

Test Anxiety and Mental Well-Being among Undergraduate Students in a North-Central Nigerian University

***Malan Martins Augustine¹ & Dauda Akwai Saleh²**

^{1,2}Department of Psychology,
Faculty of Social Sciences,
Plateau State University, Boko

***Corresponding author:** augustinemartins21@gmail.com

DOI: <https://doi.org/10.5281/zenodo.21757615>

Abstract

Objective: This study aims at understanding the burden of test anxiety on mental well-being among undergraduate students in a North-Central Nigerian university. Specifically, the study established the prevalence of test anxiety among undergraduate students and to ascertain whether test anxiety significantly predict mental well-being among undergraduate students or not.

Method: Cross-sectional survey design was utilized in this study, the total of 199 participants comprising females ($n = 109$) and males ($n = 90$) were purposively selected. The World Health Organization-Five Well-Being Index and the Westside Test Anxiety Scale were used for data collection. Two hypotheses were tested in this study utilizing Chi-square and One Way Analysis of Variance (ANOVA). All hypotheses were tested at the 0.05 level of significance; data were analyzed using Statistical Package for Social Sciences version 27.

Result: Findings of the study revealed significant prevalence of test anxiety among undergraduate students, with 31.66% undergraduate students having moderate anxiety, 29.65% having high test anxiety, and 18.09% having extremely high-test anxiety while 11.56% had high normal test anxiety and 8.04% had average test anxiety and only 1.0% had low test anxiety, $\chi^2 = 88.487$, $p = 0.001$, ($p < 0.05$). Also, test anxiety had significant influence on mental well-being among undergraduate students, $F(1, 193) = 2.524$, $p = 0.031$, $\eta^2 = 0.061$.

Conclusion: These findings underscore the detrimental effect of test anxiety on undergraduates' psychological functioning and highlight the need for comprehensive interventions, including counseling, academic workload reforms, and resilience-building programs.

Keywords: Test Anxiety, Mental Well-being, Undergraduates, North-Central Nigeria

Introduction

The transition into higher education marks a significant period of intellectual and social development for young adults. However, the pursuit of academic excellence often comes with heightened pressures and psychological challenges that undermine students' mental health. One of the most prominent of these challenges is test anxiety. Test anxiety has to do with psychological construct which involves cognitive, emotional, and physiological responses to evaluative situations. It is often conceptualized as comprising two dimensions: worry and emotional. The worry component includes intrusive thoughts, self-doubt, and fear of negative evaluation, while

the emotional component refers to physiological arousal such as nervousness, rapid heartbeat, and sweating (Putwain & Symes, 2018). Test anxiety encompasses both cognitive worry and physiological arousal, which, when heightened, significantly impair mental health and resilience (Jerrim, 2023).

Empirical evidence in Europe, America, United Kingdom and Africa has revealed high prevalence of test anxiety among students. For example, Putwain and Daly (2014) reported a 16.4% prevalence among 2436 English secondary school students while von der Embse et al. (2013) reported a 30% prevalence in high school students in the Midwestern State of the United State of America. Also, Alkowatli et al. (2022) assessed test anxiety among 614 medical students of the Gulf Medical University, Ajman, United Arab Emirates and found that 82.6% had test anxiety and that those aged 20 years of age experienced more anxiety than those who were under the age of 20 years. Putwain and von der Embse, (2021) reported that test anxiety is a worldwide phenomenon among students which may occur in daily classroom assessment, particularly due to importance given to assessment. von der Embse et al., (2018) posit that students experiencing high levels of test anxiety may avoid test preparation, procrastinate, or engage in self-defeating behaviors.

