African Journal of Health, Nursing and Midwifery
ISSN: 2689-9418
Volume 8, Issue 2, 2025 (pp. 20-33)
www.abjournals.org

AN ASSESSMENT OF THE MEDIATING ROLE OF SELF-EFFICACY ON THE RELATIONSHIP BETWEEN DAILY STRESSORS AND SYMPTOMS OF DEPRESSION, ANXIETY, AND STRESS IN STUDENTS

Mubaidat Adenrele Adeniyi[1], Temilade Oluwatoyosi Adeniyi[2], and Samuel Tobi Tundealao[3]

[1]Department of Guidance & Counselling, College of Specialized and Professional Education, Lagos State University of Education, PMB 2007, Badagry Express Way, Oto-Ijanikin, Lagos State, Nigeria.

[2]Department of Psychiatry, University College Hospital, Queen Elizabeth II Road, Agodi, Ibadan, Oyo State, Nigeria.

[3]Department of Biostatistics and Epidemiology, Rutgers School of Public Health, Piscataway, New Jersey, USA.

Cite this article:

Adeniyi, M. A., Adeniyi, T. O., Tundealao, S. T. (2025), An Assessment of the Mediating Role of Self-Efficacy on the Relationship between Daily Stressors and Symptoms of Depression, Anxiety, and Stress in Students. African Journal of Health, Nursing and Midwifery 8(2), 20-33. DOI: 10.52589/AJHNM-2FVZYNRN

Manuscript History

Received: 16 Mar 2025

Accepted: 28 Apr 2025

Published: 2 May 2025

ABSTRACT: *Studying the impact of stress in students is crucial due to its association with mental health, academic performance, and overall well-being. This study was done because there is no existing literature that examines the interplay between the individual self-efficacy of Nigerian students, their daily stressors, and the presence of any symptoms of adverse mental health. This current research investigates the mediating effect of self-efficacy on the associations between daily life stressors and their impact on stress, anxiety, and depression symptoms. This cross-sectional study was conducted among 321 students of a tertiary education institution in Lagos State, Nigeria. Standardized tools were used to generate numerical values for daily stressors, general self-efficacy, depression, anxiety, and stress symptoms. Causal mediation analysis was conducted with daily stress as the exposure (X), general self-efficacy as the mediator (M), and negative mental health indicators (i.e., stress, anxiety, and depression symptoms) as the outcome (Y). The mean age of the students was 25.1 (±5.05) years. Most participants were females (74.5%) and working full-time while schooling (57%). The findings indicated that there is a positive interrelationship between symptoms of stress, anxiety, and depression. At the same time, general self-efficacy was found to have a negative association with symptoms of stress, anxiety, and depression. General self-efficacy, however, had no protective effects on either stress, anxiety, or depression symptoms. In conclusion, the study indicated that although the average Nigerian student had high values for general self-efficacy, it did not mediate the association between the mental health indices studied and brief daily stressors, i.e., subjective perceptions of mental resilience, even when high, offered no protection from depression, anxiety, or stress symptoms in the presence of daily life stressors. More awareness needs to be created about the relevance of the mental health of students, and conscious efforts should be put in place to reduce the stress of students. Further research also needs to be done on other factors affecting the mental well-being of students.*

KEYWORDS: Self-efficacy, Assessment, Mental health, Student, Mediate, Daily Stressor, Depression.

Article DOI: 10.52589/AJHNM-2FVZYNRN
DOI URL: https://doi.org/10.52589/AJHNM-2FVZYNRN

African Journal of Health, Nursing and Midwifery
ISSN: 2689-9418
Volume 8, Issue 2, 2025 (pp. 20-33)

www.abjournals.org

INTRODUCTION

Stress experienced by students in tertiary education is multifactorial. Academic-related stress, the most significant, is cross-cultural, wide-spread, and of international concern (Pascoe et al., 2019). Stressors students encounter in the pursuit of their daily activities may adversely affect their mental health and physical well-being (Pascoe et al., 2019).

The World Health Organization (WHO, 2020) defines mental health as the state of well-being where individuals recognize their capabilities, handle typical life pressures, be productive and effective at work, and contribute to their community. On the other hand, stress is the brain's response to any demand, such as a change in daily activities. This response may be either relatively harmless or extreme and may lead to traumatic stress reactions (WHO, 2020). Pascoe et al. (2019) noted that the accumulation of daily stressors is a significant indicator for the development of anxiety and depression. Stress is defined by its neuro-endocrine reaction and a psychological response (NIMH, 2016). The institute posited further that many factors could trigger this stress response, such as change or daily activity, which could range from harmless to extreme.

The occurrence of depression and anxiety is significantly predicted by the combined impact of ongoing daily stressors (Pascoe et al., 2019). To emphasize the importance of mental health, the WHO declares October 10 of each year as World Mental Health Day (WHO, 2020). In 2015, the WHO reported that 3.6% of the global population experienced anxiety disorders, while 4.4% suffered from depressive disorders, according to the Mental Health Action Plan (2013–2020). The effect of stress on mental well-being can also differ from person to person, as not everyone exposed to stressors experiences adverse effects (Singh et al., 2010). Stress, anxiety, and depression symptoms are caused and maintained by varied factors ranging from economic, political, social, or environmental happenings (Brailovskaia et al., 2018).

