Determinants of Depression among University Students in Nigeria

[1*]Adeleke, O. R., [2]Aderonmu, K. A., [1]Elumaro, A. I., [3]Akomolafe, M. J., [1]Adedayo, O.O [2]J. O. OLAWALE, & [1]Oladimeji A. A.

[1]Adekunle Ajasin University, Akungba-Akoko, Nigeria

[2]Obafemi Awolowo University, Ile- Ife, Nigeria

[3]AdekunleAjasin University, AkungbaAkoko, Nigeria

Abstract: The study examined the determinants of depression among university students in Nigeria. Additionally, descriptive research design of survey type was used in this study. The population for this study comprised of all Nigeria undergraduate students. The sample for the study was 1,050 undergraduates. The instrument used for this study was a self-constructed, structured close ended questionnaire. Findings revealed that age and income were significant determinants of depression among university students in Nigeria while family type is not. It was therefore recommended that the University management should strengthen mental health services through health education to enable early detection and management of depression among students.

Keywords: mental health, mental illness, depression

محددات الاكتئاب بين طلاب الجامعات في نيجيريا

أديليكي، أولاسونكامي رولاند[1*]، وأديرونمو، كيندي أديبايو[2] ، وإلومارو، أديبايو إسرائيل[1] ، وموبيوسولا جود أكومولافي[3] ، أولواسي أوبي أديديو[1] ، ج.أو. أولاولي[2] ،
أولاديمي أيودجي آموس[1]

[1]جامعة أديكونالي جاسين، أكونجبا اكونكو، ولاية أوندو، نيجيريا

[2]جامعة أوبافيهي أولوي، إيل-إيفي، ولاية أوسن، نيجيريا

[3]جامعة أديكونالي جاسين، أكونجيا أكونكو، ولاية اوندو، نيجيريا

الملخص: تبحث الدراسة محددات الاكتئاب بين طلاب الجامعات في نيجيريا، وقد اُستخدم المنهج الوصفي من خلال تطبيق استبيان في هذه الدراسة. شملت عيّنة الدراسة جميع طلاب الجامعات في نيجيريا، وتكونت عينة الدراسة من 1050 طالبًا جامعيًا، باستخدام نمط الاستجابات المغلقة. أظهرت النتائج أن العمر والدخل عوامل مهمة في مستوى الاكتئاب لدى طلاب الجامعات في نيجيريا، بينما نوع الأسرة لم يكن له تأثير، وعليه فقد جاءت التوصيات على أنه يجب على إدارة الجامعة تحسين خدمات الصحة العقلية من خلال زيادة التثقيف الصحي للكشف المبكر والسيطرة على حالات الاكتئاب بين الطلاب.

الكلمات المفتاحية: الصحة العقلية، الأمراض النفسية، الاكتئاب

*olasunkanmi.adeleke@aaua.edu.ng

Introduction

Mental health is a vital branch of optimal health based on the World Health Organization (WHO) definition of health. This concept implies that mental health extends beyond the absence of mental diseases or disabilities. It is a state of well-being in which individuals recognize their abilities, are able to cope with every-day stressors, and contribute to their community by working productively (WHO, 2018). Depression is one of the major mental illnesses prevalent in recent times and it is a common mental disorder. It is characterized by gloom, disinterest, guilt or poor self-confidence, change in sleep or food pattern, weariness, and poor attentiveness. The aforementioned are signals to approaching depression, which affects over 350 million people worldwide (WHO, 2018).

Depression, like other mental illnesses, is routinely disregarded or dismissed in most cultures globally, particularly among adolescents in Africa. It is different from short-lived emotional responses to challenges in everyday life and frequent mood fluctuations. More especially, when it is long-lasting, and with moderate or severe intensity, depression may become a critical health condition. It makes a person to suffer much and function poorly at their daily engagements or transactions at school, at work, and also within the family. At its worst, it pushes the patient to commit suicide and about 800,000 people die by committing suicide every year. Suicide ranks second among the leading causes of death among15-29-year-olds (WHO, 2018).

