Depression and Certain Family Characteristics Among University of Ilorin Students.

[1,2]A.N. Alabi, [2]R.O Segun-Adelodun, [2]B.A Ayinmode,[3]B.A Issa,[2]K.O Olafimihan, [1,2]L.O.Odeigah,[4]S.I. Ezemenahi

[1]Department of Family Medicine, Faculty of Clinical Sciences, University of Ilorin.
[2]Department of Family Medicine, University of Ilorin Teaching Hospital, Ilorin.
[3]Department of Behavioural Science, Faculty of Clinical Sciences, University of Ilorin.
[4]Department of Family Medicine, Nnamdi Azikiwe University, Awka

Abstract

Depression among undergraduates is gradually gaining public health concern globally. In Nigeria, there has been an observation of a rising prevalence of depression, suicides, and attempted suicides with associated detrimental effects on academic performance and overall functioning among undergraduates in the last decade. While data on other risk factors for depression abound, there is paucity of data on the association between family characteristics and depression among the students of the University of Ilorin. Therefore, the aim of this study was to assess the prevalence of depression, its pattern of severity, and association with certain family characteristics among students attending the University of Ilorin Health Centre. A descriptive cross-sectional study was carried out among 353 selected students attending the Health Centre from May to July 2017 using structured questionnaires (Patient Health Questionnaire-9, Index of Family Relation scale) and semi-structured questionnaire. Analysis was done with the Statistical Package for Social Sciences version 20 and the level of statistical significance was set at a p-value of ≤ 0.05 at 95% confidence interval.

The age range of the respondents was 16-26years with a mean of 20.43years SD ±2.20.The prevalence of depression was 45.3% out of which,59.4% had mild depression, 27.5% had moderate depression, 9.4% had moderately severe depression and 3.7% had severe depression. Depression was positively associated with family relationship (*p*-value= 0.011), parents living together (*p*-value= 0.008) and order of birth (*p*-value = 0.001).

The study showed that the prevalence of depression among the students was high with worrisome proportion of those with severe forms (moderately severe and severe depression). Certain family characteristics (parents living together, order of birth, and family relationship) were found to be statistically associated with depression among the students. Routine screening at the University Health center for early diagnosis and treatment to avoid grave outcomes is advised.

Key words: Depression, University, Patient Health Questionnaire, Students, Family, Characteristics.

Correspondence to:

Dr A.N Alabi
Department of Family Medicine,
College of Health Sciences,
University of Ilorin.
e-mail:alabi.an@unilorin.edu.ng
Phone number: +234-8031718279

Introduction

Depression is a common mental disorder that affects people of all ages and backgrounds, and a major contributor to the overall global burden of disease.[1]In 2015, suicide from depression was the second leading cause of mortality in 15-29 year- olds with about 800,000 deaths.[1] According to a WHO report, the incidence of depression is rising globally especially in the developing countries as a result of increasing longevity and population growth.[2]This increase in prevalence has also been observed among students worldwide associated with a declining age of onset.[2]Currently, the prevalence of depression among students is said to range globally from 10% to 85% and this is higher than what is obtainable in the general population.[3] African studies have shown prevalence rates of undergraduate depression of, 39.2% in Ghana, 41.3% in Kenya, 37% in Egypt, and 13.6 – 31.7% in Ethiopia.[4-6]In Nigeria, rates between 23.3 -58%[7-9] have been found depending on the instruments used to assess depression.

The undergraduate population is made up of mainly young people aged 15-24years[10]whoare passing through a transitional period (from adolescence to adulthood),marked by varying, often contradicting experiences such as emotional, behavioural, sexual, economic, academic, social, as well as efforts at discovering one's identity with psychosocial and sexual maturation.[11,12]This transition phase coupled with university academic pressures increase the vulnerability of the undergraduate to developing depression.[12]The effect of depression is more pronounced in the undergraduates because early onset depression is associated with a greater burden of the disease than adult onset depression.