Self-efficacy refers to a subjective assessment of an individual's ability to execute behaviours required to achieve specific tasks (Fürtjes et al., 2023). General self-efficacy is closely associated with mental health, influencing psychological factors like the impact of stress on mental well-being (Fürtjes et al., 2023). People’s level of self-efficacy plays an essential role in enhancing mental wellness and overall well-being (Singh et al., 2010). Self-efficacy is central in regulating the emotional state and making people interpret potentially threatening situations as less stressful and more manageable (Parto, 2011). It has also been shown that self-efficacy buffers the impact of stress on depression and anxiety, and self-efficacy therapy can be used to mitigate anxiety (Fürtjes et al., 2023).

Mental health has long been overlooked in Nigeria and, so far, no study in Nigeria has assessed students' mental health by juxtaposing self-efficacy and daily stressors (e.g., financial struggles, academic pressure, and interpersonal conflicts). The study will explore how self-efficacy mediates the effects of daily stressors on the mental well-being of students in tertiary institutions in Nigeria by examining the variations in self-efficacy in ameliorating the perceived impact of everyday stressors among students in institutions of higher learning vis-à-vis their cultural background. Studies like this have been conducted in Germany, India, China, and Russia, where the extent of daily stressors experienced by participants, their self-efficacy, and the number of stress, anxiety, and depression symptoms were measured using the Brief Daily Stressor Screening (BDSS), General Self-Efficacy (GSE), and DASS-21 scales (Brailovskaia

Article DOI: 10.52589/AJHNM-2FVZYNRN
DOI URL: https://doi.org/10.52589/AJHNM-2FVZYNRN

et al., 2017). It is imperative to carry out this study to have a clearer picture of the impact of the factors that contribute to mental health outcomes among students in Nigeria.

The following assumptions were investigated in this study: (1) Stress, anxiety, and depression are positively related; (2) General self-efficacy has a negative relationship with stress, anxiety, and depression symptoms; (3) Brief daily stressors have a positive relationship with stress, anxiety, and depression symptoms; (4) Self-efficacy mediates the relationship between brief daily stressors and depression, anxiety, and stress symptoms.

METHODS AND MATERIALS

Study Design

This was a cross-sectional study conducted in Lagos State, Nigeria.

Study Population

The study population comprised three hundred and twenty-one (321) undergraduate students studying education courses and aged 16–60 at a tertiary educational institution in Lagos State, Southwestern Nigeria. Lagos was selected for this study because of its socio-economic representation as Nigeria's industrial capital and the most culturally varied state in Nigeria, with a fair representation of all ethnic groups (Adeniyi & Omoegun, 2013).

Inclusion Criteria

Participants were included in the study if they are fully enrolled as full-time or part-time undergraduate students at the Adeniran Ogunsanya College of Education (now known as the Lagos State University of Education) at Otto-Ijanikin, Lagos State, Nigeria. The students must be between 16 and 60 years old, proficient in English, and able to provide informed consent.

Exclusion Criteria

Students less than 16 years old, graduate students, non-degree seeking students, students with limited English proficiency, and students who did not give informed consent were excluded from the study.

Data Collection Procedure

A cross-sectional survey was conducted to collect data from the research participants. The questionnaire consisted of a socio-demographic segment followed by three Likert-scale sections with 40 questions. The questionnaire was developed based on a review of existing psychological literature and it comprised three standardized questionnaires: (1) the General Self-Efficacy Scale (GSE; Schwarzer & Jerusalem, 1995); (2) the Brief Daily Stressor Screening (BDSS; Scholten et al., 2020); and (3) the Depression, Anxiety, and Stress Scales (DASS-21; Henry & Crawford, 2005).

A purposeful random sampling technique was used to ensure representation across the student population. The sample size was determined using a power analysis to ensure sufficient statistical power. Informed consent was obtained from all participants, and confidentiality was ensured by anonymizing the data. The survey was completed via self-report questionnaires

Article DOI: 10.52589/AJHNM-2FVZYNRN
DOI URL: https://doi.org/10.52589/AJHNM-2FVZYNRN

administered on paper and filled with pencils. The data collection was completed in one month, with each participant spending about thirty minutes on the survey. The collected data were then entered into IBM Corp's Statistical Package for the Social Sciences (SPSS) version 27.0 (2020) for analysis.

Measures

The *General Self-Efficacy Scale* (GSE; Schwarzer & Jerusalem, 1995) was used to gauge the overall perception of one's self-efficacy. It involved assessing one's aptitudes and performance in unforeseen or startling situations. A sample item is *"I am confident that I could deal efficiently with unexpected events."* To assess routine stressful experiences, we used the *Brief Daily Stressor Screening* (BDSS; Scholten et al., 2020). This screening tool evaluates hassles or inconveniences in different areas of daily life that occurred within the past year, such as family obligations, health issues, financial limitations, dissatisfaction with education or work, challenges with additional employment, dissatisfaction with housing, and difficulties with relatives or other individuals, or minor annoyances.

"Negative mental health" was evaluated using the Depression, Anxiety, and Stress Scales (DASS-21; Henry & Crawford, 2005), a shorter version of the 42-item DASS scale (Lovibond & Lovibond, 1995). Participants were asked to use a Likert scale that spans from 0 (never) to 3 (almost always) to assess 21 fundamental symptoms of negative emotional states across the three subscales (stress, anxiety, and depression) to calculate an overall item score. Each subscale had seven questions that were randomized when creating the questionnaire (Crawford & Henry, 2003), and the final DASS-21 score was doubled to simulate the scoring of the original 42-point DASS scale (Teh, Ngo, binti Zulkifli, Vellasamy & Suresh, 2015). This scale had well-documented psychometric properties in clinical and non-clinical samples (Crawford & Henry, 2003).