In recent years, depression rate has rapidly increased among university students in Nigeria because many parents are unable to meet their children's financial demands as a result of the country financial crises. University students are a particular segment of society who are at a vital developmental crossroads between adolescence and adulthood. University students are challenged by regional shifts (Bernal-Morales et al., 2015), separated from family members (Othman et al., 2019; Salem et al., 2016), academic stress, and financial difficulties which are forcing the students to develop new coping mechanisms (Bakar & Awan, 2019; Negi et al, 2019).

Depression affects individual of different ages and positions in life (Durga et al., 2021), and university students are no exception. Depression is a severe health issue (Ibrahim et al., 2013) and a common disorder among tertiary institution students. According to studies conducted by college counseling centers around the world, depression is a common health problem among students of higher institutions of learning. Furthermore, in another study on depression among tertiary institution students, (Sarokhani et al., 2013) found that depression is an inescapable problem that is on the rise in the tertiary community. The study carried out on university students in Turkey showed that ranged depression ranges from 10% to 40%.

Most Nigerian universities have embraced the no-tuition-fee-no-examination policy, which has exacerbated the depression rate among university students in recent years. In different nations of the world and study populations, the prevalence of depression varies. A cumulative of 33% was estimated as depression level among Iranian university students 35.7% among students in Kenya (Othieno et al, 2014), and 32.2% among Nigerian students (Peltzer et al., 2013). Conversely, a small number of studies in Ethiopia reported 21.6% (low) prevalence of depression. Also, several investigations on depression conducted among different population groups in Ethiopia, showed that 11% of persons with depression are associated with sociodemographic variables (Bitew, 2014).

Tertiary institutions in America, Europe, Asia, Africa and other countries of the world have records of prevalence of depression, of which Nigeria is not an exemption. However, studies shown that it is more common in females than in males (Ibrahim et al., 2013; Collingwood, 2010). Some common triggers of depression among higher institution students include circumstances such as examination moments and looking forward to the outcome of the examination; financial burdens; changes in food intake and sleep patterns; extra assigned work and academic pressure; unsatisfactory transportation amenities; socio-cultural differences and marginalization; absence of provision from friends and family; unsympathetic interference of academic activities; and campus misconduct and violence (Jones et al., 2009).

Other major factors contributing to the increased risk of depression among university students include socio-demographic factors (such as age, sex, educational status, and lower socioeconomic status); stressful and devastating memories; gender-related violence; addictive and health-risk behaviors; an absence of monitoring; and poor academic result (Ahmed et al., 2020; Teh et al., 2015). Furthermore, studies of Adhikari et al. (2017) and Durga et al. (2021) revealed that students with low socioeconomic status are more likely to be depressed, this affirmed the

findings of a study conducted in Malaysia, where the prevalence of moderate to severe depression among undergraduate students in Malaysia ranges ranged from 13.9% to 29.3%. In that study, a link has been discovered between social life and depression, lower socioeconomic position is linked to major depressive illness, and students with lower total family income each month may have difficulty meeting day-to-day expenses, contributing to depression's triggering variables.

Depression has influences on individuals and the country as a whole owing to disrupted daily life (Sager, 2020), particularly among university students. Students describe their feelings while in a depressed condition in ways such as loneliness, loss of appetite, and often times they are infuriated. One of the most common feelings expressed by most students is a strong desire to commit suicide while depressed. The intensity, rate of occurrence, and duration of symptoms, on the other hand, differ from person to person.

The study by Durga et al. (2021) affirmed that, age is associated with depression and that the female is more likely to be depressed than their male counterpart. Studies have also shown that family types have strong relationship with depression. The result of a recent systematic review confirmed that children from polygamous marriages experience physical and emotional abuse associated with parental neglect and abuse which are signs of depression (Rose-Chen & Siti, 2021; Bahari et al., 2021; Habibullah et al., 2021).

The reviewed literature revealed that a strong desire exists among researchers to reduce the global rate of depression. Furthermore, just a few research concerning the frequency of depression and its associate factors among students in many Nigerian universities have been conducted. As a result, it is obvious from the past studies that little or no effort has been made to investigate the key etiological factors of depression among undergraduates in Nigerian tertiary institutions. Hence, this study was deposed to identify the determinants of depression among undergraduates in Nigerian Universities. The researchers intend to find out if age, family income and family type has no significant difference with the prevalence of depression among undergraduates in Nigerian universities.

