

THE INFLUENCE OF FAMILY FUNCTIONALITY AND SOCIAL REWARD VALUATION ON SELF-MANAGEMENT OF MENTAL HEALTH PROBLEMS AMONG PUBLIC AND PRIVATE UNIVERSITY STUDENTS: A CORRELATIONAL STUDY

^{1,*}Tosin Anthony Agbesanwa, ²Adesola Adedotun Oniyide, ³Oluwaseun Eniola Adegbilero-Iwari, ⁴Felix Olukayode Aina, ⁵Ayodeji John Owoyemi, ⁶Charity Anegbemu Wealth, ⁷Funmilayo Itanola Egbedi, ⁸Mayowa Omoyeme Ugbodaga, ⁹Tope Francis Adeyeye, ¹⁰Esther Ayodeji-Ojo and ¹¹Omotayo Folorunsho Afolayan

¹Department of Family Medicine, College of Medicine, Ekiti State University

²Department of Physiology and Integrated General Medical Unit, College of Medicine and Health Sciences, Afe Babalola University, Ado Ekiti

³Department of Community Medicine, College of Medicine and Health Sciences, Afe Babalola University, Ado Ekiti,

⁴Department of Family Medicine, College of Medicine, Ekiti State University, Ado Ekiti

⁵⁻¹⁰Department of Family Medicine, College of Medicine, Ekiti State University

¹¹Federal Medical Centre, Ikole Ekiti

Received 09th January 2026; Accepted 04th February 2026; Published online 16th March 2026

Abstract

Introduction: Mental health is becoming common among young people especially as they traverse the childhood age into adulthood. Some factors responsible for this include changes in environment and increased stressful circumstances like the demands of university education. **Objectives:** This study employed a comparative analysis of the family functionality, social reward valuation and self-management of mental health disorder among public and private university students in south western Nigeria. **Methodology:** This was a descriptive, cross-sectional study among 469 public and private university students in south western Nigeria. Stratified random sampling technique was used to select the participants for the study through a self-administered questionnaire. The Patient Health Questionnaire (PHQ-9), Smithklein's APGAR's scoring system and the social reward were instruments used in the study. **Results:** Family functionality associated significantly (13.215, $p < 0.001$) with students from private university. Passivity was the only social reward valuation that was significant among the students studied ($t = 3.218$, $p < 0.001$). Private university students found coping with school work, home chores and getting along with other people extremely difficult (20.972, $p < 0.001$). Association between socio-demographic features, family functionality, social reward valuation and self-management of mental health problems for students studied were not significant (> 0.05). **Conclusion:** Coping with school work and getting along with other people as a mental health problem was more pronounced among students of private university. Students from private university revealed higher passivity social valuation.

Keywords: Family functionality, Social reward valuation, Mental health problems, Self-management, University students.

INTRODUCTION

Mental health problems among young people are global public health challenges with about 20% of them diagnosed as having one form or the other.^{1,2} Commonly noted mental disorder in this age group include anxiety disorder, mood, behavior and attention disorder.¹ A young person with a mental disorder, often engage in acting out behavior or the use of psychoactive substance (s).¹ Globally, mental disorders accounts for 13% of global burden of disease among young people.³ In the United State, close to 20% of young people and children were reported to suffer from mental and behavioral disorders.⁴ The prevalence of mental health among Nigeria young people is between 10% and 37% with depression topping the list of others like anxiety, attention deficit and behavioral disorders.⁵⁻⁷ When the mental health of young people is ignored, there is a negative ripple effect on their health and education,⁸ Many factors including poverty, family dysfunctionality, violence and peer pressure were noted to either contribute to the emergence of mental disorder among young people or aggravate it.^{8,9}