Demographics

The survey collected information regarding age, sex, marital status, religion, state of origin, program being studied, level of study, mode of study (i.e., full-time or part-time), and employment status from the participants. Three hundred and twenty-one (321) students participated in this research. Approximately half of the respondents (n=156, 48.6%) were in their second study year, with the other half (n=165, 51.4%) being in their fourth year. The participants' mean (standard deviation, range) was 25.09 (7.05, 16–60) years. More than half of the respondents (58.6%, n=188) were aged 21–30 years.

Article DOI: 10.52589/AJHNM-2FVZYNRN
DOI URL: https://doi.org/10.52589/AJHNM-2FVZYNRN

African Journal of Health, Nursing and Midwifery
ISSN: 2689-9418
Volume 8, Issue 2, 2025 (pp. 20-33)

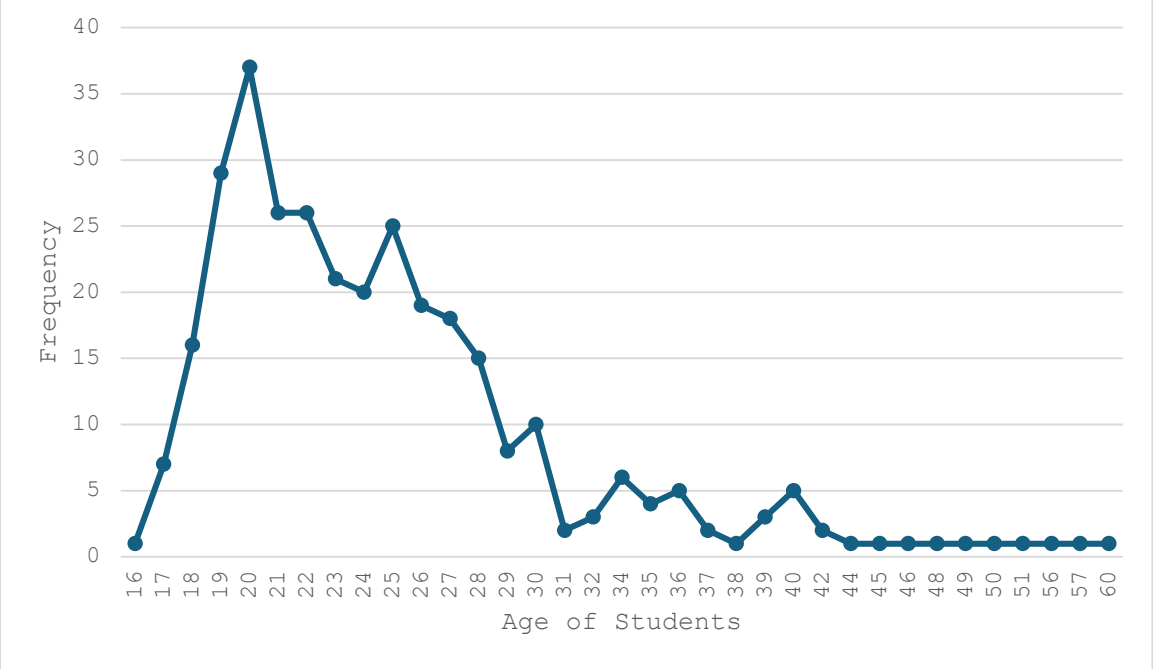

Fig. 1: Age distribution of respondents

The age distribution of the sample population is leptokurtic (kurt=5.032, S.E.=0.271) and positively skewed (skew=1.979, S.E.=0.136), which can be explained by the few older students in the sample population, as depicted in Figure 1. Figure 2 shows that most students were full-time workers (57%, n=183) and females (74.5%, n=239).