Arezi and Arezi (2025) reported high level of test anxiety among special education students in Dohuk University, Iraq while Yakkin et al. (2023) found high levels of test anxiety and associated poor mental well-being among 427 senior high school students in Caycuma District of Zonguldak, Turkey which associated gender, paternal education and motivation. According to the World Health Organization (WHO, 2022) mental well-being refers to a state in which individuals are able to cope with the normal stresses of life, work productively, and contribute to their community. Poor mental well-being among undergraduates often manifests in absenteeism, withdrawal from academic and social activities, low resilience, and diminished academic engagement (El Ansari, et al., 2021). Beyond academic outcomes, among Chinese university students test anxiety has profound implications for mental health (Li, et al., 2021). Von der Embse et al. (2018) found that test-anxious students are more prone to experiencing emotional exhaustion and decreased motivation. Test anxiety has been linked not only to poor academic outcomes but also to negative mental health consequences such as depression, hopelessness, fatigue, and suicidal ideation (Li, et al., 2021).

Impact of test anxiety on mental well-being is also a challenge among Africans, for example, Mensah et al. (2025) demonstrated that Ghanaian undergraduates experiencing high levels of test anxiety had experience challenges with their mental well-being and are likely to report depressive symptoms, disengagement from studies, and reduced life satisfaction. Among medical students in Ethiopia, higher prevalence of problematic test anxiety was reported, with a higher prevalence in female students compared to men. The following were discovered as factors that predict test anxiety among medical students; excessive course load, being first year student, having low grade, poor and moderate social support, lack of systemic study plan, and psychological distress (Tsegay, et al., 2019). Outcome of a study in Sudan aimed at determining the predictors and correlates of examination anxiety showed a significant relationship between depression and anxiety with most students having moderate to severe depression and high levels of test anxiety. Exam anxiety is predicted by experience of previous exam, gender, academic performance and level of maternal examination (Bashir, et al., 2019). Jarso, et al., (2024) reported significant association between test anxiety and psychological distress among students in Ethiopia. High prevalence of anxiety was found among final year junior high school students in Ghana, 71.4% exhibited symptoms above

the chronic anxiety cut-off point (Azasu, 2024). The mental health of students in higher education is an increasing concern. Research indicates that university students in sub-Saharan Africa are at a higher risk of poor mental health and wellbeing compared to the general population, which negatively impacts their studies (Julius, et al., 2024).

Globally, evidence has shown that nearly one-third of undergraduate students experienced moderate to severe levels of anxiety before or during examinations (Ibrahim et al., 2020). Haruna, et al., (2023) in a study on prevalence of examination anxiety among undergraduates of Federal University Gusau, Zamfara State, Nigeria that had 368 participants reported high prevalence of test anxiety among students which was a function of the level of the students but not age and being in a particular faculty with females experiencing more anxiety compared to their male counterparts. Similarly, in an earlier study by Onukwufor and Ugwu (2018) on level of schooling and gender differences in test anxiety conducted in Port Harcourt LGA, Rivers State, Nigeria that had 312 students, comprising females (N=136) and males (N=176) in which the Test Anxiety Inventory was used to generate the data found high anxiety level among the participants and that being female and not male was associated with experiencing more anxiety, and there was a significant difference between test anxiety of students who were in junior secondary school and those who were in senior secondary school. Ajayi and Ekundayo (2020) found that approximately 30% of undergraduates demonstrated clinically significant levels of test anxiety in Nigeria where systemic issues such as unstable academic calendars, overcrowded classrooms, financial hardship, and inadequate counseling services prevail, the psychological burden of test anxiety is even more pronounced. They suggest that test anxiety not only undermines academic performance but also contributes to diminished mental well-being. Furthermore, Usman (2025) in a study conducted in Gusau, Zamfara State, Nigeria on parental expectation, test anxiety and mental health of First-Year undergraduates in which the Student Test Anxiety Inventory was used to generate data from 357 students that participated found that test anxiety significantly led to meaningful and noticeable changes in the mental health of the students. Usman (2025) concluded that test anxiety is the most influential factor in variations in mental health of students.