The proliferation of superstitious beliefs in Nigeria has significant implications for mental health outcomes. In some communities in Nigeria, ingrained cultural and traditional practices often intersect with mental health perceptions thus influencing health seeking behaviors and treatment approaches.¹⁰ The family disharmony is one of the factors that contributes to the onset or aggravation of this disorders.⁸ The quality of the family environment was noted to have impact on the choice of a young person's career process, academic achievement and ability to cope with challenges.¹¹⁻¹³ In addition to this, social valuation was reported to contribute to how young people develop strategies with challenges in school and among peers.^{14,15} The family also have a positive or negative impact in a mediating role prevention or developing coping strategies for managing mental health.^{16,17} Career decision and ability to develop self-esteem for the growing age were also noted to be influenced by factors such as family social class.¹⁴ When a young person faces a challenge that seems insurmountable and such did not have adequate coping strategies, one of the fallout is mental disorder. A young person might notice an awareness of a change in his or her feeling and behavior but may not know what to do to help himself or herself. When this happens, health seeking behavior becomes inappropriate.^{18,19} This study therefore compared the

*Corresponding Author: *Tosin Anthony Agbesanwa*, Department of Family Medicine, College of Medicine, Ekiti State University, Nigeria

relationship between family functionality, social reward valuation and self-management of mental health disorders among students from two different types of universities in south western, Nigeria

METHODOLOGY

This was a descriptive, cross-sectional study comparing family functionality, social reward valuation and self-management of mental health among public and private university students of Federal University of Oye Ekiti (FUOYE) and Afe Babalola University, Ado Ekiti (ABUAD) respectively. The questionnaires were administered to consenting participants over a three-month period from May to July 2024.

Study Population

The study was conducted through self-administered questionnaires to consenting second and third level students of the College of Medicine and Health Sciences in FUOYE and ABUAD. Any student who have been previously diagnosed or undergoing treatment for any mental health disorder and substance abuse or misuse prior to the commencement of the study was excluded from the study.

Sampling technique

The use of simple balloting was used to select FUOYE from the three government owned universities and ABUAD from the three privately owned tertiary institution in Ekiti state. Stratified random sampling technique was used to select the departments and the level of student's education to be included in the study. The sample size estimation was done using the Fisher's exact formula.²⁰ Using an acceptable rate of 30.6% from a previous study²¹, 326 participants were required to obtain a statistically significant data at a 95% confidence interval and a p value of < 0.05. A total of 469 medical and health sciences students from both FUOYE and ABUAD. A total of 316 students and 153 students from the private and public universities respectively were included in the study. These participants included students from the college of medicine and health sciences which comprised the college of medicine, pharmacy, nursing, basic medical sciences, dentistry, radiography, nutrition and dietetics from the two universities. The participants included in the study were selected by simple random sampling.

Study Instrument

The instrument used for this study was from existing literature on mental disorders among young people.^{1,2,8,10} The questionnaire consists of four segments: Section A sought for the socio-demographic information about the students. The social class of the participants' family were assessed using the Oyediji Social class classification.²² Section B contains questions from Patient Health Questionnaire (PHQ-9). The PHQ-9 is a validated instrument in making diagnosis, monitoring and assessing the severity of depression.^{23,24} To assess the severity of depression in this study, participants were expected to response to the question, "If you checked off/tick any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?" Their responses were to range from not difficult at all to extremely difficult. The extent to which they perceived how difficult a mental problem is in the PHQ-9

questionnaire was used as a measure of their self-management strategies for such disorder. Section C assessed the respondents' family functional state using the Smithklein's APGAR's scoring system^{25,26} to determine whether their family is highly functional, moderately dysfunctional or severely dysfunctional. The Family APGAR measures satisfaction with coexistence and relationships between family members, based on the index person (the student). There are five domains in this instrument which are Adaptation, Partnership, Growth, Affection and Resolve. Scores assigned are from zero to two points with the response options being: always (2 points), sometimes (1 point) and never (zero) points. The total cumulative scores range from zero to ten points, namely: Severe Family Dysfunctionality - 0 to 4 points; Moderate Family Dysfunctionality - 5 to 6 points and High Family Functionality - 7 to 10 points.²⁵ The social reward questionnaire-adolescent version (SRQ-A) was used to assess the participants social reward valuation. The SRQ-A is a measure of individual perceptions on how they value different types of social rewards.²⁷ This questionnaire was reported to assess individual differences in the value experienced from different social rewards.²⁷ Six subscales of social rewards – Admiration, Negative Social Potency, Passivity, Prosocial Interactions, and Sociability had a good test-retest reliability and internal consistency when their validity were assessed. Admiration subscale is a reflection of an individual who enjoyed being flattered and loves to gain attention. Individuals with negative social potency are those who derive pleasure in being cruel, antagonistic and loves to use others. In Passivity social rewards, individuals here enjoy giving others control and allowing them to make decisions for them. Prosocial interaction sub construct includes people who enjoy kind and reciprocal relationships. Sociability sub construct includes individuals who enjoy engaging in group interactions.²⁷ Each of these six subscales was reported to reveal a distinct pattern of associations with external correlates measuring personal traits, attitudes and goals thus having construct validity.