Research Questions

1. Will age have a significant difference with the prevalence of depression among undergraduates in Nigerian universities?

2. Will family income have a significant difference with the prevalence of depression among undergraduates in Nigerian universities?

3. Will family type have a significant difference with the prevalence of depression among undergraduates in Nigerian universities?

Methodology

Design

Descriptive research design of survey type was used in this study.

Participants

The population for this study comprised of all undergraduate students in Nigeria universities. Five government owned Nigerian universities were randomly selected. Volunteering sampling technique was used to select 2,543 students. However, 1,493 out of the sample size who did not show or experience any signs of depression were excluded from the study. Hence, 1,050 respondents who showed signs of depression were used as the sample for this study.

Instrument

The instrument used for this study is a self-constructed, structured close ended questionnaire designed to obtain and adequate, reliable and relevant information from the respondents. The questionnaire comprised two sections; section A consisted of question items on the demography of the respondents which included age, gender, level of family income and family type while section B of the questionnaire comprised of 10 question-item on depression which was defined based on the criterion variables of mood, concentration/decision making, appetite, sleep, hopelessness, guilt and worthlessness. The instrument was compared with the American Psychiatric Association' Diagnostic Interview Schedule (DIS) on Depression (close ended question type). The yes /no inventory scale was used.

In order to determine the validity of the instrument, the correlation coefficient value obtained between the results of our measurement and the results of the criterion measurement (DIS) is 0.85 (high), thereby giving a good indication that the instrument measured what it intends to measure.

The test-retest method was used to determine the reliability of the questionnaire by administering the instrument twice within two-weeks interval on a group of students who are not part of the study. The scores

from the administration were correlated using Pearson product moment correlation and a value of 0.76 was obtained

Data collection

The instrument was administered using Google forms until the desired sample size from each Faculties were reached. This allowed for a respondent to answer the questionnaire only once. Data was retrieved and collated by exporting into Microsoft Excel version 16 for screening and data cleaning.

Statistical analysis

All study variables were computed with Statistical Package for Social Science software version 25, (SPSS Inc., Chicago, Illinois, USA). Data collected for the study were analyzed using both descriptive and inferential statistics of standard deviation, mean score, graphs and ANOVA. The differences between the groups were considered significant if p-values were smaller than 0.05.

Ethical considerations

Ethical consideration is of importance to this study and was conserved. Approval was obtained from the

Research Ethics Committee of Adekunle Ajasin University, AkungbaAkoko with reference number IPHAAUA/12/1903. More so, verbal and/or written consents were obtained from the study participants. The study participants were requested to sign a consent form contained on each questionnaire. Confidentiality of information was ensured during data analysis and discussion of results as contained in the consent form.

Results and Discussion
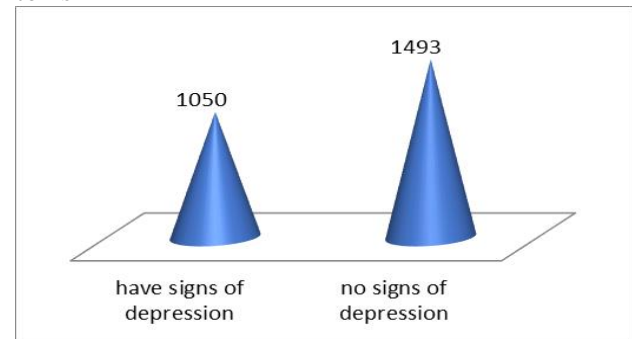
Fig. 1: frequency distribution of depression symptoms

Table 1. Differences between age of study respondents on the prevalence of depression

Age (in years)	Mean	N	Standard Deviation		Sum of squares	Df	Mean square	F	Sig.
16-20	6.67	225	± 2.276						
21-25	6.78	625	± 2.122	Between Groups	148.503	4	49.501	9.924	0.000
26-30	6.28	160	± 2.342	Within Groups	5167.650	1045	4.988		
31 and above	4.67	30	± 3.356		5316.154	1049			

p < 0.05; p < 0.01; p < 0.001, tested using ANOVA (N = 1,040)

