



Stress Management in Nigerian Universities: The Role of Career Stage and Demographic Factors in a Multivariate Analysis

Mmefone A. Ojong^{1*} , Stella Asu-Okang² , Franca G. Adieme³ , Mercy V. Owan² ,
Michael E. Asuquo² , Ntasiobi C. N. Igu⁴ , Godian P. Okenjom² , Catherine N. Elechi⁵ ,
Valentine J. Owan^{6,7}

¹ Department of Public Health, University of Calabar, Calabar, NIGERIA

² Department of Educational Management, University of Calabar, Calabar, NIGERIA

³ Department of Educational Management and Business Studies, Faculty of Education, Federal University Oye-Ekiti, Ekiti State, NIGERIA

⁴ Department of Educational Management and Foundational Studies, Alex Ekwume Federal University, Ndufu-Alike, Ebonyi State, NIGERIA

⁵ Department of Educational Management, Enugu State University of Science and Technology, Enugu, NIGERIA

⁶ Department of Educational Psychology, University of Calabar, Calabar, NIGERIA

⁷ School of Public Health, University of Port Harcourt, Port Harcourt, NIGERIA

* Correspondence: ogongmmefone@gmail.com

CITATION: Ojong, M. A., Asu-Okang, S., Adieme, F. G., Owan, M. V., Asuquo, M. E., Igu, N. C. N., Okenjom, G. P., Elechi, C. N., & Owan, V. J. (2026). Stress Management in Nigerian Universities: The Role of Career Stage and Demographic Factors in a Multivariate Analysis. *Educational Point*, 3(2), e164. <https://doi.org/10.71176/edup/19102>

ARTICLE INFO

Received: 6 May 2026
Accepted: 22 June 2026

OPEN ACCESS

ABSTRACT

The extent to which lecturers' age, gender, marital status, educational qualification, and academic rank are associated with stress management among university lecturers in Nigeria was examined in this study using a multivariate approach. A cross-sectional survey design was employed, with a multistage stratified sample of 10,350 lecturers drawn from federal, state, and private universities. Data were collected using a structured questionnaire based on established measures, including selected subscales from the Brief COPE, the Multidimensional Scale of Perceived Social Support, and recovery and appraisal measures adapted from established frameworks. Multivariate analysis of variance (MANOVA) and Tukey's HSD post-hoc tests were conducted, with partial η^2 reported as effect sizes ($p < .05$). Statistically significant multivariate associations were observed for all variables with the combined stress management outcomes ($p < .001$). Academic rank and age had the largest effects ($\eta_p^2 \approx .099-.102$), followed by educational qualification ($\eta_p^2 = .086$), while gender ($\eta_p^2 = .060$) and marital status ($\eta_p^2 = .048$) had smaller effects. Higher mean scores across the stress management dimensions were observed among younger lecturers. Male lecturers had slightly higher mean scores in cognitive appraisal and self-recovery, although gender differences were generally small. Higher mean scores in social support, adaptive coping, and self-recovery were

observed among divorced lecturers, noting the small size of this subgroup. Lecturers with doctoral qualifications had higher mean scores in stress awareness and adaptive coping, while senior academics had higher mean scores in social support and cognitive appraisal. Pairwise group differences were identified across several dimensions, although most effects were small to moderate in magnitude. The pattern of results indicates that variation in stress management is more strongly associated with career stage and position within the academic system than with personal characteristics alone. Implications point to the need for strengthened institutional support, particularly for early-career and lower-ranked staff, alongside consideration of group differences in the design of interventions aimed at improving well-being and productivity.

Keywords: stress management, demographic variables, professional variables, stress awareness, coping strategies, self-recovery, social support

INTRODUCTION

Work-related stress has become a persistent concern in higher education, where academic roles now extend well beyond teaching to include research, administration, and community service. As universities respond to globalisation, digitalisation, and rising expectations, lecturers are under increasing pressure to perform. These demands have made academic work particularly demanding and, in many cases, difficult to sustain over time (Ahmad et al., 2024; Kim et al., 2023; Shen & Slater, 2021). When these pressures are not well managed, they can lead to burnout, health problems, reduced job satisfaction, absenteeism, and lower productivity (Kushendar & Maba, 2022; Lavy, 2022). The World Health Organization (2023) has also identified stress as a major global health concern that requires serious attention.

In Nigeria, the situation is even more challenging. Many university lecturers work under difficult conditions, including heavy teaching loads, limited funding, poor infrastructure, and large class sizes. These are often combined with expectations to publish regularly and take on administrative duties (Obinna-Akakuru et al., 2022; Oderinde et al., 2024; Okechukwu et al., 2022). Issues such as brain drain and role conflict further increase the pressure and reduce the support available to staff (Jacob et al., 2021; Obasi & Adieme, 2021). Research has linked these conditions to serious health concerns among lecturers, including hypertension, anxiety, and depression (Coker et al., 2024; Omori & Bassey, 2019). Some studies suggest that more than 80% of Nigerian lecturers experience high levels of work-related stress (Bakare et al., 2025). This not only affects their well-being but also has implications for the quality of teaching and research in universities.

Because of this, attention has shifted from simply identifying stress to understanding how it is managed. Stress management refers to how individuals recognise stress, respond to it, and regulate its effects so that it does not interfere with their well-being or performance (Salimzadeh et al., 2021; Shen & Slater, 2021). In academic settings, this often involves being aware of stress, using effective coping strategies, and finding ways to recover after demanding periods. Stress management was conceptualised as a multidimensional construct comprising five interrelated components: stress awareness, cognitive appraisal, adaptive coping, social support, and self-recovery. Stress awareness and cognitive appraisal represent perceptual and evaluative processes through which lecturers recognise and interpret stressors. Adaptive coping and social support reflect behavioural and interpersonal strategies used to manage stress, while self-recovery represents the ability to regain psychological balance following stressful experiences. These dimensions collectively capture how lecturers understand, respond to, and recover from work-related stress. These ideas align with the Stress and Coping Theory, which explains how people assess stressful situations and respond to them. Studies have identified approaches such as adaptive coping, social support, and psychological recovery as common ways lecturers deal with stress (Hammoudi-Halat et al., 2023; Kim et al., 2023; Udodiugwu, 2024). However, not all lecturers manage stress in the same way.

Differences in stress management are often linked to both personal and professional factors. For example, age and gender can influence how individuals perceive stress and the strategies they use to deal with it. Experience, career stage, and social expectations may all play a role (Aduma et al., 2022; Coker et al., 2024; Yazdi et al., 2023). Marital status is also relevant, as it affects the level of social support available and the balance between work and family responsibilities (Hossain et al., 2021). Educational qualification matters as well; while higher qualifications may strengthen problem-solving skills, they often come with increased responsibilities and expectations (Aderibigbe et al., 2020).

Professional factors, particularly academic rank, are equally important. Rank determines access to resources, level of responsibility, and degree of autonomy within the university. Early-career lecturers often face high expectations with limited support, while senior academics may benefit from greater control over their work and stronger professional networks. These patterns are consistent with the Job Demands–Resources Model, which explains how job demands can lead to stress, while available resources can help reduce its impact (Bakker & Demerouti, 2017). Studies in higher education suggest that lower academic rank is often linked to higher stress, while more senior positions tend to offer some level of protection (Cadena-Povea et al., 2025; Mantai & Marrone, 2023).

Even with growing interest in this area, there are still important gaps. Many studies focus on one factor at a time rather than looking at how different factors work together. Others rely on data from a single institution, which limits how widely the findings can be applied, especially in a country as varied as Nigeria. In addition, few studies use analytical approaches that can examine several aspects of stress management at once. This makes it difficult to fully understand how personal and professional factors jointly relate to stress management among lecturers. This study addresses these gaps by examining how selected demographic factors (age, gender, marital status, and educational qualification) and a key professional factor (academic rank) are associated with stress management among Nigerian university lecturers. Stress management is treated as a multidimensional concept that includes stress awareness, adaptive coping, and self-recovery. Using a large sample drawn from multiple institutions and a multivariate approach, the study seeks to give a clearer picture of how these factors relate to the way lecturers manage stress. The study is guided by the following research questions:

- To what extent does age relate to stress management among lecturers?
- To what extent does gender relate to stress management among lecturers?
- To what extent does marital status relate to stress management among lecturers?
- To what extent does educational qualification relate to stress management among lecturers?
- To what extent does academic rank relate to stress management among lecturers?