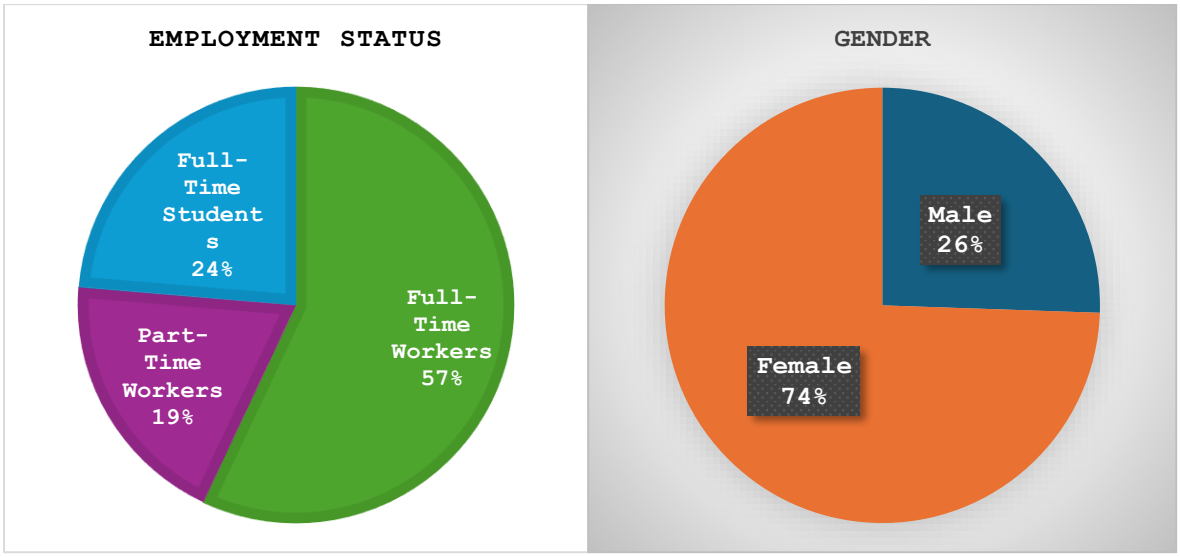

Fig. 2: Sociodemographic characteristics of study participants

Article DOI: 10.52589/AJHNM-2FVZYNRN
DOI URL: https://doi.org/10.52589/AJHNM-2FVZYNRN

African Journal of Health, Nursing and Midwifery
ISSN: 2689-9418
Volume 8, Issue 2, 2025 (pp. 20-33)

Statistical Analyses

Statistical analyses were performed using IBM Corp.'s Statistical Package for the Social Sciences (SPSS) version 27.0 (2020) and the PROCESS Macro for SPSS version 4.2 (Hayes, 2022). Descriptive statistics for stress, anxiety, and depression symptoms (DASS), General Self-Efficacy, and Brief Daily Stressors (daily hassles) were computed. Gender, age, and self-efficacy were used as independent variables in the multiple regression analyses, while depression, anxiety, and stress symptoms were the dependent variables.

The variables of basic daily stressors (BDS), general self-efficacy (GSE), age, and gender were used as independent variables to regress the dependent variables (stress, anxiety, and depression).

$$Y = \beta_0 + \beta_{BDS}X_{BDS} + \beta_{GSE}X_{GSE} + \beta_{Age}X_{Age} + \beta_{Gender}X_{Gender} + \varepsilon$$

where Y = dependent variable; X = independent variables; β_0 = Y-intercept; β = slope of depression, anxiety or stress; ε = error.

Furthermore, for the mediation model, Brief Daily Stressor was the independent variable or predictor (X), general self-efficacy was the mediator (M), and negative mental health indicators (i.e., stress, anxiety, and depression symptoms) were the dependent variables or outcome (Y) (Fig. 3).

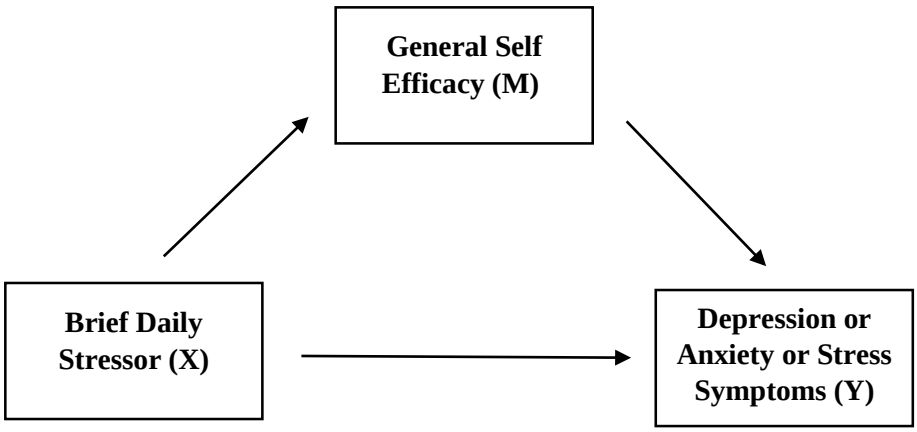

Fig. 3: Conceptual diagram

The relationship between X and Y, not accounting for M's influence (i.e., the total effect), is represented by *c*. The pathway from X to M is symbolized by *a,* and the pathway from M to Y is denoted by *b.* Paths *a* and *b* represent the indirect effect, while path *c′* represents the direct effect of X on Y after including M in the model (Fig. 4).

Article DOI: 10.52589/AJHNM-2FVZYNRN
DOI URL: https://doi.org/10.52589/AJHNM-2FVZYNRN

African Journal of Health, Nursing and Midwifery
ISSN: 2689-9418
Volume 8, Issue 2, 2025 (pp. 20-33)