Data Analysis

The data collected were cleaned, analyzed using the Statistical Package for Social Sciences (SPSS) software; version 25 and displayed on tables. Descriptive statistics were calculated using frequencies and percentage distribution for categorical variables. Demographic variables, which were normally distributed, were described as mean and standard deviation. The median and range were used for other demographic variables that are not normally distributed. T test was used to analyse the different variables from the two universities. Bivariate analysis was done using Pearson correlation while multivariate logistic regression was used for multivariate analysis. P value of < 0.05 was considered statistically significant at 96% confidence interval.

Ethical Approval

All the participants who gave their consent participated in the survey with none requiring parental consent. All data collected were kept confidential and secured in a locker. The study was approved by the ABUAD research ethics review board with ethics number ABUADHREC/11/03/2024/311. The permission of the Dean of Faculties of both clinical and basic clinical sciences of FUOYE was sought and received also.

RESULTS

Socio-demographic characteristics of Respondents

The respondents' socio-demographic characteristics is presented in Table 1. Majority of the participants, 346 (73.8%) were aged 15-19 years, with a mean age of 18.81.62. The respondents were predominantly MBBS students 226 (48.2%). A very large number 429 (92%) of the students came from high social class families.

Table 1. Socio-demographic features of Respondents

Variables	Frequency (n=469)	Percent
University Type		
Private	316	67.4
Public	153	32.6
Age		
15-19	346	73.8
20-24	117	24.9
25	6	1.3
Mean \pm S.d.	18.81.62	
Range [min. – max.]	[16 – 28]	
Gender		
Male	91	19.4
Female	378	80.6
Family Background		
Monogamous	418	89.1
Polygamous	51	10.9
Course of Study		
Bachelor of Medicine/Surgery (MBBS)	226	48.2
Basic medical	59	12.6
Nursing	39	8.3
Dentistry	26	5.5
Nutrition & Dietetics	7	1.5
Radiography	96	20.5
Pharmacy	16	3.4
Social class		
High	429	91.5
Middle	23	4.9
Low	17	3.6

n: sample size; S.d.: standard deviation; min: minimum; max: maximum

Respondents' nuclear family functionality (APGAR scale)

The results of respondents' nuclear family functionality using the Family APGAR scale as shown from figure 1 revealed that family functionality associated significantly (13.215, $p < 0.001$) with university type, as 21(77.8%) of 27 from severely dysfunctional families, 105(78.4%) of 134 from moderately functional and 190(61.7%) of 308 from highly functional families, were private university students.