METHOD

Research Design and Context

The study employed a quantitative, cross-sectional survey design to examine how demographic and professional variables determine stress management among lecturers in Nigerian universities. Data was collected at a single point in time from a geographically distributed sample of lecturers across the federal, state, and private universities in Nigeria. This design was appropriate for estimating associations between multiple predictor (demographic and professional) variables and their multiple correlated outcomes, including stress awareness, adaptive coping, and self-recovery. The Nigerian university context is heterogeneous, comprising federal, state, and private universities, as well as urban and rural campuses, with varying levels of teaching and research intensity (Olaleye et al., 2020). To reflect this heterogeneity, the sampling strategy (in

Section 4.2) was stratified by university-type and geopolitical zone, ensuring broad coverage of institutional contexts that may moderate stress management.

Participants

The study population consisted of academic staff (lecturers) employed by accredited Nigerian universities with teaching responsibilities, including Lecturer I/II, Senior Lecturer, Associate Professor, Professor, and equivalent academic positions. Eligibility was limited to lecturers employed at the selected universities at the time of data collection and actively engaged in teaching and/or related academic duties. Adjunct or visiting staff not primarily employed by the institution, as well as staff on long-term leave, were excluded. Academic staff in Nigerian public and private universities are predominantly Nigerian (Nwokeocha, 2023; Okotoni & Kugbayi, 2024), with a higher proportion of males, particularly at senior lecturer and professorial levels, although the gender gap has been narrowing (Okonta & Nkedishu, 2024). The age range spans from early-career academics in their late twenties to senior professors beyond retirement age. Ethnocultural and regional backgrounds vary widely, especially in public institutions, reflecting the range of ethnic groups in Nigeria, although representation is not evenly distributed across all institutions.

Sampling Procedures

A priori power analysis using G*Power was carried out to estimate the minimum sample size required for the multivariate analysis. Based on an F-test (MANOVA: global effects), with a small effect size ($f^2(V) = 0.013$), an alpha level of 0.05, statistical power of 0.95, five groups, and five dependent variables, the required sample size was estimated at 615 participants. The final sample of 10,350 respondents exceeded this threshold, allowing for greater precision in the estimates and more stable subgroup comparisons. Given the large sample size, effect sizes were interpreted alongside statistical significance. A multistage stratified sampling approach was applied to achieve representation across the Nigerian university system. Universities were grouped by ownership type (federal, state, and private), after which faculties were selected within each group, and lecturers were reached through departmental administrators. Specifically, universities were stratified by ownership type (federal, state, private) and geopolitical zone (6 zones). A total of 27 universities were selected in proportion (12 federal, 9 state, 6 private) to reflect the national distribution. Within each selected university, faculties/departments were randomly sampled, and lecturers were invited via departmental channels. The sample size was set to support comparisons across demographic and professional groups and to account for variation across university types. Data collection was carried out using both online and paper-based formats to allow broader participation, including lecturers with limited internet access. A total of 10,350 valid responses were retained for analysis, well above the minimum requirement. Participant characteristics are reported in the Results section.

Instrument and Measures

Data were collected using a structured questionnaire made up of five sections. Section A captured demographic and professional information, including age, gender, marital status, educational qualification, and academic rank. Sections B to E contained measures of the study variables. Stress management was assessed as a multidimensional construct comprising stress awareness, cognitive appraisal, adaptive coping, social support, and self-recovery. Each dimension was measured using established instruments and selected subscales that align with the focus of this study. Stress awareness and cognitive appraisal were measured using adapted items drawn from appraisal-based measures rooted in the Stress and Coping Theory. Specifically, items were adapted from cognitive appraisal frameworks developed by Richard S. Lazarus and Susan Folkman (Lazarus & Folkman, 1984), as well as related appraisal-based instruments used in occupational stress research. These items assessed the extent to which lecturers recognise stressors in their work environment and how they interpret or evaluate such situations. The items were slightly reworded to

reflect the academic work setting while retaining their original meaning. Adaptive coping was measured using selected subscales from the Brief COPE developed by Charles S. Carver (Carver, 1997). Specifically, items relating to active coping, planning, positive reframing, and use of emotional support were included. These subscales capture practical and constructive ways individuals respond to stress. Social support was measured using the Multidimensional Scale of Perceived Social Support developed by Gregory D. Zimet and colleagues (Zimet et al., 1988). This scale assesses perceived support from family, friends, and significant others and has been widely applied in occupational and educational research. Self-recovery was assessed using the Brief Resilience Scale developed by Bruce W. Smith and colleagues (Smith et al., 2008), which measures the ability to bounce back from stress. To strengthen the assessment of recovery experiences, selected items were also adapted from the Recovery Experience Questionnaire developed by Sabine Sonnentag and Charlotte Fritz (Sonnentag & Fritz, 2007), focusing on psychological detachment and relaxation after work. All items were rated on a five-point Likert scale, with response options ranging from strongly disagree to strongly agree or from never to very often, depending on the original scale format. Higher scores indicated a stronger presence of each stress management component.

Validity and Reliability

Face and content validity were established through expert review by three specialists in educational psychology and measurement. A pilot study was conducted with 100 lecturers from two universities not included in the main sample. Feedback from the pilot led to minor revisions in wording to improve clarity and relevance. Construct validity was examined using exploratory factor analysis (EFA). The Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy and Bartlett’s test of sphericity were used to assess the suitability of the data for factor analysis. The results indicated that the data were appropriate for factor analysis. The EFA revealed a clear factor structure consistent with the five proposed dimensions of stress management: stress awareness, cognitive appraisal, adaptive coping, social support, and self-recovery. Items loaded strongly on their respective factors, with minimal cross-loadings. Internal consistency was assessed using Cronbach’s alpha coefficients. The pilot results indicated acceptable reliability for all scales: stress awareness (.80), cognitive appraisal (.79), adaptive coping (.82), social support (.84), and self-recovery (.83). These values were considered adequate for the main study. Reliability estimates based on the full sample are reported in the Results section.

Ethical Considerations

Ethical approval was obtained from the primary investigator’s institutional review board (IRB) and, where applicable, from relevant university research ethics committees. Administrative permission was secured from participating universities through their registrars or departmental offices. Participation was voluntary and anonymous. An information sheet outlining the purpose of the study, procedures, and participants’ rights was provided prior to obtaining informed consent. Data were stored on password-protected and encrypted devices accessible only to the research team, and results are reported in aggregate form to maintain confidentiality.

Data Collection and Analysis

Data collection was conducted over eight weeks. The questionnaire was administered both online (via Google Forms) and in paper format to ensure wider participation, particularly among lecturers with limited internet access. Departmental administrators assisted with distribution and follow-up reminders. Completed paper questionnaires were double-entered to reduce the likelihood of data entry errors. Periodic follow-ups were carried out to improve response rates across the different university categories. Data were analysed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics, including means and standard deviations, were computed to summarise the study variables. The main analysis involved multivariate analysis of variance (MANOVA) to examine whether demographic and professional variables (age, gender, marital

status, educational qualification, and academic rank) were related to the combined dependent variables: stress awareness, cognitive appraisal, adaptive coping, social support, and self-recovery. Where significant multivariate effects were observed, follow-up univariate analyses and appropriate post hoc tests were conducted to identify specific group differences. Before conducting the analysis, the key assumptions of MANOVA were assessed. These included normality, linear relationships among the dependent variables, homogeneity of variance–covariance matrices (tested using Box’s M), and absence of multicollinearity. Effect sizes were reported using partial eta squared (η_p^2) to indicate the magnitude of the observed effects. All statistical tests were evaluated at the 0.05 level of significance. Given the large sample size, effect sizes were interpreted alongside statistical significance.