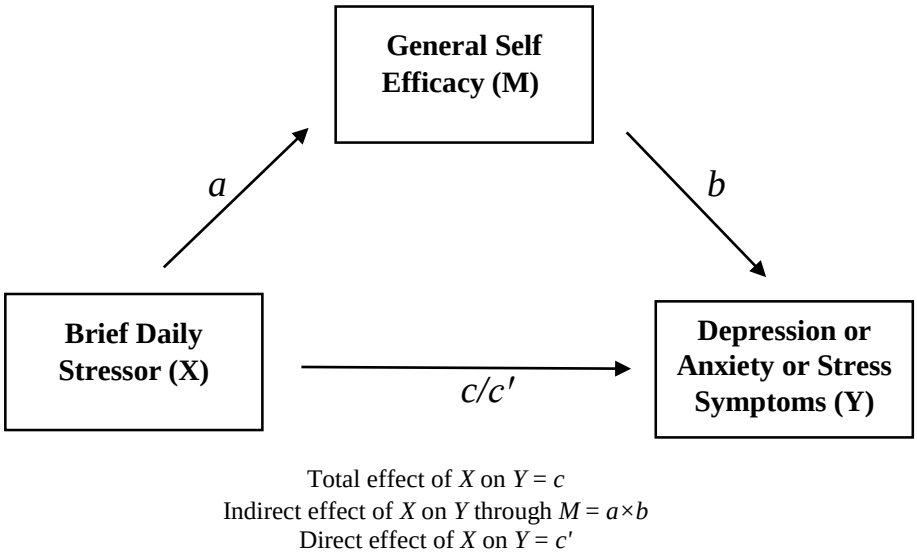

Fig. 4: Statistical diagram

RESULTS

General Self Efficacy, Brief Daily Stressors, Depression, Anxiety, and Stress Scales

Descriptive Analyses

Table 1 shows the descriptive values of the investigated constructs. The skewness and kurtosis coefficients of the scores obtained from scales utilized in the study are normally distributed. The scales include General Self-Efficacy (GSE), Brief Daily Stressors (BDS), and DASS-21 (multiplied by 2 to simulate the original 42-point DASS scale).

Table 1: Descriptive Values, Skew, and Kurtosis of General Self Efficacy, Brief Daily Stressors, Depression, Anxiety, and Stress Symptoms of Used Scales

N=321	Mean (SD)	Minimum	Maximum	Skewness	Kurtosis
General Self Efficacy	31.31 (5.49)	11	40	-0.764	0.364
Brief Daily Stressors	15.62 (7.61)	0	32	-0.106	-0.566
Depression (DASS)	10.50 (8.03)	0	40	0.744	0.267
Anxiety (DASS)	10.98 (7.72)	0	38	0.881	0.673
Stress (DASS)	12.59 (7.64)	0	36	0.398	-0.293

Article DOI: 10.52589/AJHNM-2FVZYNRN
DOI URL: https://doi.org/10.52589/AJHNM-2FVZYNRN

Correlation

Table 2 shows that depression moderately correlates significantly with anxiety but strongly correlates positively with stress. At the same time, anxiety positively correlates strongly with stress. Depression, anxiety, and stress correlate significantly positively with brief daily stressors. General Self Efficacy (GSE) is negatively correlated with depression, anxiety, and stress, albeit weakly.

Table 2: Correlations Between GSE, BDS, Depression, Anxiety, and Stress Symptoms

N=321	BDS	Depression	Anxiety	Stress
GSE	-.002	-.213*	-.111*	-.086
BDS		.355*	.297*	.353*
Depression			.646*	.719*
Anxiety				.706*
Stress				

Note: *p < 0.05; GSE, General Self Efficacy; BDS, Brief Daily Stressors

Regression Analyses

The four independent variables under study (i.e., BDS, GSE, age, and gender) collectively significantly predict depression scores, $F(4, 316) = 16.540$, $p < 0.001$. Coefficients were further assessed to ascertain the influence of each factor (i.e., independent variables) on the criterion variable – depression. The regression analysis showed that BDS had a statistically significant positive impact on depression ($\beta = 0.408$, $t = 7.400$, $p = 0.000$); hence, H_{1D} was supported. H_{2D} and H_{3D} were also supported as significantly negative effects of GSE ($\beta = -0.221$, $t = -2.891$, $p = 0.004$) and age ($\beta = -0.138$, $t = -2.306$, $p = 0.022$) respectively on depression were revealed. There was, however, no significant impact of gender on depression ($\beta = -0.154$, $t = -0.161$, $p = 0.872$); therefore, H_{4D} can be rejected. These results are presented in Table 3.

Table 3: Multiple Regression Analyses with BDS, GSE, Age, and Gender as Independent Variables and Depression as a Dependent Variable

Hypothesis	Regression Weights	B	T	p-value	Hypothesis Supported
H_{1D}	BDS → Depression	0.408	7.400	0.000	Supported
H_{2D}	GSE → Depression	-0.221	-2.891	0.004	Supported
H_{3D}	Age → Depression	-0.138	-2.306	0.022	Supported
H_{4D}	Gender → Depression	-0.154	-0.161	0.872	Not Supported
R^2	0.173				
F (4, 316)	16.540				

Note: *p < 0.05. BDS: Brief Daily Stressors, GSE: General Self Efficacy

Article DOI: 10.52589/AJHNM-2FVZYNRN
DOI URL: https://doi.org/10.52589/AJHNM-2FVZYNRN

Further regression analysis showed that BDS had a statistically significant impact on anxiety (β = 0.331, t = 6.023, p = 0.000) and stress (β = 0.383, t = 7.175, p = 0.000). GSE, age, and gender, however, had no significant impact on anxiety or stress as sole independent variables.

Mediation Analyses

Table 4 shows that general self-efficacy does not mediate the association between daily stressors and mental health symptoms – stress, anxiety, and depression.