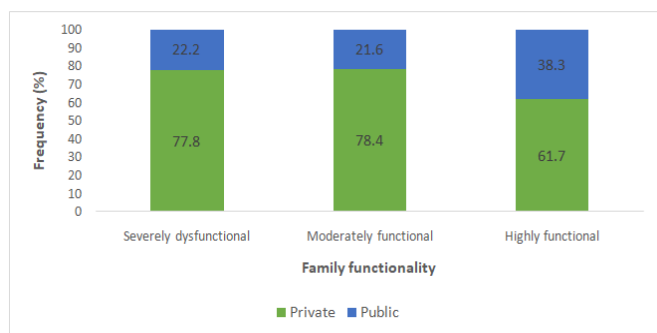


Figure 1. Respondents' nuclear family functionality by university type

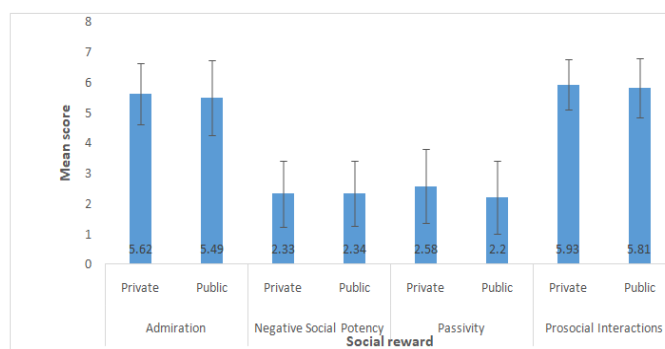
Social reward valuation of the participants studied

The social reward valuation revealed prosocial interactions sub construct (enjoyment of kind relationships) had the highest

mean score of 5.89 ± 1.47 . The implication of this is that a higher proportion of the participants studied enjoyed kind relationships which can foster social support necessary for self-management strategies. Admiration sub-construct (enjoyment of kind attention) had a closer mean score of 5.58 ± 1.55 . This implied that this proportion of participants enjoyed kind attention which can enhance self-esteem and thus encourage proactive self-management strategies. Sociability sub construct (enjoyment of group interactions) had a mean score of 3.75 ± 1.93 . the participants here could benefit from social connections from group interactions which can reduce feeling of isolation and loneliness. Participants who value passivity in social reward valuation might seek validation through other's decision and often put others comfort and welfare above their own. This might have a negative impact in their self-management strategies because they might have difficulty in setting boundaries neglecting their personal emotions. The lowest proportion of the participants with mean score of 2.33 ± 1.66 value negative social potency in social reward valuation. This are individuals who seek power and control through criticism or dominance, often using negativity to gain attention. Self-management strategies in these individuals might be faced with some negative impact because of the high possibility of involvement in strained relationship with supporters, self-sabotaging behaviors and increased anxiety and stress from conflict

Comparing the social reward valuation of participants according to university types

In figure 2 below, the t-tests results revealed that the private university had higher mean scores for admiration, passivity and prosocial interactions than the public university. However, these differences were not significant for all the sub-constructs except for passivity ($t=3.218$, $p < 0.001$). However, negative social potency indicated a higher mean score for the public school than the private though not significant.



Scores are presented in means standard deviations

Figure 2. Responses to SRQ-20 sub-constructs by university type

The Patient Health Questionnaire and Self-Management Responses of Students

The Patient Health Questionnaire

Table 2 highlights the students' responses to questions of the PHQ-9 and self-management of noted mental health problem(s). For several days, more than one-third of the students had a feeling of tiredness or having little energy 180 (38.4%), felt down, depressed or hopeless 178 (38.0%), had little interest or pleasure in doing things 172 (36.7%) and had trouble concentrating on things such as reading the newspaper

or watching television 160 (34.1%). Moreover, trouble falling or staying asleep was experienced by 111(23.7%) students nearly daily and by 139(29.6%) of them for several days. 129(27.5) had poor appetite or overeating. Nearly a quarter 115(24.5) felt bad about their personality.

Self-management Strategy Responses of Students

A greater part, 453 (96.6%) of the students checked off a problem or the other on the PHQ-9. Students who checked off any of the problems were asked how difficult those problems made it for them to do their work, take care of things at home, or get along with other people.

Generally, majority 330 (72.8%) of the students found self-management of their mental health problems difficult. This associated significantly (20.972, $p < 0.001$) with university type, as majority of those who found it somewhat difficult 189 (71.9%), very difficult 46 (83.6%) and extremely difficult 8(66.7%) to cope at school/work/home or get along with other people, were private university students. Table 4

Relationship between social reward valuation and self-management of mental health

Table 3 presents the relationship between social reward valuation and self-management of mental health for both private and public university students.