RESULTS

Respondents’ Profile

The sample consisted of 10,350 participants, of whom 6,150 (59.4%) were male, and 4,200 (40.6%) were female. Regarding age, 2,250 participants (21.7%) were less than 25 years old, 4,050 (39.1%) were between 25 and 34 years, 2,400 (23.2%) were between 35 and 44 years, and 1,650 (15.9%) were between 45 and 54 years. With respect to marital status, 2,100 participants (20.3%) were single, 8,100 (78.2%) were married, and 150 (1.4%) were divorced. Concerning educational qualification, 900 participants (8.7%) held a bachelor’s degree, 3,000 (28.9%) held a master’s degree, and 6,450 (62.4%) held a doctorate. Participants’ academic rank included 2,850 early-career faculty (27.5%), 3,900 mid-career faculty (37.7%), and 3,600 senior-career faculty (34.8%). Overall, the sample was predominantly male, married, and highly educated, with representation across all career stages and a majority of participants in the 25–34 years age range ([Table 1](#)).

Hypotheses Testing

A multivariate analysis of variance (MANOVA) was conducted to examine whether age, gender, marital status, educational qualification, and academic rank were associated with the combined dimensions of stress management (stress awareness, social support, adaptive coping, cognitive appraisal, and self-recovery).

Table 1. Demographic Characteristics of the Respondents (N = 10,350)

Variable	Category	n	%
Sex	Male	6,150	59.40
	Female	4,200	40.60
Age (years)	Less than 25	2,250	21.70
	25–34	4,050	39.10
	35–44	2,400	23.20
	45–54	1,650	15.90
Marital Status	Single	2,100	20.30
	Married	8,100	78.20
	Divorced	150	1.40
Qualification	Bachelor’s degree	900	8.70
	Master’s degree	3,000	28.90
	Doctorate degree	6,450	62.40
Rank	Early career faculty (GA & AL)	2,850	27.50
	Mid-career faculty (L2 & L1)	3,900	37.70
	Senior career faculty (SL, Assoc. Prof., Prof)	3,600	34.80

Note. GA = Graduate Assistant; AL = Assistant Lecturer; L1/L2 = Lecturer levels; SL = Senior Lecturer; Assoc. Prof. = Associate Professor; Prof = Professor.

Preliminary checks indicated that the data were suitable for multivariate analysis. Given the large sample size, emphasis was placed on effect sizes alongside statistical significance. **Table 2** presents the estimated marginal means for the five stress management dimensions. Scores were highest for self-recovery ($M = 13.446$, $SE = 0.093$) and cognitive appraisal ($M = 13.236$, $SE = 0.076$), followed by adaptive coping ($M = 12.477$, $SE = 0.083$). Social support ($M = 10.479$, $SE = 0.080$) and stress awareness ($M = 9.851$, $SE = 0.067$) had comparatively lower mean values. These results indicate that, within the sample, recovery and appraisal-related processes were more strongly endorsed than awareness and support-related aspects. Multivariate test results (**Table 3**) indicated that all predictors were significantly associated with the combined stress management outcomes ($p < .001$). However, the magnitude of these effects varied. Age ($\eta_p^2 = .102$) and academic rank ($\eta_p^2 = .099$) showed the largest multivariate effects, followed by educational qualification ($\eta_p^2 = .086$). Marital status had a smaller effect ($\eta_p^2 = .048$), while gender showed the weakest multivariate association ($\eta_p^2 = .060$). These results suggest that differences in stress management are more strongly related to structural and career-related factors than to gender.

Univariate analyses (**Table 4**) provided further detail on these relationships. Age showed moderate effects on stress awareness ($\eta_p^2 = .118$) and social support ($\eta_p^2 = .093$), and smaller effects on self-recovery ($\eta_p^2 = .054$), adaptive coping ($\eta_p^2 = .013$), and cognitive appraisal ($\eta_p^2 = .012$). Academic rank also showed moderate effects on stress awareness ($\eta_p^2 = .066$) and social support ($\eta_p^2 = .061$), with smaller effects on the remaining dimensions. Educational qualification was associated with small-to-moderate effects across most dimensions, particularly social support ($\eta_p^2 = .057$), stress awareness ($\eta_p^2 = .044$), and adaptive coping ($\eta_p^2 = .042$), but had no meaningful effect on cognitive appraisal ($\eta_p^2 < .001$, $p = .496$). Marital status showed generally small effects, with the largest observed for self-recovery ($\eta_p^2 = .042$) and social support ($\eta_p^2 = .026$). Gender differences, although statistically significant, were negligible in magnitude for most outcomes (η_p^2 ranging from $< .001$ to $.032$). The only comparatively larger effect was observed for cognitive appraisal ($\eta_p^2 = .032$), while effects on other dimensions were minimal. These findings indicate that age, academic rank, and educational qualification are more meaningful correlates of stress management than gender or marital status. However, even for the strongest predictors, most effects fall within the small-to-moderate range, suggesting that differences across groups, while detectable, are modest in practical terms.

Age

A multivariate analysis of variance (MANOVA) was conducted to examine whether age was associated with the combined stress management dimensions. The multivariate test was statistically significant, Wilks' $\Lambda = .724$, $F(15, 28,531) = 236.45$, $p < .001$, $\eta_p^2 = .102$, indicating a moderate overall effect of age on the combined outcomes.

Table 2. Estimated Marginal Means for Dependent Variables (Grand Means)

Dependent Variable	Mean	SE	95% CI (Lower, Upper)
Stress Awareness	9.851	0.067	9.720, 9.982
Social Support	10.479	0.08	10.321, 10.636
Adaptive Coping	12.477	0.083	12.315, 12.64
Cognitive Appraisal	13.236	0.076	13.087, 13.384
Self-recovery	13.446	0.093	13.263, 13.628

Table 3. Multivariate Analyses of Demographic Influences on Stress Management

Independent variables	Pillai's Trace	Wilks' λ	F (df)	p	η_p^2
Age	0.295	0.724	236.45 (15, 28531)	.000	0.102
Gender	0.060	0.940	132.14 (5, 10335)	.000	0.060
Marital Status	0.096	0.906	104.01 (10, 20670)	.000	0.048
Educational Qualifications	0.171	0.835	194.56 (10, 20670)	.000	0.086
Rank	0.198	0.812	227.46 (10, 20670)	.000	0.099

Table 4. Univariate Analyses of Demographic Influences on Stress Management Outcomes

Independent variables	Dependent Variable	F (df)	p	η_p^2
Age	Stress Awareness	461.32 (3,10339)	.000	.118
	Social Support	352.88 (3,10339)	.000	.093
	Adaptive Coping	44.32 (3,10339)	.000	.013
	Cognitive Appraisal	43.05 (3,10339)	.000	.012
	Self-Recovery	195.09 (3,10339)	.000	.054
Gender	Stress Awareness	40.43 (1,10339)	.000	.004
	Social Support	12.40 (1,10339)	.000	.001
	Adaptive Coping	4.28 (1,10339)	.039	.000
	Cognitive Appraisal	343.11 (1,10339)	.000	.032
	Self-Recovery	200.97 (1,10339)	.000	.019
Marital Status	Stress Awareness	32.99 (2,10339)	.000	.006
	Social Support	137.93 (2,10339)	.000	.026
	Adaptive Coping	35.39 (2,10339)	.000	.007
	Cognitive Appraisal	28.01 (2,10339)	.000	.005
	Self-Recovery	228.17 (2,10339)	.000	.042
Educational Qualifications	Stress Awareness	237.11 (2,10339)	.000	.044
	Social Support	309.79 (2,10339)	.000	.057
	Adaptive Coping	225.97 (2,10339)	.000	.042
	Cognitive Appraisal	0.70 (2,10339)	.496	.000
	Self-Recovery	107.34 (2,10339)	.000	.020
Rank	Stress Awareness	365.63 (2,10339)	.000	.066
	Social Support	337.12 (2,10339)	.000	.061
	Adaptive Coping	20.31 (2,10339)	.000	.004
	Cognitive Appraisal	114.57 (2,10339)	.000	.022
	Self-Recovery	33.69 (2,10339)	.000	.006

Follow-up univariate analyses (**Table 4**) indicated that age was associated with all five dimensions, although the magnitude of these effects varied. The largest effects were observed for stress awareness ($\eta_p^2 = .118$) and social support ($\eta_p^2 = .093$), both in the moderate range. Self-recovery showed a smaller but still meaningful effect ($\eta_p^2 = .054$), while adaptive coping ($\eta_p^2 = .013$) and cognitive appraisal ($\eta_p^2 = .012$) were associated with small effects.

