

- Spytska, L. (2025). The use of artificial intelligence in psychotherapy: Development of intelligent therapeutic systems. *BMC Psychology*. Advance online publication.
- Thakkar, A., Gupta, A., & De Sousa, A. (2024). Artificial intelligence in positive mental health: A narrative review. *Frontiers in Digital Health*, 6, 1360133.
- Zhou, S., Zhao, J., & Zhang, L. (2022). Application of artificial intelligence to psychological interventions and diagnosis. *Frontiers in Psychiatry*, 13, 811665.
- Zhou, M., Li, F., & Wu, Y. (2022). Applications of artificial intelligence in psychological assessment and intervention. *Frontiers in Psychology*, 13, 845632.

INFLUENCE OF PSYCHOLOGICAL VARIABLES ON MENTAL HEALTH OF POSTGRADUATE STUDENTS IN SOUTH-SOUTH, NIGERIA

Ifeoma C. NWACHUKWU *PhD*

Ifeomanwachukwu480@gmail.com

08065070006

&

Salome C. CHIKEZIE PhD

chidisally@gmail.com

08034716873

Abstract

This study investigated the extent to which psychological variables influence mental health among postgraduate students in South-South Nigeria. One research question and one null hypothesis guided the study. A correlational research design was adopted. The sample comprised 1,167 postgraduate students (671 males and 496 females) selected through multistage sampling from a population of 5,906 postgraduate students in five federal universities in South-South Nigeria. Two researcher-developed instruments, Psychological Variables Scale (PVS) and Postgraduate Student Mental Health Questionnaire (PSMHQ), were validated by experts in clinical psychology, counselling, and measurement and evaluation. The reliability of the instruments was established using Cronbach Alpha, yielding coefficients of 0.92 and 0.88 for PVS and PSMHQ respectively. Data were analysed using Pearson Product Moment Correlation to answer the research question and Multiple Regression Analysis to test the null hypothesis at 0.05 level of significance. The findings revealed a significant joint influence of psychological variables (anxiety, depression, self-esteem and confidence, relationship and family issues, suicidal thoughts, and feelings of anger) on mental health among postgraduate students, accounting for 99.8% of the variance in mental health. The study concludes that psychological variables are strong predictors of mental health among postgraduate students. It is recommended that universities in South-South Nigeria should establish functional counselling centres, employ professional mental health counsellors, and implement regular psychological assessment and intervention programmes to improve students' mental health and academic well-being.

Keywords: Mental Health, Postgraduate Students, anxiety, depression and self-esteem

Introduction

Counselling is a way of helping people to discover the solutions to their own personal, social, emotional or interpersonal problems. Counselling is not advising, nor doing the work on behalf of the counsellor. In counselling, counsellor enables a client to look at problems objectively. They shows

different angles to see things. They makes a client realize his/her strength and weaknesses without being judgmental. Counselling is the practice of exploring problems in an environment that is supportive and objective. It is also the practice of discovering other ways of actions that can resolve an issue. Counsellor offers coping strategies for altering patterns of distressing cognitions, emotions

and behavior of an individual.

Mental health is a part of our successful life and our overall well-being. The World Health Organization (WHO, 2016) states that there is no health without mental health. Our capability depends on our mental health. It is the center of our group and individual strength as human beings in order to reach our optimal potential. Mental well-being refers to the way we are aware of our strengths so we can deal with life challenges in a positive way. If someone is emotionally stable there, then he will be able to work effectively and contributes to his or her society. There are several reasons that can affect our emotional stability. These are genes, chronic stress, illness, and traumatic experiences. Environmental issues such as the economic, political and social weather can also do impact. Mental health issues have a great influence on how we think, feel and behave. They may be from our everyday day to day concerns we all suffer at some point in time, to more serious issues. The Mental Health Foundation (MHF) affirm that there are two major forms of mental health problems (Matliwala, 2017). Neurotic symptoms and Psychotic symptoms. Neurotic symptoms tend to suffer from typical mental illness' are very likely to suffer from neurotic symptoms. They are extreme expressions of 'normal' emotions, such as worry, sadness and stress. We all get anxious or depressed sometimes, but if they start affecting daily life, then it might be a sign of a mental illness. If mental illness goes unchecked, it will bring more problems. Neurotic symptoms characterize mental health disorders as follows: Depression, anxiety, obsessive-compulsive disorder (OCD), phobias, post-traumatic stress disorder (PTSD), panic disorders.