Several models have been formulated to understand the underlying mechanisms that cause test anxiety is consistently associated with poor academic performance. This study adopts the cognitive resources model, particularly social cognitive theory and transactional theory of stress. Test-anxious students expend significant cognitive resources on worrying, leaving fewer resources available for problem-solving and recall during examinations. This is supported by the processing efficiency theory, which posits that anxiety reduces working memory capacity and task efficiency (Eysenck et al., 2007). The social cognitive theory emphasizes self-efficacy as determinant of how individuals respond to stressful life situations (Bandura, 1986), students with low self-efficacy are more likely to interpret examinations as threats, leading to heightened anxiety and reduced well-being. In relation to transactional model of stress, test anxiety is seen as a product of cognitive appraisal. When students perceive academic demands as exceeding their coping resources, anxiety intensifies, compromising psychological health. Effective coping strategies, such as problem-focused coping, can mitigate the negative effects of test anxiety (Lazarus & Folkman, 1984).

Statement of the Problem

Although test anxiety is widely studied globally, most Nigerian studies focus on academic performance, with limited attention to mental well-being. This neglects the broader psychological impact of test anxiety on students' resilience, motivation, and life satisfaction. Understanding the impact of test anxiety on mental well-being is therefore crucial for universities in Nigeria and beyond. There is paucity of data in relation to the impact of test anxiety on mental well-being of university studies, most of the global studies, African studies and studies done in Nigeria focused more on impact of test anxiety on academic performance with few studies that looked at psychological distress generally. In the studies reviewed there is absence of mental well-being as a key factor among students that is why its important for this study to look address mental well-being, this constitutes the problem identified in this study. This creates a gap in literature that this study seeks to fill. By exploring how test anxiety predicts students' mental well-being, outcome of this research contributes to both policy, theory and practice by providing evidence-based recommendations tailored to Nigerian higher education institutions. Therefore, this study is aimed at understanding the burden of test anxiety on mental well-being among undergraduate students in a North-Central Nigerian university.

Objectives of the Study

The specific objectives for this study are,

1. To establish the prevalence of test anxiety among undergraduate students in a North Central university, Nigeria.
2. To ascertain whether test anxiety will significantly predict mental well-being among undergraduate students in a North Central university, Nigeria.

Hypotheses

1. Test anxiety will have significant high prevalence among undergraduate students of a North Central university, Nigeria.
2. Test anxiety will significantly predict mental well-being among undergraduate students of a North central university, Nigeria.

Method

Research Design

This study employed a cross-sectional survey design, all participants that participate in this study were selected utilizing purposive sampling technique. The study had only one independent variable, namely test anxiety which had 6 levels- low, average, normal, moderate, high and extremely high. The dependent variable was mental well-being.

Participants

The total of 199 undergraduate students from a university in North Central Nigeria participated in this study with mean age of 23.46 and standard deviation of 3.901. In terms of gender distribution, majority 109(54.8%) were females compared to males 90(45.2%). Majority 69(34.7%) of the participants were in 100 level, 55(27.6%) were in 200 level, 38(19.1%) were in 300 level and 37(18.6%) were in 400 level.

Instruments

Two scales were used for data collection in this study. They are the World Health Organization-Five Well-Being Index and the Westside Test Anxiety Scale

Westside Test Anxiety Scale (WTAS)

The Westside Test Anxiety Scale was designed to measure the degree of anxiety experienced by students in relation to academic testing situations (Driscoll, 2004). It is a brief, 10-item instrument that uses a 5-point Likert response format ranging from 1 (never true) to 5 (always true). Items address difficulties such as concentration problems and worry related to examinations. Example statements include: “The closer I am to a major exam, the harder it is for me to concentrate on the material” and “After an exam, I worry about whether I did well enough.” The scale has demonstrated good reliability, with a reported Cronbach’s alpha of .84, and evidence of strong validity. Scores are interpreted such that values between 0–23 indicate low test anxiety, whereas scores of 24 and above suggest higher levels of test anxiety (Driscoll, 2004).