Estimated marginal means (**Table 5**) indicated a consistent pattern across most outcomes. Lecturers under 25 years reported the highest scores for stress awareness ($M = 10.86$), social support ($M = 12.60$), adaptive coping ($M = 13.20$), cognitive appraisal ($M = 14.06$), and self-recovery ($M = 15.05$). In contrast, lecturers aged 45–54 years reported the lowest scores on stress awareness ($M = 7.88$), social support ($M = 8.40$), adaptive coping ($M = 11.84$), and self-recovery ($M = 11.86$). Differences in cognitive appraisal were comparatively small across age groups, although the youngest group still reported the highest mean.

Post hoc comparisons (Tukey HSD; Appendix A) indicated that many of the observed differences were driven by contrasts between the youngest and oldest groups. In particular, lecturers under 25 years scored significantly higher than older groups on stress awareness and social support, while differences in adaptive coping and cognitive appraisal were smaller and less consistent across age categories. For self-recovery, the youngest group reported higher scores than older groups, although differences narrowed across the middle age ranges. These findings indicate that age is meaningfully associated with certain aspects of stress management, particularly stress awareness and social support, while its relationship with adaptive coping and cognitive appraisal is comparatively modest.

Gender

A multivariate analysis of variance (MANOVA) was conducted to examine whether gender was associated with the combined stress management dimensions. The multivariate test was statistically significant,

Table 5. Estimated Marginal Means for Stress Management Components by Age

Dependent Variable	Age Group	Mean	SE
Stress awareness	Less than 25 years	10.860	0.090
	25 to 34 years	10.160	0.080
	35 to 44 years	10.510	0.090
	45 to 54 years	7.880	0.090
Social support	Less than 25 years	12.600	0.110
	25 to 34 years	10.590	0.090
	35 to 44 years	10.330	0.100
	45 to 54 years	8.400	0.100
Adaptive coping	Less than 25 years	13.200	0.110
	25 to 34 years	12.290	0.100
	35 to 44 years	12.580	0.110
	45 to 54 years	11.840	0.110
Cognitive appraisal	Less than 25 years	14.060	0.100
	25 to 34 years	13.100	0.090
	35 to 44 years	12.810	0.100
	45 to 54 years	12.970	0.100
Self-recovery	Less than 25 years	15.050	0.120
	25 to 34 years	14.000	0.110
	35 to 44 years	12.880	0.120
	45 to 54 years	11.860	0.120

Wilks' $\Lambda = .940$, $F(5, 10,335) = 132.14$, $p < .001$, $\eta_p^2 = .060$, indicating a small-to-moderate overall effect. Follow-up univariate analyses (Table 4) indicated that gender was associated with all five dimensions; however, the magnitude of these effects was generally small. The largest effect was observed for cognitive appraisal ($\eta_p^2 = .032$), followed by self-recovery ($\eta_p^2 = .019$). Effects for stress awareness ($\eta_p^2 = .004$), social support ($\eta_p^2 = .001$), and adaptive coping ($\eta_p^2 < .001$) were negligible, despite reaching statistical significance. Estimated marginal means (Table 6) indicated modest differences between male and female lecturers. Male lecturers reported slightly higher scores in stress awareness ($M = 9.99$), cognitive appraisal ($M = 13.71$), and self-recovery ($M = 13.89$), while female lecturers reported marginally higher social support ($M = 10.57$). Scores for adaptive coping were very similar across groups. These findings indicate that although gender differences are statistically detectable, their magnitude is small. Gender appears to have limited practical importance in explaining variation in stress management compared to other factors examined in the study.

Marital Status

A multivariate analysis of variance (MANOVA) was conducted to examine whether marital status was associated with the combined stress management dimensions.

Table 6. Estimated Marginal Means by Sex

Dependent Variable	Sex	Mean	SE
Stress awareness	Male	9.994	0.070
	Female	9.707	0.071
Social support	Male	10.383	0.084
	Female	10.574	0.085
Adaptive coping	Male	12.535	0.087
	Female	12.420	0.088
Cognitive appraisal	Male	13.708	0.079
	Female	12.764	0.080
Self-recovery	Male	13.891	0.098
	Female	13.000	0.099

The multivariate test was statistically significant, Wilks' $\Lambda = .906$, $F(10, 20,670) = 104.01$, $p < .001$, $\eta_p^2 = .048$, indicating a small overall effect. Follow-up univariate analyses (Table 4) indicated that marital status was associated with all five dimensions, although the magnitude of these effects was generally small. The largest effects were observed for self-recovery ($\eta_p^2 = .042$) and social support ($\eta_p^2 = .026$), while effects for stress awareness ($\eta_p^2 = .006$), adaptive coping ($\eta_p^2 = .007$), and cognitive appraisal ($\eta_p^2 = .005$) were minimal. Estimated marginal means (Table 7) indicated some variation across groups. Divorced lecturers reported higher scores for social support ($M = 12.18$), adaptive coping ($M = 13.75$), cognitive appraisal ($M = 13.91$), and self-recovery ($M = 16.99$), while single lecturers reported slightly higher stress awareness ($M = 10.43$). Married lecturers tended to fall between these groups on most dimensions.

Post hoc comparisons (Tukey HSD; Appendix B) indicated that several of these differences were statistically significant, particularly for social support and self-recovery. However, given the small effect sizes, these differences should be interpreted with caution. It is also important to note that the divorced group represents a very small proportion of the sample, which may affect the stability of the estimates for this category. As such, the higher scores observed for this group should be interpreted carefully. Overall, marital status is associated with variation in stress management, but the magnitude of these differences is small, suggesting limited practical significance.

Educational Qualifications

A multivariate analysis of variance (MANOVA) was conducted to examine whether educational qualification was associated with the combined stress management dimensions. The multivariate test was statistically significant, Wilks' $\Lambda = .835$, $F(10, 20,670) = 194.56$, $p < .001$, $\eta_p^2 = .086$, indicating a moderate overall effect. Follow-up univariate analyses (Table 4) indicated that educational qualification was associated with most dimensions, although the magnitude of these effects was generally small to moderate. The largest effects were observed for social support ($\eta_p^2 = .057$), stress awareness ($\eta_p^2 = .044$), and adaptive coping ($\eta_p^2 = .042$). Self-recovery showed a smaller effect ($\eta_p^2 = .020$), while cognitive appraisal was not associated with educational qualification, $F(2, 10,339) = 0.70$, $p = .496$, $\eta_p^2 < .001$. Estimated marginal means (Table 8) indicated a clear pattern across several outcomes. Lecturers with doctoral degrees reported higher scores in stress awareness ($M = 11.05$), adaptive coping ($M = 13.30$), and self-recovery ($M = 14.03$). Those with master's degrees reported the highest levels of social support ($M = 11.71$) and also scored highly on adaptive coping ($M = 13.18$) and self-recovery ($M = 14.02$). In contrast, lecturers with bachelor's degrees reported the lowest scores across most dimensions, particularly stress awareness ($M = 8.76$) and adaptive coping ($M = 10.96$). Scores for cognitive appraisal were similar across all qualification levels, consistent with the non-significant result.