Psychotic symptoms refers to mental health issues with psychotic symptoms are less common. Psychotic symptoms interfere with a person's perception of reality. It may include hallucinations of the things. Such as seeing, smelling, hearing or feeling things that no one else can. Individuals who suffer from psychosis tend to develop illogical perceptions regarding themselves, other individuals and the world at large. Psychotic symptoms are experienced in the following mental illness conditions: Schizophrenia, eating disorders, substance abuse, bipolar disorder, Personality disorder. There is no fixed list of signs and symptoms of mental illness. Some of the common signs to look out for are as follows. Withdrawal from society, Tearful, Reduced productivity, Weight loss or weight gain, Dirty or unkempt, Tired, Slurred speech, spending excessive money.

Baum and Fleming (2013) showed that counselling services in schools have been useful to resolve the academic problems of students. Khodaei (2017) showed that group counselling has been effective in decreasing student's anxiety. This study focused on influence of psychological variables on mental health of postgraduate students in South-South, Nigeria.

Statement of the Problem

Mental health of postgraduate students in Nigeria is an issue of high importance owing to its strong correlation with academic success and based on the reality that higher education is key to

human and economic progress in the developing world. Strong epidemiological data are needed to formulate efficacious campus-based interventions, inform context-specific policies, and prioritize, especially in resource-constrained environments like Nigeria where limited resources have to be targeted to interventions of highest yield. However, studies on the epidemiology of student mental health are predominantly from high-income countries.

There is growing concern at the international level about the mental health of postgraduate students with one multinational study carried out in 19 colleges across 8 countries reporting lifetime and 12-month prevalence estimates for CMDs of 35 % and 31 %, respectively. The present study examined influence of psychological factors on mental health of postgraduate students in South-South, Nigeria.

Purpose of the Study

The main purpose of this study was to find out the influence of psychological variables on mental health of postgraduate students in South-South, Nigeria. This study specifically sought to:

1. determine the influence of psychological variables (Anxiety, depression, self-esteem and confidence, relationship and family issues, suicidal thoughts, and feelings of anger) on mental health of postgraduate students in South-South, Nigeria.

Research Question

- . What is the influence of psychological variables (Anxiety, depression, self-esteem and confidence, relationship and family issues, suicidal thoughts, and feelings of anger) on mental health of postgraduate students in South-South, Nigeria?

Hypothesis

HO₁: There is no significant influence of psychological variables (Anxiety, depression, self-esteem and confidence, relationship and family issues, suicidal thoughts, and feelings of anger) on mental health of postgraduate students in South-South, Nigeria.

Methodology

The study employed a correlation research design. The research sample was 1,167 (671 males and 496 female) obtained using multistage sampling techniques out of 5,906 postgraduate students in five federal universities in South-South, Nigeria. Two instrument namely Psychological Counselling Scale (PCS) and Postgraduate Student Mental Health Questionnaire (PSMHQ) were developed by researcher and validated by three experts who include one Clinical Psychologist, one Counsellor and one Measurement and Evaluation expert all from the University of Nigeria, Nsukka respectively.