Table 2. The Patient Health Questionnaire (PHQ-9) and Self-Management Responses of Students

Frequency of being bothered by any of the following problems 2 weeks before the study (n=469)	Not at all n (%)	Several days n (%)	More than half the days n (%)	Nearly every day n (%)
Little interest or pleasure in doing things	109(23.2)	172(36.7)	106(22.6)	82(17.5)
Feeling down, depressed, or hopeless	166(35.4)	178(38.0)	74(15.8)	51(10.9)
Trouble falling or staying asleep, or sleeping too much	125(26.7)	139(29.6)	94(20.0)	111(23.7)
Feeling tired or having little energy	60(12.8)	180(38.4)	115(24.5)	114(24.3)
Poor appetite or overeating	199(42.4)	129(27.5)	68(14.5)	73(15.6)
Feeling bad about yourself — or that you are a failure or have let yourself or your family down	221(47.1)	115(24.5)	85(18.1)	48(10.2)
Trouble concentrating on things, such as reading the newspaper or watching television	178(38.0)	160(34.1)	78(16.6)	53(11.3)
Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	320(68.2)	89(19.0)	40(8.5)	20(4.3)
Thoughts that you would be better off dead or of hurting yourself in some way	370(78.9)	54(11.5)	29(6.2)	16(3.4)
Self-management of above problems at school/home or with other people (n=453)	Not difficult	Somewhat difficult	Very difficult	Extremely difficult
Private	65(52.8)	189(71.9)	46(83.6)	8(66.7)
Public	58(47.2)	74(28.1)	9(16.4)	4(33.3)
(20.972, $p < 0.001$)	123	263	55	12

Chi-square

Table 3. Relationship between social reward and self-management of mental health

	Admiration	Negative Social Potency	Passivity	Prosocial Interactions
Self-management (Private, n=308)				
r	-0.003	0.081	-0.025	0.01
p-value	0.956	0.155	0.666	0.862
Self-management (Public, n=145)				
r	0.062	0.126	-0.028	-0.002
p-value	0.456	0.130	0.736	0.982

r: correlation coefficient

Table 4. Association between socio-demographic features, family functionality and self-management of mental health

Variables	Private (n=308)			Public (n=145)		
	Self-management Not difficult	Difficult	p-value	Self-management Not difficult	Difficult	p-value
Age						
15-19	55(22.1)	194(77.9)	0.573	32(36.8)	55(63.2)	0.457
20-24	10(17.5)	47(82.5)		24(43.6)	31(56.4)	
25	0(0.0)	2(100.0)		2(66.7)	1(33.3)	
Gender						
Male	16(25.8)	46(74.2)	0.4 ^a	11(44.0)	14(56.0)	0.822 ^a
Female	49(19.9)	197(80.1)		47(39.2)	73(60.8)	
Family Background						
Monogamous	61(21.7)	220(78.3)	0.554 ^a	50(40.3)	74(59.7)	1.0 ^a
Polygamous	4(14.8)	23(85.2)		8(38.1)	13(61.9)	
Course of Study						
Bachelor of Medicine/Surgery (MBBS)	49(22.4)	170(77.6)	0.482 ^a	1(50.0)	1(50.0)	1.0 ^a
Others	16(18.0)	73(82.0)		57(39.9)	86(60.1)	
Social class						
High	65(22.0)	230(78.0)	0.163	48(40.0)	72(60.0)	0.987
Middle	0(0)	8(100.0)		5(38.5)	8(61.5)	
Low	0(0)	5(100.0)		5(41.7)	7(58.3)	
Family functionality						
Severely dysfunctional	4(20.0)	16(80.0)	0.054	1(16.7)	5(83.3)	0.326
Moderately functional	14(13.5)	90(86.5)		9(33.3)	18(66.7)	
Highly functional	47(25.5)	137(74.5)		48(42.9)	64(57.1)	

^a: Yate's correction

It was seen that all the sub-constructs of social reward did not relate significantly (>0.05) with self-management of mental health for both the private and public university students.

Association between socio-demographic features, family functionality and self-management of mental health

Table 4 presents the association between socio-demographic features, family functionality and self-management of mental health for both private and public university students. It was observed that all the variables examined did not associate significantly (>0.05) with self-management of mental health.