Table 7. Estimated Marginal Means for Stress Management Components by Marital Status

Dependent Variable	Marital Status	Mean	SE
Stress Awareness	Single	10.43	0.07
	Married	10.27	0.04
	Divorced	8.86	0.18
Social Support	Single	9.09	0.08
	Married	10.17	0.04
	Divorced	12.18	0.22
Adaptive Coping	Single	11.74	0.08
	Married	11.94	0.05
	Divorced	13.75	0.23
Cognitive Appraisal	Single	13.08	0.07
	Married	12.71	0.04
	Divorced	13.91	0.21
Self-recovery	Single	11.79	0.09
	Married	11.55	0.05
	Divorced	16.99	0.25

Table 8. Estimated Marginal Means of Stress Management Variables by Educational Qualification

Dependent Variable	Qualification	Mean	SE
Stress Awareness	Bachelor's degree	8.759	0.104
	Master's degree	9.741	0.078
	Doctorate degree	11.052	0.070
Social Support	Bachelor's degree	10.037	0.125
	Master's degree	11.712	0.094
	Doctorate degree	9.687	0.084
Adaptive Coping	Bachelor's degree	10.958	0.129
	Master's degree	13.178	0.097
	Doctorate degree	13.296	0.087
Cognitive Appraisal	Bachelor's degree	13.156	0.118
	Master's degree	13.261	0.088
	Doctorate degree	13.290	0.079
Self-Recovery	Bachelor's degree	12.285	0.145
	Master's degree	14.023	0.109
	Doctorate degree	14.029	0.098

Post hoc comparisons (Tukey HSD; Appendix C) indicated that many of the observed differences were driven by contrasts between bachelor's degree holders and those with postgraduate qualifications. Differences between master's and doctoral degree holders were generally smaller and less consistent. These findings suggest that educational qualification is associated with variation in several aspects of stress management, particularly stress awareness, social support, and adaptive coping. However, the magnitude of these differences is modest, and the relationship does not extend to cognitive appraisal.

Academic Rank

A multivariate analysis of variance (MANOVA) was conducted to examine whether academic rank was associated with the combined stress management dimensions. The multivariate test was statistically significant, Wilks' $\Lambda = .812$, $F(10, 20,670) = 227.46$, $p < .001$, $\eta_p^2 = .099$, indicating a moderate overall effect. Follow-up univariate analyses (Table 4) indicated that academic rank was associated with all five dimensions, although the magnitude of these effects varied. The largest effects were observed for stress awareness ($\eta_p^2 = .066$) and social support ($\eta_p^2 = .061$), both in the moderate range. Smaller effects were found for cognitive appraisal ($\eta_p^2 = .022$), self-recovery ($\eta_p^2 = .006$), and adaptive coping ($\eta_p^2 = .004$). Estimated marginal means (Table 9) indicated distinct patterns across ranks.

Table 9. Estimated Marginal Means of Stress Management Variables by Academic Rank

Dependent Variable	Academic Rank	Mean	SE
Stress Awareness	Early Career Faculty (GA, AL)	10.750	0.086
	Mid-Career Faculty (L2, L1)	8.891	0.080
	Senior Faculty (SL, Assoc. Prof., Prof)	9.910	0.089
Social Support	Early Career Faculty (GA, AL)	9.018	0.104
	Mid-Career Faculty (L2, L1)	10.342	0.096
	Senior Faculty (SL, Assoc. Prof., Prof)	12.076	0.106
Adaptive Coping	Early Career Faculty (GA, AL)	12.613	0.107
	Mid-Career Faculty (L2, L1)	12.216	0.099
	Senior Faculty (SL, Assoc. Prof., Prof)	12.603	0.110
Cognitive Appraisal	Early Career Faculty (GA, AL)	12.737	0.098
	Mid-Career Faculty (L2, L1)	12.964	0.090
	Senior Faculty (SL, Assoc. Prof., Prof)	14.006	0.100
Self-Recovery	Early Career Faculty (GA, AL)	12.705	0.120
	Mid-Career Faculty (L2, L1)	13.730	0.111
	Senior Faculty (SL, Assoc. Prof., Prof)	13.902	0.123

Early career lecturers reported higher stress awareness ($M = 10.75$), while senior faculty reported higher levels of social support ($M = 12.08$), cognitive appraisal ($M = 14.01$), and self-recovery ($M = 13.90$). Adaptive coping scores were similar across groups, indicating minimal differences by rank for this dimension. Post hoc comparisons (Tukey HSD; Appendix D) indicated that several of these differences were statistically significant, particularly for stress awareness and social support. Differences in adaptive coping were small and less consistent across groups, while cognitive appraisal and self-recovery showed clearer differences between senior and early-career lecturers. These findings indicate that academic rank is meaningfully associated with certain aspects of stress management, particularly stress awareness and social support. However, differences in adaptive coping are minimal, and effects across most dimensions remain modest in magnitude.

DISCUSSION

In this study, the relationships between demographic and professional characteristics and the multidimensional construct of stress management among university lecturers in Nigeria were examined using a large, multi-institutional sample and MANOVA. The findings indicate that although all variables were statistically associated with stress management, the strength of associations varied considerably. Age, academic rank, and educational qualification emerged as stronger correlates than gender and marital status. These results align with and extend prior literature emphasizing that academic stress is more strongly influenced by structural and career-stage factors than by purely individual demographics (Akah et al., 2022; Obinna-Akakuru et al., 2022).

The prominent role of age is consistent with the Life Course Perspective (Elder et al., 2003) and Stress and Coping Theory (Lazarus & Folkman, 1984). Younger lecturers (particularly those under 25) reported higher levels across most stress management dimensions, especially stress awareness and social support. This may reflect greater vigilance to stressors and more active engagement with available networks during early career transitions. In contrast, older lecturers (45–54 years) showed lower scores, possibly due to cumulative fatigue from prolonged exposure to chronic challenges in Nigerian universities, such as heavy teaching loads, inadequate infrastructure, and publish-or-perish pressures amid brain drain (Obinna-Akakuru et al., 2022; Oderinde et al., 2024). This pattern nuances Western findings where older workers often report better coping due to experience, highlighting context-specific factors in resource-constrained settings.

Academic rank also demonstrated meaningful associations, supporting the Job Demands–Resources (JD-R) model (Bakker & Demerouti, 2017). Early-career faculty showed higher stress awareness but lower social support and cognitive appraisal, suggesting high demands with limited resources. Senior faculty benefited from stronger networks, better appraisal, and recovery, resources accumulated through rank. This career-stage gradient underscores how institutional hierarchies moderate stress management and calls for targeted support for junior staff.

Educational qualification findings align with expectations that advanced training enhances problem-solving and adaptive coping (Aderibigbe et al., 2020). Doctoral holders outperformed bachelor's holders on awareness, coping, and recovery. Interestingly, master's holders reported the highest social support, possibly reflecting a transitional career phase with balanced demands. The lack of differences in cognitive appraisal suggests this dimension may be more trait-like or situationally driven.

Gender differences were small, consistent with shared occupational stressors in Nigerian academia overriding traditional role expectations (Coker et al., 2024). Marital status showed modest effects, with divorced lecturers reporting notably higher social support, adaptive coping, and self-recovery. While this could indicate resilience developed through adversity (Gobena, 2024), the very small subgroup ($n = 150$) warrants caution in interpretation and requires replication.

Overall, the results highlight that stress management in this context is shaped more by position within the academic system (career stage, resources) than personal demographics. This extends JD-R and Stress and Coping theories by demonstrating their applicability in a low-resource, high-demand African higher education environment. This study makes several unique contributions. First, with $N = 10,350$ across federal, state, and private universities, it is among the largest multi-institutional investigations of lecturer stress management in sub-Saharan Africa. Second, the multidimensional operationalization of stress management and simultaneous MANOVA examination of demographic and professional factors address key gaps in fragmented prior research. Third, the emphasis on career stage (academic rank) over demographics provides nuanced, actionable insights for institutional interventions in Nigeria and similar contexts. These findings challenge assumptions from high-resource Western settings and underscore the need for context-sensitive models.

LIMITATIONS AND FUTURE RESEARCH

Several limitations should be noted. The cross-sectional design precludes causal inferences about the direction of relationships. All data were self-reported, raising potential common-method bias and social desirability effects, despite efforts to ensure anonymity. Although the stratified sampling enhanced representativeness, response rates were not formally tracked, and selection bias toward more motivated lecturers remains possible. The divorced subgroup was small (1.4%), limiting the stability of findings for this category. Finally, while the instruments showed good reliability, some scales were adapted, and future studies could benefit from fully validated comprehensive measures or objective indicators (e.g., physiological stress markers).