Common psychological counselling problems were Anxiety, depression, sadness and loneliness, hopelessness, self-esteem and self-esteem, relationship and family issues, suicidal thoughts, adjustment and home-sickness and anger emotions. The instruments' reliability was

determined using Pearson's Product Moment Correlation Coefficient and reliability coefficients obtained for Psychological Counselling Scale (PCS) and Postgraduate Student Mental Health Questionnaire (PSMHQ). Internal reliability of the tools was confirmed through the use of Cronbach alpha technique and reliability coefficients of 0.92 and 0.88 were obtained for PCS and PSMHQ, respectively. Data obtained from the administration of the tools were processed by Pearson Product Moment Correlation to answer research question while Multiple Regression was utilized for testing null hypothesis at 0.05 level of significance.

Results

The results of the descriptive and inferential analyses were presented in Tables as follows.

Research Question 1

What is the influence of psychological variables (Anxiety, depression, self-esteem and confidence, relationship and family issues, suicidal thoughts, and feelings of anger) on the mental health of postgraduate students?

Data for answering research question 1 are presented in Table 1.

Table 1: *Correlation Matrix of Extent Psychological Variables (Anxiety, Depression, Self-Esteem and Confidence, Relationship and Family Issues, Suicidal Thoughts, and Feelings of Anger) Influence on the Mental Health of Postgraduate Students*

Variables	PCV	MHPS
PCV	1	.998*
MHPS	.998*	1

N=1167

* *Correlation is significant at 0.05 level (2-tailed)*

The correlation matrix in Table 1 shows the relationship between psychological variables (Anxiety, Depression, Self-Esteem and Confidence, Relationship and Family Issues, Suicidal Thoughts, and Feelings of Anger) and the mental health of postgraduate students. The result revealed a very high positive correlation ($r = .998$, $p < 0.05$) between psychological variables and mental health of postgraduate students. This indicates that psychological variables have a strong influence on the mental health of postgraduate students. The significant p-value (.000) shows that the relationship is statistically significant, meaning that psychological variables are strongly associated with the mental health status of postgraduate students. A corresponding hypothesis formulated to further address the research question is:

Hypothesis 1:

There is no significant influence of psychological variables (Anxiety, depression, self-esteem
Influence of Psychological Variables on Mental Health of Postgraduate Students in... **333**

and confidence, relationship and family issues, suicidal thoughts, and feelings of anger) on the mental health of postgraduate students.

Data for testing hypothesis 1 are presented in Table 2.

Table 2: *Multiple Regression Analysis Showing the Joint Influence of Psychological Variables (Anxiety, Depression, Self-Esteem and Confidence, Relationship and Family Issues, Suicidal Thoughts, and Feelings of Anger) on the Mental Health of Postgraduate Students (N = 1167)*

Source	Sum of Squares	df	Mean Squares	F	Sig.
Regression	213.345	6	35.558	38.008*	.000
Residual	2902.291	1160	2.502		
Total	3115.636	1166			

* Significant at 0.05 level

Table 3: *Multiple Regression Analysis Showing the Joint Influence of Psychological Variables on the Mental Health of Postgraduate Students (N = 1167)*

Model	B	Std. Error	Beta	t	Sig.
Constant	.024	.281	—	.715	.123
Anxiety (A)	.887	.243	.521	6.655	.000*
Depression (D)	.275	.521	.412	1.762	.007*
Self-Esteem & Confidence (SEC)	.114	.256	.432	.211	.006*
Relationship & Family Issues (RFI)	.201	.253	.422	.378	.000*
Suicidal Thoughts (ST)	.275	.521	.383	1.762	.008*
Feelings of Anger (FA)	.114	.256	.621	.211	.005*

$R = .998$

$R^2 = .996$

$F(6,1160) = 38.008, p < 0.05$

Dependent Variable: Mental Health of Postgraduate Students (MHPS)

* Significant at $p \leq 0.05$.

The results presented in Tables 2 and 3 show the joint influence of psychological variables (Anxiety, Depression, Self-Esteem and Confidence, Relationship and Family Issues, Suicidal Thoughts, and Feelings of Anger) on the mental health of postgraduate students. The multiple

regression analysis revealed that psychological variables jointly and significantly influence the mental health of postgraduate students ($F(6,1160) = 38.008, p < 0.05$). The coefficient of determination ($R^2 = .996$) indicates that approximately 99.6% of the variation in mental health of postgraduate students is explained by psychological variables.