World Health Organization-Five Well-Being Index (WHO-5)

The WHO-5 Well-Being Index was introduced by the World Health Organization in 1998 to provide a concise measure of subjective psychological well-being. It contains five positively worded items rated on a 6-point Likert scale ranging from 0 (at no time) to 5 (all of the time). Respondents are asked to consider their well-being over the previous two weeks, with items assessing positive mood, vitality, and general interest in daily activities. Scores range from 0 to 25, with higher totals indicating better well-being. For interpretative purposes, raw scores are often transformed into percentage scores by multiplying by 4. Interpretive cutoffs classify scores into poor (0–28%), moderate (29–50%), good (51–75%), and very good well-being (76–100%). The scale has consistently shown high internal consistency ($\alpha = .82-.94$) and good test-retest reliability ($ICC = .83-.90$), as well as strong correlations with other measures of depression and mental health (Bonsignore et al., 2001; Krieger et al., 2014).

Procedure

Data was collected within the campus of a university in North Central Nigeria. A research assistant who was trained in data collection procedure assisted in data collection. All participants that participate in the study consent to and voluntarily participated. Instruments of data collection was administrated to some participants in lecture halls while waiting for lecturers and immediately after lectures, while others were administrated the instrument of data collection at relaxation spots across the campus. To complete responding to the instrument of data collection took participants approximately between 25 to 30 minutes after which the instrument of data collection was retrieved.

Method of Data Analysis

Both descriptive and inferential statistics were utilized in data analysis. Chi-square and One Way Analysis of Variance (ANOVA) were utilized in testing hypotheses one and two respectively. Level of significance was set at 0.05. all data were analyzed using Statistical Package for Social Sciences (SPSS) version 27.

RESULTS

Descriptive results

Table 1 shows the test anxiety and mental well-being mean score among undergraduate students. The table showed a mean score of 33.99 for test anxiety and standard deviation of 6.185 and mental well-being mean score of 16.49 and standard deviation of 3.424. This indicates that high scores were obtained for test anxiety.

Table 1:

Mean and Standard Deviation of Test Anxiety and Mental Well-being

	Mean	Standard Deviation
Test anxiety	33.99	6.185
Mental well-being	16.49	3.424

Tables 2 present the mean, standard error, 95% Confidence Interval (lower and upper bound) scores of mental well-being across test anxiety.

Table 2:

Mean, Standard Error, Lower and Upper Bound Scores of Mental Well-being across Test Anxiety

Test Anxiety	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Low test anxiety	14.00	2.38	9.31	18.69
Average test anxiety	15.88	.84	14.22	17.53
High normal test anxiety	14.74	.70	13.36	16.12
Moderate test anxiety	16.97	.42	16.13	17.80
High test anxiety	16.29	.44	15.43	17.15
Extremely high-test anxiety	17.50	.56	16.49	18.61

Table 2 displays the mean, standard error, and 95% *CI* scores for mental well-being across participant's test anxiety. For those with low test anxiety, the mean mental well-being score is 14.00 ($SE = 2.38$). This mean value signifies that, on average participants that have low test anxiety score reveals the typical dispersion of individual scores across this mean. Additionally, the 95% *CI* ranging from 9.31 (lower bound) to 18.69 (upper bound) provides a range within which we can reasonably anticipate the true mean mental well-being score for those with low test anxiety. On the other hand, participants that are having average test anxiety, the mean mental well-being score is 15.88 ($SE = .84$). This indicates that, on average, individuals that had average test anxiety score represents typical variability of individual scores around this mean. The 95% *CI* for this mental well-being category spans from 14.22 (lower bound) to 17.53 (upper bound), signifies the expected range for the actual mental well-being score for this group. For those with high normal test anxiety, the mean mental well-being score is 14.74 ($SE = .701$). This indicates that mental well-being score for this group reflects the typical variability of individual scores around this mean. Moreover, the 95% *CI* ranging between 13.36 - 16.12 (lower and upper bound) offers a range which we can reasonably expect the true mean mental well-being score for this group to fall.