Future research should adopt longitudinal designs to track changes across career stages, incorporate mixed-methods approaches for deeper insight into coping processes, and evaluate the effectiveness of institution-level interventions (e.g., workload management, mentorship programs). Comparative studies across African countries would further illuminate contextual influences.

CONCLUSION

The relationship between selected demographic and professional factors and stress management among university lecturers in Nigeria was examined using a large, multi-institutional sample and a multivariate analytical approach. The findings indicate that while age, gender, marital status, educational qualification, and academic rank are all statistically associated with stress management, their contributions are not equal. Age, academic rank, and educational qualification show more consistent and meaningful relationships with key dimensions of stress management, whereas gender and marital status play a comparatively limited role. A central message from the study is that stress management among lecturers is influenced more by position within the academic system than by personal characteristics alone. Differences across groups are present but generally modest in size, suggesting that stress management is not driven by any single factor. Instead, it is shaped by a combination of career stage, access to institutional resources, and the demands attached to academic roles. In particular, early-career lecturers appear more aware of stress but may lack the resources to manage it effectively, while more senior academics benefit from greater support and control over their work. These findings point to the importance of looking beyond individual-level explanations of stress and focusing more on institutional conditions. In a system where lecturers face heavy workloads, limited funding, and high-performance expectations, improving stress management is unlikely to be achieved through personal coping strategies alone. Efforts to address stress in higher education should therefore prioritise better working conditions, stronger support systems, and more balanced career structures, especially for those at earlier stages of their careers.

Author Contributions: MAO: Conceptualisation, methodology, data analysis, manuscript drafting, and correspondence; SAO: Manuscript drafting, discussion, conclusion, and fieldwork; FA: Background to the study, manuscript drafting, and fieldwork; MVO: Literature review, manuscript drafting, and fieldwork; MEA: Literature review and fieldwork; NCNI: Literature review and fieldwork; GPO: Literature review and fieldwork; CNE: Literature review, editing, and fieldwork; VJO: Supervision, data analysis, and manuscript editing.

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Declaration of interest: The authors declare no competing or conflicting interests.

Ethical statement: Ethical standards consistent with the principles of the Helsinki Declaration (World Medical Association, 1964) were followed. Participation was voluntary, and respect for participants' rights, dignity, and personal integrity was maintained throughout the study. Informed consent was obtained from all participants prior to data collection. Participants were informed of the purpose of the study, the procedures involved, and their right to withdraw at any time without penalty.

AI statement: The authors used ChatGPT (OpenAI) and Grammarly during manuscript preparation solely to improve grammar, language fluency, clarity, and readability. These tools were not used to generate the scientific content, study design, data analysis, data interpretation, results, or conclusions of the manuscript. After using these tools, the authors carefully reviewed, edited, and verified the final version of the manuscript. The authors accept full responsibility for the accuracy, originality, and integrity of the published work.

Data sharing statement: Data are available from the corresponding author upon reasonable request.

REFERENCES

- Aderibigbe, J. K., Nwokolo, E. E., & Solomon, O. (2020). Occupational stress among some Nigerian graduate employees: The impact of work experience and education. *Cogent Psychology*, 7, Article 1802948. <https://doi.org/10.1080/23311908.2020.1802948>
- Aduma, P. O., Owan, V. J., Akah, L. U., Alawa, D. A., Apie, M. A., Ogabor, J. O., Olofu, M. A., Unimna, F. A., Ebuara, V. O., Essien, E. E., & Essien, C. K. (2022). Interactive analysis of demographic variables and occupational stress on university lecturers' job performance. *Humanities and Social Sciences Letters*, 10(2), 88–102. <https://doi.org/10.18488/73.v10i2.2952>
- Ahmad, I., Gul, R., & Kashif, M. (2024). A qualitative study of workplace factors causing stress among university teachers and coping strategies: A qualitative study of workplace factors. *Human Arenas*, 7, 812–834. <https://doi.org/10.1007/s42087-022-00302-w>
- Akah, L. U., Owan, V. J., Aduma, P. O., Onyenweaku, E. O., Olofu, M. A., Alawa, D. A., Ajigo, I., & Usoro, A. A. (2022). Occupational stress and academic staff job performance in two Nigerian universities. *Journal of Curriculum and Teaching*, 11(5), 64–78. <https://doi.org/10.5430/jct.v11n5p64>
- Bakare, O. Q., Coker, A. O., Saibu, M., & Durojaiye, T. O. (2025). Work-related stress among academic staff of a higher institution in South-west Nigeria: A cross-sectional study. *West African Journal of Medicine*, 42(2), 90–96. <https://www.wajmed.com/index.php/wajmed/article/view/1121>
- Bakker, A. B., & Demerouti, E. (2017). Job demands–resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, 22(3), 273–285. <https://doi.org/10.1037/ocp0000056>
- Baral, P., & Tamrakar, N. (2020). Health-promoting lifestyle among nurses of a tertiary-level hospital: A descriptive cross-sectional study. *Journal of Karnali Academy of Health Sciences*, 3(1), 1–10. <https://doi.org/10.3126/jkahs.v3i1.28456>
- Cadena-Povea, H., Hernández-Martínez, M., Bastidas-Amador, G., & Torres-Andrade, H. (2025). What pushes university professors to burnout? A systematic review of sociodemographic and psychosocial determinants. *International Journal of Environmental Research and Public Health*, 22(8), Article 1214. <https://doi.org/10.3390/ijerph22081214>
- Carver, C. S. (1997). You want to measure coping but your protocol's too long: Consider the Brief COPE. *International Journal of Behavioral Medicine*, 4(1), 92–100. https://doi.org/10.1207/s15327558ijbm0401_6