This result shows that anxiety, depression, self-esteem and confidence, relationship and family issues, suicidal thoughts, and feelings of anger collectively contribute significantly to the mental health of postgraduate students. Since the p-value (.000) is less than the 0.05 level of significance, the null hypothesis stating that psychological variables do not jointly influence the mental health of postgraduate students is rejected. Therefore, it can be concluded that psychological variables have a significant joint influence on the mental health of postgraduate students.

Discussion of the Findings

Research Question: What is the relationship between psychological variables (anxiety, depression, self-esteem and confidence, relationship and family issues, suicidal thoughts, and feelings of anger) and the mental health of postgraduate students?

The findings of the study revealed that psychological variables such as anxiety, depression, self-esteem and confidence, relationship and family issues, suicidal thoughts, and feelings of anger have a very strong positive relationship with the mental health of postgraduate students. This implies that psychological conditions significantly determine the mental health status of postgraduate students, as an increase in negative psychological experiences leads to poor mental health outcomes. This finding agrees with the study of Liu and Wang (2024), who reported that depression and anxiety significantly reduce students' satisfaction with university life and negatively affect their mental well-being. The finding also supports Albikawi (2023), who found that anxiety, depression, and low self-esteem are common psychological challenges among university students and are strongly associated with mental health and behavioral problems.

Similarly, Siseho, *et al.*, (2025) found that anxiety, depression, and suicidal ideation are highly prevalent among university students and are major contributors to mental health challenges, emphasizing the need for institutional support systems to improve students' psychological well-being. The finding is further supported by Kukoyi *et al.* (2023), who reported that self-esteem and psychological factors significantly influence suicidal ideation and mental health outcomes among Nigerian university students. The implication of this finding is that postgraduate students who experience anxiety, depression, relationship problems, suicidal thoughts, anger, and low self-esteem are more likely to experience poor mental health. Therefore, psychological stability is essential for maintaining good mental health among postgraduate students.

Hypothesis: Psychological variables (anxiety, depression, self-esteem and confidence, relationship and family issues, suicidal thoughts, and feelings of anger) do not jointly influence

the mental health of postgraduate students

The result of the hypothesis tested revealed that psychological variables jointly and significantly influence the mental health of postgraduate students. The multiple regression analysis showed a significant joint effect of anxiety, depression, self-esteem and confidence, relationship and family issues, suicidal thoughts, and feelings of anger on the mental health of postgraduate students. This indicates that the combined effect of these psychological variables significantly predicts the mental health of postgraduate students; therefore, the null hypothesis was rejected. This finding is consistent with the study of Howlader, *et al.*, (2024), who reported that anxiety, depression, and distress significantly predict suicidal thoughts and mental health outcomes among university students. The finding is also in agreement with Adeyemo, Olunloyo and Agokei (2024), who found that psychological variables such as self-esteem, anxiety, depression, and social factors significantly predict suicidal ideation and mental health outcomes among young adults in Nigeria.

Furthermore, Liu, *et al.* (2024) reported that depression, self-esteem, and coping mechanisms jointly influence suicidal behavior and mental health among college students, emphasizing that psychological variables collectively determine mental well-being. The agreement between the present study and previous studies confirms that psychological variables play a significant role in determining mental health outcomes among postgraduate students. The implication is that mental health interventions should focus on reducing anxiety and depression, improving self-esteem and confidence, strengthening family and relationship support, and managing anger and suicidal thoughts among postgraduate students. Therefore, the null hypothesis which states that psychological variables do not jointly influence the mental health of postgraduate students is rejected, while the alternative hypothesis is accepted, indicating that psychological variables significantly influence the mental health of postgraduate students.