Participants with moderate test anxiety exhibit a mean score of 16.97 ($SE = .42$). This indicates that the average mental well-being score for individuals in this group represents the typical dispersion of individuals scores around this mean. The 95% CI for those with moderate test anxiety ranges from 16.13 (lower bound) to 17.80 (upper bound) this implies the anticipated range for the actual mean mental well-being score for this group. Participants with high test anxiety had mental well-being score of 16.29 ($SE = .44$), with 95% CI for those with high test anxiety score ranging between 15.43 - 17.15 (lower and upper bound). Finally, participants with extremely high-test anxiety had the mean mental well-being score of 17.50 ($SE = .56$). This indicates that mental well-being score for this group reflects the typical variability of individual scores around this mean. Furthermore, the 95 CI ranging between 16.49 - 18.61 (lower and upper bound) offers a range which can reasonably expected the true mean mental well-being score for this group to fall.

Inferential Results

The study tested two hypotheses, hypotheses one was tested with Chi-square statistical test while hypotheses tow was tested with One-Way analysis of variance (ANOVA). all hypotheses were tested at the 0.05 significance level.

Hypothesis 1

Test anxiety will have significant high prevalence among participants

The result revealed that there was a significant rate of test anxiety among undergraduate students, with 31.66% undergraduate students having moderate anxiety, 29.65% having high test anxiety, and 18.09 having extremely high-test anxiety. Furthermore, 11.56% had high normal test anxiety and 8.04 had average test anxiety. Only 1.0% had low test anxiety, $\chi^2 = 88.487$, $p = 0.001$, ($p < 0.05$). The hypothesis is supported. This implies that a high number of undergraduate students exhibit test anxiety. Table 3 shows details of the result.

Table 3:

Chi-square rate of Test Anxiety among Undergraduate Students

Test Anxiety	Observed N	%	Chi-square (χ^2)	p -value
Low test anxiety	2	1.0	88.487	<.001
Average test anxiety	16	8.04		
High normal test anxiety	23	11.56		
Moderate test anxiety	63	31.66		
High test anxiety	59	29.65		
Extremely high-test anxiety	36	18.09		
Total	199			

Hypothesis 2

Test anxiety will significantly influence mental well-being among undergraduate students

Table 4:

ANOVA Source Table for Test Anxiety on Mental Well-being of the Study Participants.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	142.496	5	28.499	2.524	.031	.061
Intercept	13645.115	1	13645.115	1208.462	<.001	.862
Test Anxiety	142.496	5	28.499	2.524	.031	.061
Error	2179.223	193	11.291			
Total	56417.000	199				
Corrected Total	2321.719	198				

Result of hypothesis two (Table 4) reveals that test anxiety had significant influence on mental well-being among undergraduate students, means; 14.00 ($SE = 2.38$), 15.88 ($SE = .84$), 14.74 ($SE = .74$), 16.99 ($SE = .42$), 16.29 ($SE = .44$), 17.50 ($SE = .56$) $F(1, 193) = 2.524$, $p = 0.031$, $\eta^2 = 0.061$. The eta squared value of 0.061 indicates that test anxiety accounted for 6.1% of the variance in mental well-being among undergraduate students. The hypothesis is supported.