Table 2. Post Hoc analysis showing differences between age of study respondents on the prevalence of depression

Age		Mean Difference	Sig.
16-20	21-25	-0.109	1.000
	26-30	0.385	0.573
	31 and above	2.000*	0.000
21-25	16-20	0.109	1.000
	26-30	0.495	0.075
	31 and above	2.109*	0.000
26-30	16-20	-0.385	0.573
	21-25	-0.495	0.075
	31 and above	1.615*	0.002
31 and above	16-20	-2.000*	0.000
	21-25	-2.109*	0.000
	26-30	-1.615*	0.002

*The mean difference is significant at the 0.05 level.

Table 3. Post Hoc analysis showing Differences between Family Income of study respondents on the Prevalence of Depression

FamilyIncome		Mean Difference	Sig.
below 20,000	21,000 - 50,000	-0.163	1.000
	51,000 - 100,000	0.770*	0.002
	101,000 - 200,000	0.642	0.059
	200,000 and above	-0.061	1.000
21,000 - 50,000	below 20,000	0.163	1.000
	51,000 - 100,000	0.933*	0.000
	101,000 - 200,000	0.805*	0.006
	200,000 and above	0.103	1.000
51,000 - 100,000	below 20,000	-0.770*	0.002
	21,000 - 50,000	-0.933*	0.000
	101,000 - 200,000	-0.128	1.000
	200,000 and above	-0.830*	0.001
101,000 - 200,000	below 20,000	-0.642	0.059
	21,000 - 50,000	-0.805*	0.006
	51,000 - 100,000	0.128	1.000
	200,000 and above	-0.702*	0.034
200,000 and above	below 20,000	0.061	1.000
	21,000 - 50,000	-0.103	1.000
	51,000 - 100,000	0.830*	0.001
	101,000 - 200,000	0.702*	0.034

*The mean difference is significant at the 0.05 level.

Table 4. Differences between Family Income of study respondents on the Prevalence of Depression

Family type	Mean	N	Standard deviation		Sum of squares	Df	Mean Square	F	Sig.
Monogamous	6.62	635	± 2.193						0.541
Polygamous	6.70	265	± 2.249	Between Groups	11.014	3	3.671	0.719 n.s,	
Separate	6.38	80	± 2.776	Within Groups	5339.962	1046	5.105		
Widow	6.36	70	± 2.240	Total	5350.976	1049			

$p < 0.05$; $p < 0.01$; $p < 0.001$, tested using ANOVA test (N = 1,050)

Discussion

Figure 1 explains frequency distribution of depression symptoms. Out of 2,543 respondents that were recruited for this study, 1,050 experienced or had signs of depression while 1,493 did not.

Table 1 showed that there was a significant difference between age and prevalence of depression that was found among undergraduates in the study area (F = 9.924, p < 0.001) with effect size of 0.28, indicating a large effect. Post Hoc tests were conducted using Bonferroni test. The comparison revealed significant variations within the categories of age group. Based on the means shown in Table 2, respondents who were 21-25 years of age are more likely to experience depression (6.78), followed by respondents who were 16-20 years old (6.67), while, respondents who were

above 30 years of age had a lesser chance of becoming depressed. This finding agrees with another cross-sectional study done on Jimma University students in Ethiopia (Ahmed et al., 2020) concluding that age is one of the factors contributing to the increased risk of depression among university students around the world. The finding is also in line with the findings of a study on university students in Nepal (Durga et al.,2021) affirming that age is associated with depression.