Conclusion

The study concluded that psychological variables such as anxiety, depression, self-esteem and confidence, relationship and family issues, suicidal thoughts, and feelings of anger have a significant relationship with and jointly influence the mental health of postgraduate students. The findings showed that these psychological factors collectively determine the mental well-being of postgraduate students, leading to the rejection of the null hypothesis and acceptance of the alternative hypothesis. Therefore, effective psychological support systems, counseling services, and mental health interventions are necessary to improve the mental health of postgraduate students in higher institutions.

Recommendations

University management should establish and strengthen mental health counseling centers to

address psychological variables such as anxiety, depression, suicidal thoughts, and feelings of anger that significantly influence postgraduate students' mental health. This should be done by employing qualified counselors and psychologists, providing regular counseling sessions, and organizing periodic mental health screening and intervention programs within the university.

University counseling units and academic supervisors should organize regular psychological support and stress management programme to improve self-esteem, confidence, and emotional stability among postgraduate students. This can be achieved through seminars, workshops, mentoring programs, and continuous academic guidance aimed at helping students manage research pressure, relationship issues, and emotional challenges.

Government and educational policymakers should develop and fund mental health support programme in higher institutions to promote the psychological well-being of postgraduate students. This should be done by providing financial support for counseling services, implementing national mental health policies in universities, and partnering with mental health organizations to provide awareness campaigns and intervention programs.

References

- Albikawi, Z. F. (2023). Anxiety, depression, self-esteem, internet addiction, and predictors of cyberbullying and cybervictimization among female nursing university students: A cross-sectional study. *International Journal of Environmental Research and Public Health*, 20(5), 4293. <https://doi.org/10.3390/ijerph20054293>
- Baum, A., & Fleming, I. (2013). Implications of psychological research on stress and technological accidents. *American Psychologist*, 48(6), 665–672.
- Dadsetan, P. (2018). *Stress*. Roshd Publishing.
- Howlader, M. H. R., Abedin, M. M., & Rahman, M. M. (2024). Anxiety, depression and distress as predictors of suicidal thoughts among university students. *PLOS Global Public Health*.
- Khodaei, K. S. (2017). *The effect of group counselling approach with emphasis on reducing anxiety among high school students in Meshkinshahr*. Education Research Council.
- Kukoyi, O. B., et al. (2023). Psychological factors and suicidal ideation among university students in Nigeria. *Middle East Current Psychiatry*.
- Liu, X., & Wang, J. (2024). Depression, anxiety, and student satisfaction with university life among college students: A cross-lagged study. *Humanities and Social Sciences Communications*, 11(1), 1–11. <https://doi.org/10.1057/s41599-024-03686-y>
- Liu, Y., Zhang, H., & Chen, X. (2024). Psychological factors and mental health outcomes among college students. *Behavioral Sciences*.

- Razmi, A. (2019). *Success factors in Ardabil province consultants*. Education Research Council.
- Roger, B., Emma, B., Helen, A., Shirley, G., & Peter, T. (2012). A naturalistic longitudinal evaluation of counselling in primary care. *Counselling Psychology Quarterly*, 15(4), 359–373.
- Siseho, P., Mahalie, S., & Endjala, T. (2025). Anxiety, depression and suicidal ideation among university students: Implications for mental health support. *BMC Public Health*.
- Ward, E., King, M., Lloyd, M., Bower, P., & Sibbald, B. (2010). Randomized controlled trial of non-directive counselling, cognitive behaviour therapy, and usual general practitioner care for patients with depression: Cost-effectiveness. *BMJ*, 321(7273), 1389–1392.
- World Health Organization. (2016). *Health and mental health*. https://www.who.int/hrh/nursing_midwifery/en/

COMPARATIVE STUDY OF GROUP AND INDIVIDUAL COUNSELLING IN ENHANCING CONFLICT RESOLUTION SKILLS AMONG LEADERS