Discussion

The present study investigated the burden of test anxiety on mental well-being among undergraduate students. The first hypothesis predicted that test anxiety would have a significant prevalence among students. This was supported, as findings revealed a significant higher rate of test anxiety among undergraduate students, moderate anxiety had the highest prevalence rate of test anxiety, followed by high test anxiety, extremely high-test anxiety, high normal test anxiety and average test anxiety, with only 1.0% that had low test anxiety. Findings of hypotheses indicates that a high number of undergraduate students exhibited test anxiety. These findings are consistent with prior research. For instance, Saleh et al. (2021) and Tehrani et al. (2022) reported that high test anxiety correlates with poor emotional regulation, depression, and reduced motivation. Similarly, Khan et al. (2023) noted that students experiencing test anxiety are more prone to academic burnout. Together, these studies affirm that test anxiety is not just a situational reaction but a persistent psychological burden that undermines student performance and well-being. Putwain and von der Embse, (2021) reported that test anxiety is a worldwide phenomenon among students. In this present study, higher prevalence of test anxiety found is in conformity with the many previous studies such as; Ajayi and Ekundayo (2020) reported that approximately 30% of undergraduates demonstrated clinically significant levels of test anxiety. Similarly, among students of Federal university Gusau Zamfara state higher prevalence of examination anxiety was reported (Haruna, et al., 2023). Alkowatli et al. (2022) also reported a higher prevalence of test anxiety.

Outcome of the second hypotheses revealed that test anxiety had significant influence on mental well-being among undergraduate student. Extremely high-test anxiety had the higher mean mental well-being score followed by high test anxiety and moderate test anxiety respectively. Low test anxiety had the lowest mental well-being score. This implies that among undergraduate students

in North-central Nigeria test anxiety is a major factor that predicts mental well-being. This finding aligns with Li et al. (2024), who found that test anxiety disrupts academic resilience and fosters negative self-appraisal, and Mensah et al. (2024), who confirmed that evaluative stress predicts reduced life satisfaction among African undergraduates. Similarly, among Chinese university students test anxiety has profound implications for mental health (Li, et al., 2021). Beyond academic outcomes, among Chinese university students test anxiety has profound implications for mental health (Li, et al., 2021). Also, Jarso, et al., (2024) discovered significant association between test anxiety and psychological distress among students in Ethiopia. While in Sudan Bashir, et al., (2019) had earlier reported exam anxiety is predicted by experience of previous exam, gender, academic performance and level of maternal examination (Bashir, et al., 2019).

Significant outcome of this study will further strengthen existing theories of test anxiety and mental well-being. Test anxiety has been linked previously to poor academic performance and in this present study, test anxiety significantly influences mental well-being which was a gap that this filled. Social cognitive theory and transactional theory of stress were adopted in this study; the outcome of this present study further gives explanation to the theories especially in relation to current prevalence of test anxiety and its influence on mental well-being. According to Bandura (1986) students with low self-efficacy are more likely to interpret examination as threat which leads to heightened anxiety and reduced well-being. This implies that in this study its likely, that the higher prevalence of test anxiety found may be attributed to low self-efficacy which in turn also affected the participants mental well-being. According to Lazarus and Folkman, (1984) anxiety increases when perceived academic demands exceed their coping resources which in turn compromises psychological health. This implies that whenever undergraduate students perceive academic pressure it's likely that it brings test anxiety which in turn can also affects their mental well-being if the academic pressure is not managed properly.

The study, however, was limited by its cross-sectional design and limited number of participants which may affect generalization of findings of the study. Future research should include more participants and utilized a mixed design which will give participants the opportunity to explain better the impact of test anxiety on their mental well-being. Based on the outcome of this study, it is recommended that universities integrate resilience-building interventions, and provide accessible Psychological and counselling services within the school system.

Conclusion

The study concludes that test anxiety is highly prevalent among undergraduates and significantly impact mental well-being. Considering the high prevalence of test anxiety and its impact on mental well-being there is need for psychological intervention and counselling across institutions in Nigeria. Therefore, this study has implication for policy, theory/literature and practice. In terms of policy, the findings support the institutionalization of mental health policies and services within Nigerian universities. Theoretically, the study reinforces social cognitive and transactional stress models by showing that self-efficacy and cognitive appraisal are critical in test-related stress. While in relation to literature, the study contributes to current literatures on test anxiety and mental well-being. In terms of practice, there is need for mental health practitioners to embark on awareness campaign in universities and providing mental health services aimed towards resilience-building programs and coping mechanisms which will be beneficial to the university community in general. The findings underscore the detrimental effect of test anxiety on undergraduates'

psychological functioning and highlight the need for comprehensive interventions, including counseling, academic workload reforms, and resilience-building programs.