- Coker, A. O., Bakare, O. Q., & Saibu, G. M. (2024). Work stress, psychological morbidity and coping strategies deployed by university lecturers in Lagos, Nigeria. *International Journal of Psychiatry Research*, 7(3), 1–10. <https://doi.org/10.33425/2641-4317.1191>
- Elder, G. H., Johnson, M. K., & Crosnoe, R. (2003). The emergence and development of life course theory. In J. T. Mortimer & M. J. Shanahan (Eds.), *Handbook of the life course* (pp. 3–19). Springer. https://doi.org/10.1007/978-0-306-48247-2_1
- Gobena, G. A. (2024). Effects of academic stress on students' academic achievements and its implications for their future lives. *Anatolian Journal of Education*, 9(1), 113–130. <https://doi.org/10.29333/aje.2024.918a>
- Hammoudi-Halat, D., Soltani, A., Dalli, R., Alsarraj, L., & Malki, A. (2023). Understanding and fostering mental health and well-being among university faculty: A narrative review. *Journal of Clinical Medicine*, 12(13), Article 4425. <https://doi.org/10.3390/jcm12134425>
- Hossain, B., Yadav, P. K., Nagargoje, V. P., & Joseph, K. J. V. (2021). Association between physical limitations and depressive symptoms among Indian elderly: Marital status as a moderator. *BMC Psychiatry*, 21(1), Article 573. <https://doi.org/10.1186/s12888-021-03587-3>
- Jacob, O. N., Jegede, D., & Musa, A. (2021). Problems facing academic staff of Nigerian universities and the way forward. *International Journal on Integrated Education*, 4(1), 230–241. https://www.researchgate.net/publication/358221364_Problems_Facing_Academic_Staff_of_Nigerian_Universities_and_the_Way_Forward
- Kim, L., Pongsakornrunsilp, P., Pongsakornrunsilp, S., Horam, N., & Kumar, V. (2023). Key determinants of job satisfaction among university lecturers. *Social Sciences*, 12(3), Article 153. <https://doi.org/10.3390/socsci12030153>
- Kushendar, K., & Maba, A. P. (2022). Peer counseling as a coping strategy for academic stress and burnout in final-year students. *COUNS-EDU: The International Journal of Counseling and Education*, 7(4), 138–143. <https://doi.org/10.23916/0020220740540>
- Lavy, S. (2022). A meaningful boost: Effects of teachers' sense of meaning at work on their engagement, burnout, and stress. *AERA Open*, 8, Article 23328584221079857. <https://doi.org/10.1177/23328584221079857>
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer. <https://shorturl.at/pXi1l>
- Mantai, L., & Marrone, M. (2023). Academic career progression from early career researcher to professor: What can be learned from job ads. *Studies in Higher Education*, 48(6), 797–812. <https://doi.org/10.1080/03075079.2023.2167974>
- Nwokeocha, S. M. O. (2023). *Academic staff working conditions, organizational commitment and performance of Nigerian universities* (Doctoral dissertation). Anglia Ruskin University. <https://hdl.handle.net/10779/aru.23753691>
- Obasi, K. K., & Adieme, F. G. (2021). Work-life balance and teacher engagement in private senior secondary schools in Rivers State, Nigeria. *ISagoge – Journal of Humanities and Social Sciences*, 1(7), 86–106. <https://doi.org/10.59079/isagoge.v1i7.57>
- Obinna-Akakuru, A. U., Njoku, U. B., Agunanne, V. C., Nelson-Okata, E., & Onwujialiri, O. I. (2022). Stress factors and job performance of lecturers in tertiary institutions in Nigeria. *International Journal of Education, Teaching, and Social Sciences*, 2(1), 45–55. <https://doi.org/10.47747/ijets.v2i1.678>
- Oderinde, S. L., Akintunde, O. Y., & Ajala, I. R. (2024). A critical analysis of the impact of work overload on lecturers' well-being: A case of Obafemi Awolowo University, Ile-Ife, Nigeria. *International Journal of Qualitative Research*, 3(3), 238–249. <https://doi.org/10.47540/ijqr.v3i3.1256>
- Okechukwu, F. O., Ogba, K. T., Nwufo, J. I., Ogba, M. O., Onyekachi, B. N., Nwanosike, C. I., & Onyishi, A. B. (2022). Academic stress and suicidal ideation: Moderating roles of coping style and resilience. *BMC Psychiatry*, 22(1), Article 546. <https://doi.org/10.1186/s12888-022-04063-2>
- Okonta, V., & Nkedishu, V. C. (2024). Gender disparity in principal officers' positions in Nigerian universities: Implications for educational planners and administrators. *International Journal of Education, Learning and Development*, 12(4), 16–37. <https://eajournals.org/ijeld/vol12-issue-4-2024/gender-disparity-in-principal-officers-positions-in-nigerian-universities-implications-for-educational-planners-and-administrators/>
- Okotoni, O., & Kugbayi, O. (2024). Conflict between academic staff and non-teaching staff in Nigerian universities: Causes and consequences. *Higher Education*, 88(3), 1093–1109. <https://doi.org/10.1007/s10734-023-01160-3>
- Olaleye, S., Ukpabi, D., & Mogaji, E. (2020). Public vs private universities in Nigeria: Market dynamics perspective. In E. Mogaji, F. Maringe, R. E. Hinson (Eds.), *Understanding the higher education market in Africa* (pp. 19–36). Routledge. <https://doi.org/10.4324/9780429325816-4>

- Omori, A. E., & Bassey, P. U. (2019). Demographic characteristics and workers' performance in public service in Nigeria. *International Journal of Research and Innovation in Social Science*, 3(2), 141–146. <https://rsisinternational.org/journals/ijriss/Digital-Library/volume-3-issue-2/141-146.pdf>
- Salimzadeh, R., Hall, N. C., & Saroyan, A. (2021). Examining academics' strategies for coping with stress and emotions: A review of research. *Frontiers in Education*, 6, Article 660676. <https://doi.org/10.3389/feduc.2021.660676>
- Shen, P., & Slater, P. F. (2021). Occupational stress, coping strategies, health, and well-being among university academic staff: An integrative review. *International Education Studies*, 14(12), 99–124. <https://doi.org/10.5539/ies.v14n12p99>
- Smith, B. W., Dalen, J., Wiggins, K., Tooley, E., Christopher, P., & Bernard, J. (2008). The brief resilience scale: Assessing the ability to bounce back. *International Journal of Behavioral Medicine*, 15(3), 194–200. <https://doi.org/10.1080/10705500802222972>
- Sonnentag, S., & Fritz, C. (2007). The Recovery experience questionnaire: Development and validation of a measure for assessing recuperation and unwinding from work. *Journal of Occupational Health Psychology*, 12(3), 204–221. <https://doi.org/10.1037/1076-8998.12.3.204>
- Udodiugwu, M. I. (2024). Management of stress amongst state universities' lecturers for improved performance: A quantitative approach. *Annals of Human Resource Management Research*, 4(1), 61–77. <https://doi.org/10.35912/ahrmr.v4i1.2163>
- World Health Organization (WHO, 2023). Stress. <https://www.who.int/news-room/questions-and-answers/item/stress>
- Yazdi, F., Chaboksavar, F., Malekzadeh, R., Ziapour, A., Lebni, J. Y., Janjani, P., & Kianipour, N. (2023). Role of demographic variables in investigating occupational stress of disaster and emergency medical management center. *Journal of Education and Health Promotion*, 12(1), 289. https://doi.org/10.4103/jehp.jehp_1300_22
- Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment*, 52(1), 30–41. https://doi.org/10.1207/s15327752jpa5201_2

APPENDICES

Appendix A. Tukey HSD Post Hoc Comparisons by Age

Dependent Variable	(I) Age	(J) Age	Mean Difference (I-J)	SE	Sig.
Stress Awareness	Less than 25 years	25-34 years	.8741*	0.056	0.000
		35-44 years	.2375*	0.062	0.001
		45-54 years	2.4364*	0.069	0.000
	25-34 years	Less than 25 years	-.8741*	0.056	0.000
		35-44 years	-.6366*	0.055	0.000
		45-54 years	1.5623*	0.062	0.000
	35-44 years	Less than 25 years	-.2375*	0.062	0.001
		25-34 years	.6366*	0.055	0.000
		45-54 years	2.1989*	0.068	0.000
	45-54 years	Less than 25 years	-2.4364*	0.069	0.000
		25-34 years	-1.5623*	0.062	0.000
		35-44 years	-2.1989*	0.068	0.000
Social Support	Less than 25 years	25-34 years	.6667*	0.067	0.000
		35-44 years	.3542*	0.075	0.000
		45-54 years	1.8485*	0.082	0.000
	25-34 years	Less than 25 years	-.6667*	0.067	0.000
		35-44 years	-.3125*	0.066	0.000
		45-54 years	1.1818*	0.074	0.000
	35-44 years	Less than 25 years	-.3542*	0.075	0.000
		25-34 years	.3125*	0.066	0.000
		45-54 years	1.4943*	0.081	0.000
	45-54 years	Less than 25 years	-1.8485*	0.082	0.000
		25-34 years	-1.1818*	0.074	0.000
		35-44 years	-1.4943*	0.081	0.000
Adaptive Coping	Less than 25 years	25-34 years	.2667*	0.069	0.001
		35-44 years	-.2125*	0.077	0.030
		45-54 years	.2364*	0.085	0.028
	25-34 years	Less than 25 years	-.2667*	0.069	0.001
		35-44 years	-.4792*	0.068	0.000
		45-54 years	-0.0303	0.077	0.979
	35-44 years	Less than 25 years	.2125*	0.077	0.030
		25-34 years	.4792*	0.068	0.000
		45-54 years	.4489*	0.084	0.000
	45-54 years	Less than 25 years	-.2364*	0.085	0.028
		25-34 years	0.0303	0.077	0.979
		35-44 years	-.4489*	0.084	0.000
Cognitive Appraisal	Less than 25 years	25-34 years	.6222*	0.063	0.000
		35-44 years	.9000*	0.070	0.000
		45-54 years	0.0364	0.078	0.966
	25-34 years	Less than 25 years	-.6222*	0.063	0.000
		35-44 years	.2778*	0.062	0.000
		45-54 years	-.5859*	0.070	0.000
	35-44 years	Less than 25 years	-.9000*	0.070	0.000
		25-34 years	-.2778*	0.062	0.000
		45-54 years	-.8636*	0.077	0.000
	45-54 years	Less than 25 years	-0.0364	0.078	0.966
		25-34 years	.5859*	0.070	0.000
		35-44 years	.8636*	0.077	0.000
Self Recovery	Less than 25 years	25-34 years	-.2000*	0.078	0.049

25-34 years	35-44 years	1.0500*	0.087	0.000
	45-54 years	1.2545*	0.096	0.000
	Less than 25 years	.2000*	0.078	0.049
35-44 years	35-44 years	1.2500*	0.076	0.000
	45-54 years	1.4545*	0.086	0.000
	Less than 25 years	-1.0500*	0.087	0.000
45-54 years	25-34 years	-1.2500*	0.076	0.000
	45-54 years	0.2045	0.094	0.133
	Less than 25 years	-1.2545*	0.096	0.000
	25-34 years	-1.4545*	0.086	0.000
	35-44 years	-0.2045	0.094	0.133

Based on observed means.

