the impact of stressors depends on students' appraisal of their resources. Students who planned their work, took direct action, reframed challenges positively, and sought practical help were much less affected academically by stress than students who lacked these strategies. This result, consistent with Struthers et al. (2000), is encouraging because coping skills, unlike many stressors, can be taught.

The higher stress reported by female students may reflect additional domestic responsibilities, safety concerns, and social expectations, as well as a greater willingness to report stress. The peak in stress at 300 level corresponds to a stage when many Business Education students undertake industrial attachment or teaching practice alongside demanding core courses, including advanced accounting and office technology, which can compound academic and financial demands.

CONCLUSION

This study concludes that stress is prevalent among Business Education students in Enugu State and has a meaningful negative impact on their learning outcomes, lowering both academic performance and the acquisition of practical skills. Financial hardship is the stressor most directly linked to poorer grades, while problem-focused coping substantially reduces the harm that stress does to academic performance. Female and 300-level students are particularly exposed to stress. Improving learning outcomes in Business Education programmes therefore requires attention not only to teaching and curriculum but also to the financial circumstances and coping capacities of students.

Recommendations

1. Tertiary institutions in Enugu State, working with the state government and alumni associations, should expand bursaries, work-study schemes, and emergency financial support targeted at Business Education students in financial need.
2. Business Education departments should integrate structured stress management and coping-skills training, emphasising planning, active problem-solving, and help-seeking, into orientation programmes and general studies courses.
3. Institutions should strengthen student counselling units and ensure that counsellors are accessible, adequately staffed, and publicised within Business Education departments.
4. Departments should review the scheduling of continuous assessment, practical work, and industrial attachment, particularly at 300 level, to avoid clustering of heavy demands.
5. Lecturers should provide open access to computer laboratories and practice materials so that students with financial constraints can still practise essential skills.
6. Support programmes should give attention to the particular stressors faced by female students, including mentoring and peer-support networks.

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