Table 4: Estimated Coefficients of the Mediation Model with Brief Daily Stressor (X), General Self-efficacy (M), and Depression, Anxiety, and Stress Symptoms (Y)

Relationship	Total Effect (p-value)	Direct Effect (p-value)	Indirect Effect	Confidence interval Bound. (ind.)		t-statistics (ind.)	Conclusion
				Lower	Upper		
BDS → GSE → DASS-D	0.3828 (0.0000)	0.3859 (0.0000)	-0.0032	-0.0259	0.0157	-0.3107	No mediation
BDS → GSE → DASS-A	0.3173 (0.0000)	0.3188 (0.0000)	-0.0014	-0.0164	0.0083	-0.2414	No mediation
BDS → GSE → DASS-S	0.3720 (0.0000)	0.3731 (0.0000)	-0.0011	-0.0138	0.0071	-0.2245	No mediation

BDS: Brief Daily Stressors; GSE: General Self Efficacy; DASS: Depression Anxiety Stress Scales; DASS-D: Depression scale; DASS-A: Anxiety scale; DASS-S: Stress scale; ind.: indirect effect; t-statistics (ind.) = ind. Effect Coefficient/Standard Error; p-value, $p < 0.05$. Effect size (P_M) was not considered because of the statistically insignificant mediation results.

DISCUSSION

Not everyone exposed to a stressful existence has poor mental health since people differ in their ability to handle stress and how they perceive it (Fürtjes et al., 2023). The effects of daily stressors on stress, anxiety, and depression symptoms of chosen students in a tertiary institution in Lagos State, Nigeria, were examined in the current research, with a focus on general self-efficacy (GSE) as a protective factor. Stress, anxiety, and depression symptoms were positively correlated with each other, affirming Hypothesis 1. This finding is supported by earlier studies (Brailovskaia et al., 2018; Radeef & Faisal, 2018; Višnjić et al., 2023; Peng et al., 2024) that showed that people anxious about their daily living activities often engage in depression and stress-induced behaviors. Višnjić, Kök, Višnjić, et al. (2023) discovered a positive relationship between severe stress, anxiety, and depression symptoms and all six BSMAS (the Bergen Social Media Addiction Scale) components among selected university students in Serbia.

General self-efficacy has been proven to protect against the negative factors associated with mental health (Brailovskaia et al., 2017; Radeef & Faisal, 2018). Lower depression levels have also been recorded with greater stress management self-efficacy (Sawatzky et al., 2012). We found in this study (Table 2) that general self-efficacy is negatively correlated with depression, anxiety, and stress symptoms, respectively, which confirms the second hypothesis. This relationship was similar in studies reported among German, Russian, and Chinese students

Article DOI: 10.52589/AJHNM-2FVZYNRN
DOI URL: https://doi.org/10.52589/AJHNM-2FVZYNRN

(Brailovskaia et al., 2017). Studies conducted by Wang et al. (2023) reported that self-efficacy is effective in associations between stressors and anxiety.

Furthermore, this study revealed a positive interrelationship between brief daily stressors and stress, anxiety, and depression symptoms, confirming the third hypothesis. Peng, Ma, Hu, and Gan (2024) reported that an increase in everyday life activities among the sampled young Chinese participants resulted in more stress and a corresponding increase in emotional distress, such as anxiety and depression. In another related study, Radeef and Faisal (2018) reported that dental students experienced depression, anxiety, and stress (DAS) symptoms in their study and that stress from personal or academic challenges led to adverse psychological outcomes.

Mediation analysis conducted in this study showed that general self-efficacy does not mediate the association between brief daily stressors and mental health symptoms of depression, anxiety, or stress, respectively; hence, the fourth hypothesis was rejected. In studies conducted in other places, the effects of self-efficacy were varied. Schonfeld, Preusser, and Margraf (2017) reported that self-efficacy had a limited impact and could sometimes not be the significant manipulating variable in mental health. In their study, Fürtjes et al. (2023) reported that increased self-efficacy could reduce the impact of stress on anxiety but not depression. This study revealed notable distinctions between anxiety and depression regarding how self-efficacy affects the link between symptomatology and stress. However, this study showed that in the presence of daily stressors, general self-efficacy did not have any hypothesized protective effect on depression, anxiety, or stress symptoms (See Table 4.) as against being a mediator of treatment outcome in alcohol consumption (Schonfeld et al., 2017).

General self-efficacy has been indicated as being effective in intervention- and prevention-based approaches to mediating stress effects, contrary to this present study by Schonfeld, Brailovskaia, Zhang, and Margraf (2019). This study's findings are also contrary to those from studies done in Germany, Russia, and China (Brailovskaia et al., 2017), in which resilience (i.e., internal self-efficacy) mediated the relationship between social support and negative mental health. In affirmation of our findings, a study among Chinese medical students (Shao et al., 2020) revealed a comparatively high prevalence of anxiety and depressive symptoms about mental health, indicating that self-efficacy alone does not buffer the symptoms of anxiety and depression.

LIMITATIONS OF THE STUDY

Because of the study's cross-sectional nature, it was difficult to infer causality between the studied variables. The survey's self-reported nature can also underestimate or overestimate relationships.

STRENGTH

This is the first study in Sub-Saharan Africa to examine the mediating effect of self-efficacy on the association between student stress and mental health outcomes.

Article DOI: 10.52589/AJHNM-2FVZYNRN
DOI URL: https://doi.org/10.52589/AJHNM-2FVZYNRN

IMPLICATIONS AND FUTURE DIRECTION

Future studies should evaluate other factors influencing students' mental well-being and their mediating or moderating effects. This same study should also be repeated in more centres to broaden representation across Nigeria and other African countries. These studies will aid in the design of appropriate intervention strategies to promote students' mental health.