Table 3 shows differences between family income on prevalence of depression. A significant difference between family income on prevalence of depression was found among undergraduates in the study area (F = 8.385, p < 0.001) with effect size of 0.31, indicating a large effect. Post Hoc tests were conducted using Bonferroni test. Based on the mean shown in Table 3, respondents who earned between 21,000 to 50,000 naira were more likely to experience depression

(7.02), followed by respondents who earned above 200,000 naira (6.92), followed by respondents who earned below 20,000 naira in one month, while respondents who earned between 51,000 to 200,000 naira had a lesser chance of becoming depressed. This finding supports the findings of Adhikari et al. (2017). In that study, the investigators affirmed that students with low socioeconomic status are more likely to be depressed. Also, the finding is in line with the findings of a study in Ethiopia (Ahmed et al., 2020) and another study in Nepal (Teh et al., 2015). The findings of those two international studies confirmed that one of the major factors contributing to the increased risk of depression among university students include lower socioeconomic status of the parents. Students with low socioeconomic status are more likely to be depressed, according to a study conducted in Malaysia, where the prevalence of moderate to severe depression among undergraduate students in Malaysia ranges ranged from 13.9% to 29.3% (Durga et al.,2021). In that study, a link has been discovered between social life and depression, lower socioeconomic position is linked to major depressive illness, and students with lower total family income each month may have difficulty meeting day-to-day expenses, contributing to depression's triggering variables.

In this study (Table 4), it was found that there was no significant difference between family type on prevalence of depression among undergraduates in the study area. This finding contradicts the findings of studies done in Malaysia and Nigeria (Bahari et al., 2021; Habibullah et al., 2021; Rose-Chen & Siti, 2021) confirming that children from polygamous marriages have experienced physical and emotional abuse associated with parental neglect and abuse which are signs of depression. The reason for the difference in the study might be as a result of culture and the region in which the study was carried out. The overall prevalence of depression was high in this study where age and family income except for family types have significant relationship with prevalence of depression among the study population.

Implications

As we have demonstrated, the data that the universities already routinely collected enables for the accurate identification of students who are more likely to experience depression. With the help of this information, students who are most at risk for depression may receive tailored support, and the health of all students could be regularly checked.

Limitations

The readers are warned against over generalization of the study findings because the study has two major limitations:

-The study was carried out in some universities in the southern part of Nigeria. The representation of students for other universities in Nigeria is doubtful.

-The diagnosis for depression in this study was purely based on a self-constructed, structured close ended questionnaire designed by the researchers. In the absence of a face-to-face psychiatric interview, the validity of having the clinical diagnosis of depression is doubtful.

Summary

The factors of age and family income were identified as factors that cause depression among undergraduate students in this study. We suggest that the school authority should also strengthen mental health services through health education to enable early detection while management of depression among students, and risk factors should be carefully monitored.

References

Adhikari, A., Dutta, A., Sapkota, S., Chapagain, A., Aryal, A., & Pradhan, A. (2017). Prevalence of poor mental health among medical students in Nepal: A cross-sectional study. *BMC Med Educ, 17*(232), 1-7. https://doi.org/10.1186/s12909-017-1083-0

Ahmed, G., Negash, A., Habtamu, K. H., Alemu, D., & Tesfaye, Y. (2020). Prevalence and associated factors of depression among Jimma University students: A cross-sectional study. *Int J Ment Health Syst, 14* (52), 2-10. https://doi.org/10.1186/s13033-020-00384-5

Bahari, I.S., Norhayati, M.N., Hazlina, N.U.N., Aiman, C.A.A.M.S., & Arif. N.A.N.M. (2021). Psychological impact of polygamous marriage on women and children: a systematic review and meta-analysis. *BMC Pregnancy and Childbirth 21*(1), 823- 835. https://doi.org/10.1186/s12884-021-04301-7

Bakar, A., & Awan, I. (2019). Relationship between the demographic variables and prevalence of depression among the university students. *Biomed J Sci Tech Res 17*(4),12959–12961. https://doi.org/10.26717/BJSTR.2019.17.003031

Bernal-Morales, B., Rodríguez-Landa, J., & Pulido-Criollo, F. F. (2015). Impact of anxiety and depression symptoms on

scholar performance in high school and university students. *A Fresh Look at Anxiety Disorders, 11*, 226-42.