DISCUSSION

In this study, the participants' family functionality was associated significantly with students who attended private university when compared with their counterpart from public owned institution. A functional family often have financial stability and prioritization of education for their children thus having in private university which is often costlier than public institution.^{28,29} In addition, in a functional family, there might be strong support through collective efforts at solving family problems and challenges as opposed to a dysfunctional family where there might be strained relationship and communication. A study done among students in Turkey reported that family influence and support positively help students career process and happiness.¹¹ To corroborate this, Adeniji et al in a study done among secondary school students reported that negative family function affects academic engagement.¹² Ilgan et al. in a study on the factors affecting university choice: a study on university freshman students reported that future expectations for career, quality and popularity of education influenced the type of university they attended. They also noted that students from low social class family gave less importance to quality and popularity of education.³⁰

The highest mean score of prosocial interaction sub construct of social reward valuation in this study is a reflection that the participants enjoyed positive relationships which can engender positive social support needed for effective self-management strategies. This high mean score was closely followed by admiration and sociability sub constructs. This might be a reflection of the high proportion of the parents/home from high social class (91.5%) in the area of study. There is a possibility that with access to resources, the students might have been taught of the importance of kindness and also encouraged to be active in volunteer activities. Motoi reported that social stratification has a direct link with values imbibed by both parents and their children.³¹ A study on prosocial involvement as a positive youth development construct: a conceptual review reported that most human behaviors are learned, molded or shaped by the environment such person is raised from.¹⁴ It was observed that when the social valuation of the participants studied was compared among the type of university, students from private university had higher mean score for prosocial interactions, admiration, and passivity sub-construct of social valuation reward. This might be as a result of the learned experiences of students raised from the different homes and environments.¹⁴ Studies reported that parent's higher education and high emotional understanding have strong influence on the development of prosocial valuation among young people.^{15,32} In this study, passivity social sub-construct valuation was significantly higher among private university students when compared to their counterparts from

public owned institution. This implied that students from private university sought validation through other's decision and often put others comfort and welfare above their own. The reason for this might be because private university students who are often smaller in class have access to personalized mentorship. Secondly, most of them might be from affluent families, thus their values, attitudes and behaviors might encourage their perceived values and priority.

The participants' responses revealed that more than 95% of them had one problem or the other from the mental disorder instrument used in this study. Over 70% of them had difficulty in managing this problem by themselves with a higher proportion who found it very/extremely difficult to cope at school/work/home or get along with other people being those from private university. Increased pressure from expectations from parents, high academic standards of private universities, social adjustments to new environment and being away from family and familiar environment might be possible reasons for this. A study by Fabeku on first year students in one of the states in Nigeria reported that a larger proportion from private universities employed coping strategies for economic, academic and social challenges.¹⁶ Social valuation did not associate significantly with self-management of mental problems among the participants of the two types of university under consideration. However, the participants' social valuation was highest in prosocial, followed by admiration and sociability which were reported to be protective in the management of mental conditions.^{14,15} Though comparing the two types of university did not reveal any association between self-management of mental disorder and social valuation, the participants mean score in prosocial and admiration might point to the possibility of coping mechanism among the students. Being a psycho-social issue, multiple variables may interact to exert influence on self-management rather than an isolated variable. More research is therefore needed on this important subject.

Strengths and Limitations

A large sample size of 469 is a strength of the study as it will increase the power of the study. This study also provides valuable insight into the relationship between family functionality, social reward valuation and self-management of students when private and public university were compared. However, caution is needed when the interpretation of results from this study is considered. Firstly, The Patient Health Questionnaire (PHQ) used in data collection was not originally designed to assess self-management of mental health. The ability to assess causality is also a limitation of this study considering the cross sectional design employed. In order to better understand the trajectories of mental health problems among the students studied and self-management, a longitudinal study will be needed and a designed instrument to assess self-management strategies employed. It is also noteworthy that the two sample groups were unequal with more being from the private university. Future studies might consider collecting data from different faculties of the universities to gain a better understanding of the mental health from both private and public universities.