CONCLUSION

This study emphasizes the positive interrelationship between depression, anxiety, and stress symptoms. Also, it points out that there is no buffering effect of self-efficacy on the association between daily hassles/stressors and the symptoms of depression, anxiety, or stress. These results should be used in intervention programs to justify screening for other negative mental health symptoms in students who present with either depression, anxiety, or stress symptoms. It should also serve as a means of enlightening relevant stakeholders that individual self-efficacy does not have the presumed protective effect from depression, anxiety, or stress symptoms in the presence of stressors.

Ethical Statement

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards. The study was approved by the Institutional Review Board (IRB) of Lagos State University of Education, Nigeria. The instrument for this study did not contain any element that would induce participants' pain or harm them. Personal information and the identity of participants were kept confidential, as information such as names and addresses were not required of participants. There was no financial remuneration for participants involved in completing the questionnaire.

Acknowledgment

We are grateful to Prof. Dr Jurgen Margraf, Alexander von Humbolt, professor of Clinical Psychology and Psychotherapy, Mental Health Research and Treatment Center, Ruhr-University of Bochum, Germany, for providing the scales/questionnaires and for his invaluable mentorship.

Article DOI: 10.52589/AJHNM-2FVZYNRN
DOI URL: https://doi.org/10.52589/AJHNM-2FVZYNRN

Author's Contributions

Mubaidat Adenrele Adeniyi and Temilade Oluwatoyosi Adeniyi: Responsible for research conception and design; acquired, analyzed, and interpreted the data; drafted the manuscript and thoroughly reviewed the intellectual content; gave final approval; agreed to take responsibility for all aspects of the work, ensuring any questions about accuracy or integrity of any part of the work were adequately investigated and resolved.

Samuel Tobi Tundealao: Drafted the manuscript and thoroughly reviewed the intellectual content; gave final approval; agreed to take responsibility for all aspects of the work, ensuring any questions about accuracy or integrity of any part of the work were adequately investigated and resolved.

Declarations

Competing Interest

We have no competing interests to declare that are relevant to this article's content.

Funding

No sponsors financially supported the authors.

Conflict of Interest

On behalf of all authors, the corresponding author states that there is no conflict of interest.

Data Availability

Data associated with this study are not publicly available. Derived data supporting the findings of this study are available from the corresponding author upon reasonable request.

Statement of Methods and Guideline Compliance

All methods were carried out following relevant guidelines and regulations.

Informed Consent

After reviewing the consent form, the interviewer evaluated the participants' comprehension. In accordance with research ethics, only those who demonstrated clear understanding were requested to give informed consent by indicating 'Yes' on the form. If 'No' was indicated, the participant was not eligible to participate in the study further.

Article DOI: 10.52589/AJHNM-2FVZYNRN
DOI URL: https://doi.org/10.52589/AJHNM-2FVZYNRN

Consent to Publication

Not applicable.

REFERENCES

Adeniyi, M. A. & Omoegun, M. O. (2013). Rehabilitative strategies as a template for addressing the adjustment problems of area boys and girls in Lagos metropolis. *Journal of Psychosocial Research 8* (2), 157-165.

Brailovskaia, J, Schonfeld, P, Zhang, C.X and Bieda, A (2018). A Cross-Cultural Study in Germany, Russia, and China: Are Resilient and Social Supported Students Protected Against Depression, Anxiety, and Stress? *Psychological Reports.* 121 (2), 265–281. doi:10.1177/0033294117727745

Crawford, J.R. and Henry, J.D. (2003) The Depression Anxiety Stress Scales (DASS): Normative Data and Latent Structure in a Large Non-Clinical Sample. *British Journal of Clinical Psychology, 42, 111-131. https://doi.org/10.1348/014466503321903544*

Fürtjes, S., Voss, C., Rückert, F., Peschel, S. K. V., Kische, H., Ollmann, T. M., Berwanger, J., & Beesdo-Baum, K. (2023). Self-efficacy, stress, and symptoms of depression and anxiety in adolescents: An epidemiological cohort study with ecological momentary assessment. *Journal of Mood & Anxiety Disorders*, 4, DOI: 10.1016/j.xjmad.2023.100039

Hayes, A. F. (2022). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (3rd ed.). New York: The Guilford Press (732pp)

Henry, J.D. & Crawford, J.R. (2005). The short-form version of the Depression Anxiety Stress Scales (DASS – 21): Construct validity and formative data in a large non-clinical sample. *British Journal of Clinical Psychology, 44(Pt 2), 227–239. https://doi.org/10.1348/014466505X29657*

IBM Corp. (2020). *IBM SPSS Statistics for Windows, (Version 27.0) [Computer software]* Armonk, NY: IBM Corp.

Kadden, R. M. & Litt. M. D. (2011). The role of self-efficacy in the treatment of substance use disorders. *Addictive Behaviors*, 36 (12), 1120-1126 doi: 10.1016/j.addbeh.2011.07.032

Lovibond, P. F., & Lovibond, S. H. (1995). Depression Anxiety and Stress Scales (DASS-42) [Database record]. *APA PsycTests*. https://doi.org/10.1037/t39835-000

Mize, J. L. (2024). Depression, anxiety, stress symptoms and coping strategies in the context of the sudden course modality shift in the Spring 2020 semester. *Current Psychology* **43**, 3944–3955). https://doi.org/10.1007/s12144-023-04566-5

NIMH (2016). US National Institute for Mental Health (NIMH). Retrieved November 13, 2016 from http://www.nimh.nih.gov.