Bitew, T. (2014). Prevalence and risk factors of depression in Ethiopia: a review. *Ethiop J Health Sci, 24*(2), 161-169. http://dx.doi.org/10.4314/ejhs.v24i2.9

Collingwood, J. (2010). *Depression in Students*. Available at http://psychcentral.com/lib/depression-in-stdents/0003673

Durga, K. M., Rajan, B., Ridesh, P., & Shreesti, S. (2021). Depression among the university students in Arghakhanchi District. *Am J Applied Psychol, 10*(4), 95-100. https://doi.org/10.11648/j.ajap.20211004.12

Habibullah, A., Oche, M.O., Iye, R. A., Kasimu, A. G., & Bashar, B. Z. (2021). Prevalence and pattern of depression among women of polygamous and monogamous family settings in rural areas of Sokoto State, Nigeria. *Central African Journal of Public Health, 7*(1), 11-22. https://doi.org/10.11648/j.cajph.20210701.12

Hakami, R. M. (2018). Prevalence of psychological distress among undergraduate students at Jazan University: A cross-sectional study. *Saudi J Med Med Sci, 1*(6), 2-8. https://doi.org/10.4103/sjmms.sjmms_73_17

Ibrahim, A. K., Kelly, S. J., Adams, C. E., & Glazebrook, C. A. (2013). Systematic review of studies of depression prevalence in university students. *J Psychiatr Res, 47*(3), 391-400.https://doi.org/10.1016/j.jpsychires.2012.11.015

Jones, N. P., Papadakis, A. A., Hogan, C. M., & Strauman, T. J. (2009). Over and over again: Rumination, reflection, and promotion goal failure and their interactive effects on depressive symptoms. *Behav Res Ther, 47*(3), 254-259. https://doi.org/10.1016/j.brat.2008.12.007

Negi, A. S., Khanna, A., & Aggarwal, R. (2019). Psychological health, stressors, and coping mechanism of engineering students. *Int J Adolesc Youth, 24*(4), 511-520. https://doi.org/10.1080/02673843.2019.1570856

Othieno, C. J., Okoth, R. O., Peltzer, K., Pengpid, S., & Malla, L. O. (2014). Depression among university students in Kenya: prevalence and sociodemographic correlates. *J Affect Disord, 16*(5), 120-125. https://doi.org/10.1016/j.jad.2014.04.070

Othman, N., Ahmad, F., El Morr, C., & Ritvo, P. (2019). Perceived impact of contextual determinant depression, anxiety, and stress: a survey with university students. *Int J Ment Health Syst, 13*(17), 1-9. https://doi.org/10.1186/s13033-019-0275-x

Peltzer, K., Pengpid, S., Olowu, S., & Olasupo, M. (2013). Depression and associated factors among university students in Western Nigeria. *J Psychol Africa, 7*(3), 459–465. https://doi.org/10.1080/14330237.2013.10820652

Rose-Chen, S. K., & Siti, A. H. (2021). Systematic review: agreement and impacts on wives and children well-being of polygamous family structure. *J Crit Rev, 7*(2), 596- 606. https://www.jcreview.com › paper

Sager, R. (2020). The burden of mental disorders across the states of India: The global burden of disease study (1990-2017). *Lancet Psychiatry, 7*(2), 148-161. https://doi.org/10.1016/S2215-0366

Salem, G. M., Allah, M. B. A., & Said, R. M. (2016). Prevalence and predictors of depression, anxiety, and stress among Zagazig University students. *Med J Cairo Univ, 8*(4), 325-334. www.medicaljournalofcairouniversity.net

Sarokhani, D., Delpisheh, A., Veisani, Y., Sarokhani, M. T., Manesh, R. E., & Sayehmiri, K. (2013) Prevalence of depression among university students: A systematic review and meta-analysis study. *Depression Research and Treatment* (an open access publication). https://doi.org/10.1155/2013/373857

Teh, C. K., Ngo, C. W., Zulkifli, R.A.B., Vellasamy, R., & Suresh, K. (2015). Depression, anxiety and stress among undergraduate students: A cross sectional study. *Open Journal of Epidemiology, 5*(4), 260-8. https://doi.org/10.4236/ojepi.2015.54030

World Health Organization (2018). *Fact Sheet: Depression. Geneva, Switzerland. World Health Organization.* Available at http://www.who.int/mental_health/management/depression/en/