The error term is Mean Square(Error) = 8.719.

* The mean difference is significant at the .05 level.

Appendix B. Tukey HSD Post Hoc Comparisons by Marital Status

Dependent Variable	(I) Marital Status	(J) Marital Status	Mean Difference (I-J)	SE	Sig.
Stress Awareness	Single	Married	.7354*	0.052	0.000
		Divorced	3.6429*	0.179	0.000
	Married	Single	-.7354*	0.052	0.000
		Divorced	2.9074*	0.175	0.000
	Divorced	Single	-3.6429*	0.179	0.000
		Married	-2.9074*	0.175	0.000
Social Support	Single	Married	-.1984*	0.062	0.004
		Divorced	-1.1429*	0.215	0.000
	Married	Single	.1984*	0.062	0.004
		Divorced	-.9444*	0.210	0.000
	Divorced	Single	1.1429*	0.215	0.000
		Married	.9444*	0.210	0.000
Adaptive Coping	Single	Married	0.0185	0.064	0.955
		Divorced	-1.5000*	0.222	0.000
	Married	Single	-0.0185	0.064	0.955
		Divorced	-1.5185*	0.216	0.000
	Divorced	Single	1.5000*	0.222	0.000
		Married	1.5185*	0.216	0.000
Cognitive Appraisal	Single	Married	.7222*	0.059	0.000
		Divorced	-.5000*	0.202	0.036
	Married	Single	-.7222*	0.059	0.000
		Divorced	-1.2222*	0.197	0.000
	Divorced	Single	.5000*	0.202	0.036
		Married	1.2222*	0.197	0.000
Self Recovery	Single	Married	.6878*	0.072	0.000
		Divorced	-3.0714*	0.250	0.000
	Married	Single	-.6878*	0.072	0.000
		Divorced	-3.7593*	0.243	0.000
	Divorced	Single	3.0714*	0.250	0.000
		Married	3.7593*	0.243	0.000

Based on observed means.

The error term is Mean Square (Error) = 8.719.

* The mean difference is significant at the .05 level.

Appendix C. Tukey HSD Post Hoc Comparisons by Qualification

Dependent Variable	(I) Qualification	(J) Qualification	Mean Difference (I-J)	SE	Sig.
Stress Awareness	Bachelor's degree	Master's degree	-.4167*	0.08061	.000
		Doctorate degree	-0.0969	0.07547	.404
	Master's degree	Bachelor's degree	.4167*	0.08061	.000
		Doctorate degree	.3198*	0.04687	.000
	Doctorate degree	Bachelor's degree	0.0969	0.07547	.404
		Master's degree	-.3198*	0.04687	.000
Social Support	Bachelor's degree	Master's degree	-1.1833*	0.09672	.000
		Doctorate degree	-0.031	0.09055	.937
	Master's degree	Bachelor's degree	1.1833*	0.09672	.000
		Doctorate degree	1.1523*	0.05624	.000
	Doctorate degree	Bachelor's degree	0.031	0.09055	.937
		Master's degree	-1.1523*	0.05624	.000
Adaptive Coping	Bachelor's degree	Master's degree	-1.8500*	0.09979	.000
		Doctorate degree	-1.5581*	0.09343	.000
	Master's degree	Bachelor's degree	1.8500*	0.09979	.000
		Doctorate degree	.2919*	0.05802	.000
	Doctorate degree	Bachelor's degree	1.5581*	0.09343	.000
		Master's degree	-.2919*	0.05802	.000
Cognitive Appraisal	Bachelor's degree	Master's degree	.5833*	0.09106	.000
		Doctorate degree	.3566*	0.08525	.000
	Master's degree	Bachelor's degree	-.5833*	0.09106	.000
		Doctorate degree	-.2267*	0.05295	.000
	Doctorate degree	Bachelor's degree	-.3566*	0.08525	.000
		Master's degree	.2267*	0.05295	.000
Self Recovery	Bachelor's degree	Master's degree	-.9833*	0.11223	.000
		Doctorate degree	-.7752*	0.10507	.000
	Master's degree	Bachelor's degree	.9833*	0.11223	.000
		Doctorate degree	.2081*	0.06526	.004
	Doctorate degree	Bachelor's degree	.7752*	0.10507	.000
		Master's degree	-.2081*	0.06526	.004

Based on observed means.

The error term is Mean Square(Error) = 8.719.

* The mean difference is significant at the .05 level.

Appendix D. Tukey HSD Post Hoc Comparisons by Rank

Dependent Variable	(I) Rank	(J) Rank	Mean Difference (I-J)	SE	Sig.
Stress Awareness	Early career faculty (GA and AL)	Mid-career faculty	1.1984*	0.05227	0.000
		Senior career faculty	.7785*	0.05318	0.000
	Mid-career faculty (L2 and L1)	Early career faculty	-1.1984*	0.05227	0.000
		Senior career faculty	-.4199*	0.04902	0.000
	Senior career faculty (SL, Assoc. Prof. and Prof)	Early career faculty	-.7785*	0.05318	0.000
		Mid-career faculty	.4199*	0.04902	0.000
Social Support	Early career faculty (GA and AL)	Mid-career faculty	.7287*	0.06271	0.000
		Senior career faculty	.3377*	0.0638	0.000
	Mid-career faculty (L2 and L1)	Early career faculty	-.7287*	0.06271	0.000
		Senior career faculty	-.3910*	0.05882	0.000
	Senior career faculty (SL, Assoc. Prof. and Prof)	Early career faculty	-.3377*	0.0638	0.000
		Mid-career faculty	.3910*	0.05882	0.000
Adaptive Coping	Early career faculty (GA and AL)	Mid-career faculty	.2713*	0.0647	0.000
		Senior career faculty	-0.0877	0.06583	0.377
	Mid-career faculty (L2 and L1)	Early career faculty	-.2713*	0.0647	0.000
		Senior career faculty	-.3590*	0.06068	0.000
	Senior career faculty (SL, Assoc. Prof. and Prof)	Early career faculty	0.0877	0.06583	0.377
		Mid-career faculty	.3590*	0.06068	0.000
Cognitive Appraisal	Early career faculty (GA and AL)	Mid-career faculty	.4615*	0.05904	0.000
		Senior career faculty	-.3333*	0.06007	0.000
	Mid-career faculty (L2 and L1)	Early career faculty	-.4615*	0.05904	0.000
		Senior career faculty	-.7949*	0.05538	0.000
	Senior career faculty (SL, Assoc. Prof. and Prof)	Early career faculty	.3333*	0.06007	0.000
		Mid-career faculty	.7949*	0.05538	0.000
Self Recovery	Early career faculty (GA and AL)	Mid-career faculty	-.4919*	0.07277	0.000
		Senior career faculty	.1908*	0.07404	0.027
	Mid-career faculty (L2 and L1)	Early career faculty	.4919*	0.07277	0.000
		Senior career faculty	.6827*	0.06825	0.000
	Senior career faculty (SL, Assoc. Prof. and Prof)	Early career faculty	-.1908*	0.07404	0.027
		Mid-career faculty	-.6827*	0.06825	0.000

Based on observed means.

The error term is Mean Square(Error) = 8.719.

* The mean difference is significant at the .05 level.