REFERENCE

- Ajayi, I. A., & Ekundayo, H. T. (2020). The impact of test anxiety on academic performance and mental well-being of Nigerian students. *Journal of Educational Research and Practice*, 10(2), 45–56.
- Alkowitzli, H., Khan, S., Bhyat, Y., & Alsuwaidi, M. (2022). Test anxiety amongst university students: A cross-sectional study. *Medical Reports & Case Study*, 7(11). www.iomcworld.org/open-access.
- Arezi, A.A.Z., & Arezi, M.A.Z. (2025). Test anxiety among special education students at the University of Dohuk, Iraq: Prevalence, predictors and intervention implications. *Jurnal Theologia*, 36 (1), 1-13. Doi: <https://doi.org/10.21580/teo.2025.36.1.26380>.
- Azasu, E. K., Babatunde, A., Amoako, E. O., Achulo, S. & Kugbey, N. (2024). Factors contributing to anxiety among final year junior high school students in Ghana: implications for supporting mental well-being during basic education certificate examination. *Discover Psychology*, 4:128. <https://doi.org/10.1007/s44202-024-00217-3>
- Bashir, M. B. A., Albadawy, I. M. A. H., & Cumber, S. N. (2019). Predictors and correlates of examination anxiety and depression among high school students taking the Sudanese national board examination in Khartoum state, Sudan: a cross-sectional study. *Pan Afr Med J*. 29, 33:69. doi: 10.11604/pamj.2019.33.69.17516
- Driscoll, R. (2004). Westside Test Anxiety Scale. *Westside Psychology*. <http://www.testanxietycontrol.com/research.htm>
- El Ansari, W., Stock, C., & Mills, C. (2021). Is health and well-being associated with participation in student engagement? A cross-sectional study of undergraduates. *International Journal of Environmental Research and Public Health*, 18(12), 6249. <https://doi.org/10.3390/ijerph18126249>
- Eysenck, M. W., Derakshan, N., Santos, R., & Calvo, M. G. (2007). Anxiety and cognitive performance: Attentional control theory. *Emotion*, 7(2), 336–353. <https://doi.org/10.1037/1528-3542.7.2.336>.
- Eysenck, M.W., Derakshan, N., Santos, R., & Calvo, M.G. (2007). Anxiety and cognitive performance: Attentional control theory. *Emotion*, 7(2), 336-356.
- Haruna, A.S., Gurjiya, S.A., & Sheu, L.A. (2023). Prevalence of examination anxiety among undergraduates: Implications for Counselling. *Shodh Sari-An International Multidisciplinary Journal*, 2(4), 115-130. Doi: 10.59231/SARI7628.
- Ibrahim, A. K., Kelly, S. J., Adams, C. E., & Glazebrook, C. (2020). A systematic review of studies of depression prevalence in university students. *Journal of Psychiatric Research*, 122, 7–14. <https://doi.org/10.1016/j.jpsychires.2019.12.015>.