Conclusion

The study aimed to compare family functionality, social reward valuation and self-management of mental health

disorder among public and private university students. Based on findings from this study, students from private university are from majorly from functional family background when compared with the counterparts in the public university. Coping with school work and getting along with other people as symptoms of mental disorder is more pronounced among students of private university in this study. While students from public university had a higher mean score for negative social potency, however this is not associated with mental health of participants studied.

Funding: The authors did not receive any support from either governmental or non-governmental agencies in execution of this research

Conflict of interest: The author declares there is no conflict of interest

REFERENCES

1. ACOG Clinicals, Brookman R. Mental Health Disorders in Adolescents [Internet]. Washington, DC, US; 2017 [cited 2026 Jan 23]. Report No.: 705. Available from: <https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2017/07/mental-health-disorders-in-adolescents>
2. Patel V, Flisher AJ, Hetrick S, McGorry P. Mental health of young people: a global public-health challenge. *The Lancet*. 2007 Apr 14;369(9569):1302–13.
3. World Health Organization. Adolescent Mental Health [Internet]. 2021 [cited 2026 Jan 24]. Available from: <https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health>.
4. Child and Adolescent Mental Health. In: 2022 National Healthcare Quality and Disparities Report [Internet]. Rockville (MD): Agency for Healthcare Research and Quality (US); 2022 [cited 2026 Jan 23]. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK587174/>
5. Babasola K, Okhiria A, Bale S, Sorunke T, Alli U. Prevalence of mental illness among youths in Ogun State, South West Nigeria. *UMYU Scientifica Journal*. 2024;3:63–70.
6. Ogbonna P, Iheanacho P, Ogbonnaya N, Mbadugha C, Ndubuisi I, Chikeme P. Prevalence of mental illness among adolescents (15–18 years) treated at Federal Neuropsychiatric Hospital, Enugu Nigeria, from 2004 to 2013. *Arch Psychiatr Nurs*. 2020;34:7–13.
7. Abubakar-Abdullateef A, Adedokun B, Omigbodun O. A comparative study of the prevalence and correlates of psychiatric disorders in Almajiris and public primary school pupils in Zaria, Northwest Nigeria. *Child Adolesc Psychiatry Ment Health*. 2017;3.
8. Akinrinde D, Ayeni S, Akande D, Adegbite A. Exploring Common Mental Health Problems among Nigerian Adolescents: Identified Challenges and Recommendations for the Future – The Center for Policy Impact in Global Health [Internet]. Durham, North Carolina: The Center for Policy Impact in Global Health (CPIGH); 2024 [cited 2026 Jan 23]. Available from: <https://centerforpolicyimpact.org/2024/09/03/exploring-common-mental-health-problems-among-nigerian-adolescents-identified-challenges-and-recommendations-for-the-future/>
9. Viner R, Ozer E, Denny S, Marmot M, Resnick M, Fatusi A, et al. Adolescence and the social determinants of health. *Lancet*. 2012;379(9826):1641–52.
10. Ikwuka U. Perceptions of mental illness in south-eastern Nigeria: causal beliefs, attitudes, help-seeking pathways and perceived barriers to help-seeking [Internet] [PhD thesis]. [UK]: University of Wolverhampton; 2016. Available from: [//hdl.handle.net/2436/621723](http://hdl.handle.net/2436/621723)
11. Koçak O, Ak N, Erdem SS, Sinan M, Younis MZ, Erdoğan A. The Role of Family Influence and Academic Satisfaction on Career Decision-Making Self-Efficacy and Happiness. *International Journal of Environmental Research and Public Health*. 2021 Jan;18(11):5919.
12. Adeniji EO, Akindele-Oscar Y, Mabekeje SO. Relationship between Family Functioning and Academic Engagement of Secondary School Students: The Moderating Role of Resilience Emily. *International Journal of Technology and Inclusive Education (IJTIE)*. 2020;9(1).
13. Oweini A, Charara R, Najjar I. The Influence and Involvement of Family Members in Career Decision-Making. *Psychology & Psychological Research International Journal*. 2024 Feb 23;9(1):1–13.
14. Lam CM. Prosocial Involvement as a Positive Youth Development Construct: A Conceptual Review. *ScientificWorldJournal*. 2012 Apr 30;2012:769158.
15. Hua W W. The Relation between Prosocial Behavior and Adolescents' Emotional Understanding. *Journal of Education Humanities and Social Sciences* [Internet]. 2023 [cited 2026 Feb 15];22. Available from: https://www.researchgate.net/publication/376979408_The_Relation_between_Prosocial_Behavior_and_Adolescents'_Emotional_Understanding
16. Fabeku O E. First-Year students challenges and coping strategies in public and private universities in Osun state, Nigeria. *Innovare Journal of education*. 2024;12(3):9–14.
17. Huang X, Hu N, Yao Z, Peng B. Family functioning and adolescent depression: A moderated mediation model of self-esteem and peer relationships. *Front Psychol*. 2022 Aug 9;13:962147.
18. Hunt J, Eisenberg D. Mental Health Problems and Help-Seeking Behavior Among College Students. *Journal of Adolescent Health*. 2010;46(1):3–10.
19. Salisu-Olatunji SO, Odeyemi KA. Health Needs and Health Seeking Behaviours of Adolescents Attending a Vacation Coaching Centre in Lagos. *Nigerian Journal of Clinical Medicine* [Internet]. 2011 [cited 2021 Mar 11];4(2). Available from: <https://www.ajol.info/index.php/njcm/article/view/71604>
20. Pourhoseingholi MA, Vahedi M, Rahimzadeh M. Sample size calculation in medical studies. *Gastroenterology and Hepatology From Bed to Bench*. 2013;6(1):14.
21. Ibrahim AK, Kelly SJ, Adams CE, Glazebrook C. A systematic review of studies of depression prevalence in university students. *Journal of Psychiatric Research*. 2013 Mar 1;47(3):391–400.
22. Oyedeji G. Socioeconomic and cultural background of hospitalized children in Ilesa. *Nig J Paediatr*. 1995;(12):111–7.
23. Kroenke K, Spitzer, R. The PHQ-9: A new depression diagnostic and severity measure(Review). *Psychiatric Annals*. 2002;32(9):509–15.
24. Kroenke K, Spitzer RL, Williams JB. The PHQ-9: validity of a brief depression severity measure. *J Gen Intern Med*. 2001 Sep;16(9):606–13.