The aetiology of depression in this population is complex and multidimensional involving genetic,

environmental and social risk factors which include the family environment. The psychosocial environment of the family has also been reported by various studies to impart on the mental health status of her members.[13-16]

The family is a social unit of people who are related by blood, choice or legally and its description could be in terms of nuclear or extended.[17-18] It operates as a subsystem of a society saddled with a primary role of nurturing, supporting the psychological growth and development of its members and it plays a central role in the cognitive and emotional development of each individual.[19, 20]The family also determines the members' health beliefs, health-related behaviour, stress, and bears the major burden of ill health in any member.

Family structure can be nuclear or extended. Nuclear family consists of the father, mother and children, while an extended family includes the kin from outside the nuclear family.[21] This seems to be common in Asia, the Middle East, South America, and sub-Saharan Africa, but not in other regions of the world.[21]Extended family system has been found to offer some protection against depression but it may also be a risk factor in some people.[21]

The complex family psychosocial environmental factors either cause or increase the risk of depression in adolescents.[22]One of such factors is family relationship which demonstrates the degree of mutual connectedness and expectations among members.[19]Family relationships, dynamics, and social supports directly influence healthy individual functioning.[23]Substantive evidences have shown that family relationship influences the prevalence and pattern of depression in adolescents and undergraduates.[14, 23]There is a greater risk of developing depression in persons undergoing stressful life conditions like undergraduates in the presence of poor family relationship.[24, 25] A systematic review done in the United Kingdom reported that 18% of mental disorders occur in families with poor family relationship and 7% in families with good family relationship.[26]

The other family environmental risk factors identified by studies that predispose to depression include conflicts, adverse life events, abusive family relationships and chronic health conditions.[14]Also, family characteristics like type of marriage, parent living together, number of children in the family, family socio-economic status, and family social class have also been shown to predispose members to developing depression.[14] Family dynamics like family support and family functionality have been identified by studies to impart significantly on the causation, treatment, and prognosis of depression.[14-16]Despite available evidence on the association between family characteristics and depression in the general population, there is paucity of research on similar associations with undergraduate depression especially in Nigerian considering the fact that they are undergoing through a period of stress. This current study therefore was carried out in an attempt to fill this gap on the association between family characteristics and undergraduate depression in the University of Ilorin health centre.

Materials and Method

This study was a health facility-based descriptive cross sectional study among 353 students presenting at the Health centre for medical care selected bysystematic random sampling method. Participants included in the study were duly registered students of the University of Ilorin irrespective of the course and level, and who gave their consent to participate in the study. While those who were too ill to participate, who had a history of psychiatry illness and who refused to participate in the study were excluded. Ethical clearance was sought and received from the University of Ilorin Teaching Hospital ethical review committee and the Director of the University of Ilorin Health Service**.** The data were collected with pretested interviewer-administered semi-structured and structured questionnaires. The pretest was carried out at the school clinic of Al- Hikmah University Ilorin, Nigeria.

The structured questionnaire was designed based on the 9-itemPatient Health Questionnaire (PHQ-9), and the Index of Family Relation scale (IFR). The Semi-structured questionnaire comprised of questions to determine the socio-demographic and other relevant characteristics of the participants. The PHQ-9 has 9 –item module according to the DSM-IV criteria for major depressive disorder.[28] It is suitable for screening and rating severity of depression in adolescents and adults in primary health care setting.[28]It has been used and validated in Nigeria with good reliability with a Chronbach's alpha score of 0.85.[28] It is rated 0 to 3 (0= not at all; 1= several days; 2= more than half the days; 3= nearly every day),with interpretation of the total scores as : 0-4 = no depression; 5-9= mild depression; 10-14= moderate depression; 15-19= moderately severe depression; 20-27= severe depression.[28]The IFR was designed to measure psychological risk.[29] It measures the degree, severity or magnitude of a problem that family members have in their relationships with one another as felt or perceived by the person completing the scale. It is appropriately used as a measure of the client's family environment, and it may be used to help the client deal with problems in relating to the family as a whole. The IFR is a short-form, 25-item self-report questionnaire.

Statistical Analysis

The collected data were analysed using the Statistical Package for Social Sciences (SPSS®) version 20. Frequency tables were generated for all the relevant variables. Means and standard deviations were calculated for continuous variables and categorical

variables were expressed in percentages. Chi square and t test were used to test the association between categorical and continuous variables where appropriate. Probability (p) value of less than 0.05 at 95% confidence interval (CI) was taken as statistically significant.