- Jarso, M. H., Tariku, M., Mamo, A., Tsegaye, T., & Gezimu, W. (2024). Test anxiety and its determinants among health sciences students at Mattu University: a cross-sectional study. *Front. Psychiatry*, 14:1241940. doi: 10.3389/fpsy.2023.1241940
- Julius, B., Putteeraj, M. & Somanah, J., 2024, 'A systematic review of university students' mental health in sub-Saharan Africa', *Transformation in Higher Education* 9(0), a316. <https://doi.org/10.4102/the.v9i0.316>
- Krieger, T., Zimmermann, J., Huffziger, S., Ubl, B., Diener, C., Kuehner, C., & Grosse Holtforth, M. (2014). Measuring depression with a well-being index: Further evidence for the validity of the WHO-5 as a measure of the severity of depression. *Journal of Affective Disorders*, 156, 240–244. <https://doi.org/10.1016/j.jad.2013.12.015>
- Lazarus, R. S., & Folkman, S. (1984). Stress, appraisal, and coping. *Springer*.
- Li, H., Zhang, J., & Wang, Y. (2021). Academic pressure, test anxiety, and mental health: Evidence from Chinese university students. *Frontiers in Psychology*, 12, 669. <https://doi.org/10.3389/fpsyg.2021.00669>.
- Mensah, R.O., Amponsah, K.D., Badah, P.A., & Jibril, H.S. (2024). Factors affecting students, academic performance and teachers' efficiency in Ghana: A case study of Wa Senior High School. *Cogent Arts and Humanities*, 11(1), 2024. [Google Scholar].
- Musa, M., & Ahmed, A. (2021). Financial hardship, institutional instability, and test anxiety among Nigerian students. *Nigerian Journal of Education and Psychology*, 6(2), 98–110.
- Onukwufor, J.N., & Ugwu, C. J. (2018). Level of schooling and gender differences in test anxiety among secondary school students in Port Harcourt Local Government Area, Rivers State. *Advances in Social Sciences Research Journal*, 5(2), 154-159.
- Putwain, D. W., & Symes, W. (2018). Test anxiety and academic performance: The mediating effects of coping strategies. *School Psychology International*, 39(1), 56–73. <https://doi.org/10.1177/0143034317748864>.
- Putwain, D.W., & von der Embse, N.P. (2018). Teacher's use of fear appeals and timing reminders prior to high-stakes examinations: Pressure from above, below and within. *Social Psychology of Education*, 21(5), 1001-1019.
- Saka, A., Mustapha, U., & Abdulsalam, A. (2024). Impact of test anxiety and mental health challenges on academic performance of senior secondary school students in Wukari Local Government Area, Taraba State, Nigeria. *World Journal of Applied Medical Science*, 1(1), 2024. <https://wasprpublication.com/wjams>.
- Tsegay, L., Shumet, S., Damene, W., Gebreegziabhier, G., & Ayano, G. (2019). Prevalence and determinants of test anxiety among medical students in Addis Ababa Ethiopia. *BMC Medical Education*, 19, 423. <https://doi.org/10.1186/s12909-019-1859-5>
- Usman, M.D. (2025). Parental expectations, test anxiety and mental health of First-Year undergraduates in tertiary institutions in Gusau Metropolis, Zamfara State, Nigeria. *Kano Journal of Educational Psychology*, 5(1), 2736-1373.

- von der Embse, N. P., Jester, D., Roy, D., & Post, J. (2018). Test anxiety effects, predictors, and correlates: A 30-year meta-analytic review. *Journal of Affective Disorders*, 227, 483–493. <https://doi.org/10.1016/j.jad.2017.11.048>.
- Von der Embse, N.P., & Hasson, R. (2012). Test anxiety and high-stake performance between school settings: Implications for educators. *Prevention of School Failure: Alternative Education for Children and Youth*, 56(3), 180-187.
- Winther Topp, C., Østergaard, S. D., Søndergaard, S., & Bech, P. (2016). The WHO-5 Well-Being Index: A systematic review of the literature. *Psychotherapy and Psychosomatics*, 84(3), 167–176. <https://doi.org/10.1159/000376585>
- World Health Organization. (1998). Well-being measures in primary health care: *The DepCare project*. WHO Regional Office for Europe.
- World Health Organization. (2022). Mental health: Strengthening our response. *World Health Organization*. <https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response>.
- Yatkin, E., Arai, N., Gunes, L.C., & Tosun, S. (2023). Mental well-being and test anxiety among students preparing for university admission examination during the pandemic. *Frontiers Psychology*, 1(1), 2023. Doi: 10.3389/fpsyg.2023.1184788.