25. Shapiro J, Neinstein LS, Rabinovitz S. The Family APGAR: Use of a simple family-functioning screening test with adolescents. *Family Systems Medicine*. 1987; 5(2):220–7.
26. Smilkstein G. The family APGAR: a proposal for a family function test and its use by physicians. *J Fam Pract*. 1978 Jun;6(6):1231–9.
27. Foulkes L, Viding E, McCrory EJ, Neumann CS. Social Reward Questionnaire (SRQ): development and validation. *Front Psychol* [Internet]. 2014 [cited 2025 Jul 26];5. Available from: <https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2014.00201/full>
28. Jafari P, Aliesmaeili A. Factors Influencing the Selection of a University by High School Students. *Journal of basic and Applied Scientific research*. 2013;3(1):696–703.
29. Zyberaj F, Dudushi R, Dervishi A, Robo M, Bezhani V, Smakaj E, et al. Factors influencing university students' academic program preferences: An analysis of Albanian data. *Acta Psychologica*. 2025 Aug 1;258:105256.
30. İlğan A, Ataman O, Yurdunkulu A. Factors Affecting University Choice: A Study on University Freshman Students. *The Journal of Buca Faculty of Education*. 2018;(46):199–216.
31. Motoi G. The Role Of The Social Class And The Family In The Formation Of Values In The Context Of The Democratisation Of Education. *Social Sciences and Education Research Review*. 2018;5(1).
32. Xiao F, Zheng Z, Chen Y. Theoretical Development of the Underlying Mechanism of Prosocial Behavior. 2014;37(5):1263–70.