Parto, M. (2011). Problem-solving, self-efficacy, and mental health in adolescents: Assessing the mediating role of assertiveness. *Procedia-Social and Behavioural Sciences, 30, 644–648. https://doi.org/10.1016/j.sbspro.2011.10.125*

Pascoe, M. C., Hetrick, S. E., & Parker, A. G. (2019). The impact of stress on students in secondary school and higher education. International Journal of Adolescence and Youth, 25(1), 104–112. https://doi.org/10.1080/02673843.2019.1596823

Paudel, S., Gautam, H., Adhikari, C., & Yadav, D. K. (2020). Depression, Anxiety, and Stress among the Undergraduate Students of Pokhara Metropolitan, Nepal. *Journal of Nepal Health Research Council, 18*(1), 27–34. https://doi.org/10.33314/jnhrc.v18i1.2189

Article DOI: 10.52589/AJHNM-2FVZYNRN
DOI URL: https://doi.org/10.52589/AJHNM-2FVZYNRN

Peng, H., Ma, J., Hu, J. & Gan, Y. (2024). Association of daily stress with daily anxiety and depression: Roles of self-affirmation and positive attention bias. Published online: January 31. 2024 http://doi.org/10.1027/2512-8442/a000140

Radeef, A.S., & Faisal, G. G. (2018). Stressors and their association with symptoms of depression, anxiety and stress in dental students. *Makara Journal of Health Research,* 22 (2), 58-62. DOI:10.7454/msk.v22i2.9064

Sawatzky, R. G., Ratner, P. A., Richardson, C. G., Washburn, C., Sudmant, W. & Mirwaldt, P. (2012). Stress and depression in students: The mediating role of stress management self-efficacy. *Nursing Research,* 61 (1), 13-21. http://dx.doi.org/10.1097/NNR.0b013e31823b1440

Scholten, S., Lavallee, K., Velten, J., Zhang, X.C & Margraf, J. (2020). The brief daily stressor screening tool: An introduction and evaluation. *Stress and Health, 36(5), 686-692*

Schonfeld, P., Brailovskaia, J., Zhang, X.C. & Margraf, J. (2019). Self-efficacy as a mechanism linking daily stress to mental health in students: A three-wave cross-lagged study. *Psychological. Reports*, 122 (6), 2074-2095. https://doi.org/10.1177/0033294118787496

Schonfeld, P., Preusser, F. & Margraf, J. (2017). Cost and benefits of self-efficacy: Differences and stress response and clinical implications. *Neuroscience and Behavioural Reviews,* 75, 40-52. DOI:10.1016/j.neubiorev.2017.01.031

Schwarzer, R. & Jerusalem, M. (1995). Generalized self-efficacy scale in J. Weinman, S. Wright & M. Johnston (Eds), Measures in health psychology: *A user's portfolio. Causal and control beliefs.* Windsor, UK: NFER – NELSON.

Shao, R., He, P., Ling, B., Tan, L., Xu, L., Hou, Y., Kong, L., & Yang, Y. (2020). Prevalence of depression and anxiety and correlations between depression, anxiety, family functioning, social support and coping styles among Chinese medical students. *BMC Psychology, 8,* Article 38. https://doi.org/10.1186/s40359-020-00402-8

Siegmann, P., Teismann, T., Fritsch, N., Forkmann, T., Glaesmer, H., Zhang, X.C., Brailovskaia, J., & Margraf, J. (2018**).** Resilience to suicide ideation: A cross-cultural test of the buffering hypothesis. *Clinical Psychology & Psychotherapy*, 25(1), e1–e9. https://doi.org/10.1002/cpp.2118

Singh, A.P, Shukla, A. & Singh, P.A. (2010). Perceived self-efficacy and mental health among the elderly. *Delhi Psychiatry Journal 13(2), 314-321.*

Teh, C.K., Ngo C.W., binti Zulkifli, R.A., Vellasamy, R. & Suresh, K. (2015). Depression, Anxiety and Stress among Undergraduate Students: a Cross-Sectional Study. *Open Journal of Epidemiology,* 5(4):260–268. DOI:10.4236/ojepi.2015.54030

Višnjić, A., Kök, K., Višnjić, J., Jovanović, T. and Marković, R. (2023). A longitudinal study of the association between depression, anxiety, and stress symptoms of university students in Serbia with excessive social media use before and during the COVID-19 pandemic. *Frontiers in Public Health*. 11:1140961. doi: 10.3389/fpubh.2023.1140961

Wang, Y., Wang, X., Wang, X., Guo, X., Yuan, L., Gao, Y., & Pan, B. (2023). Stressors in university life and anxiety symptoms among international students: a sequential mediation model. *BMC psychiatry*, *23*(1), 556. https://doi.org/10.1186/s12888-023-05046-7

World Health Organization (2020). Comprehensive mental health action plan 2013-2020-2030, World Health Organization Geneva: www.who.int/mental-health

Article DOI: 10.52589/AJHNM-2FVZYNRN
DOI URL: https://doi.org/10.52589/AJHNM-2FVZYNRN