Results

A total of 353 eligible and consenting undergraduates were recruited for this study aged 16-26 years with a mean age of 20.43 years (SD ± 2.20). Respondents between 20 and 23 years had the highest representation (51.0%). There were more females (60.1%) and Christians (59.8%). Nearly all the respondents (98.3%) were single and Yoruba was the commonest ethnic group (88.4%).See Table 1.

A large percentage of the respondents' (70.3%) came from monogamous setting. While one third of them were the first child (32.9%) and others were between the second and sixth child. More than half of the respondents (57.5%) had a family size of less than or equal to six. A high percentage of the respondents (83.9%) reported that their parents lived together while 16.1% were not living together. (They were divorced, separated, or single parents). In terms of parental social class, almost half (43.3%) of the students had parents from social class 1.This was closely followed by those from middle social class (36.6%) and a quarter (20.1%) from the lower social class. The mean Index of Family Relations (IFR) score was 44.88± 26.23 with almost half (47.3%) the students' scores within the poor relationship range of 31-70,and 16.2% reporting very poor family relationship. Those from a monogamous home (52.4%), whose parents were not living together (61.4%), who in the fifth position by order of birth (72.7%), tended to be more depressed. Respondents who had poor family relationship were also most depressed (51.5%).See table 2.

Figure 1 shows that the prevalence of depression was 45.3% among the studied undergraduate

As seen in figure 2,59.4% had mild depression, 27.5% had moderate depression, 9.4% had moderately severe depresssion and 3.7% had severe depression.

As shown in table 3 below, students with abnormal family relationships (poor and severely poor) were more likely to be depressed than those with good family relationship. This association was statistically significant (p- 0.011).

Also, students whose parents were not living together were more depressed than those with their parents living together and this association was statistically significant (p-0.008)

Order of birth also had a statistical significant relationship with depression as those at the 5th birth order were most likely to be depressed (p-0.001).
Type of marriage (p-0.705) and parental social class (p-0.741) were not significantly associated with depression.

After multivariate logistic regression, parents living together (OR=2.176, CI= 1.217-3.891) and family relationship (OR=0.508, CI=0.325-0.794) were found to be the family characteristic predictors of depression among the studied undergraduates of the university of Ilorin as shown in table 4 below.

Table 1: Socio- demographic characteristics of respondents **N=353**

Variables	Frequency (n)	Percentage (%)
Age Groups(Years)		
16 – 19	135	38.2
20 – 23	180	51.0
≧ 24	38	10.8
Mean ± SD	20.43 ± 2.20	
Gender		
Male	141	39.9
Female	212	60.1
Religion		
Christianity	211	59.8
Islam	142	40.2
Marital Status		
Single	347	98.3
Married	6	1.7
Ethnicity		
Hausa	2	0.6
Igbo	16	4.5
Yoruba	312	88.4
Others	23	6.5

Others* Ebira, Nupe, Igala and Idoma
N = Total number of respondents
n = number of respondents in each category

Figure 1:Prevalence of Depression.

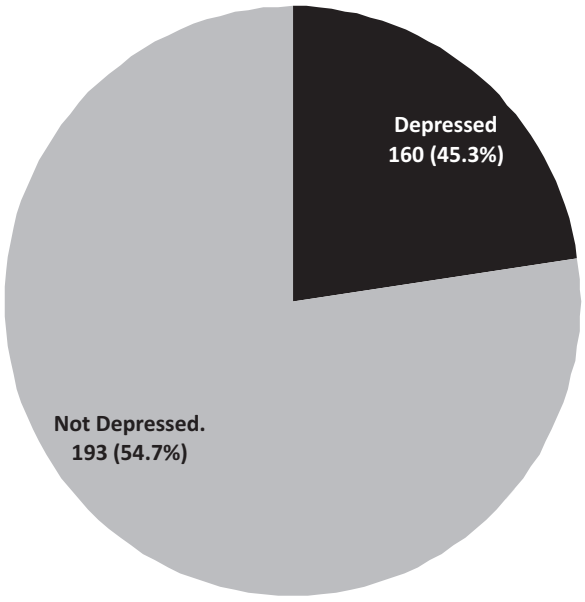

Figure 2: Severity Pattern of Depression

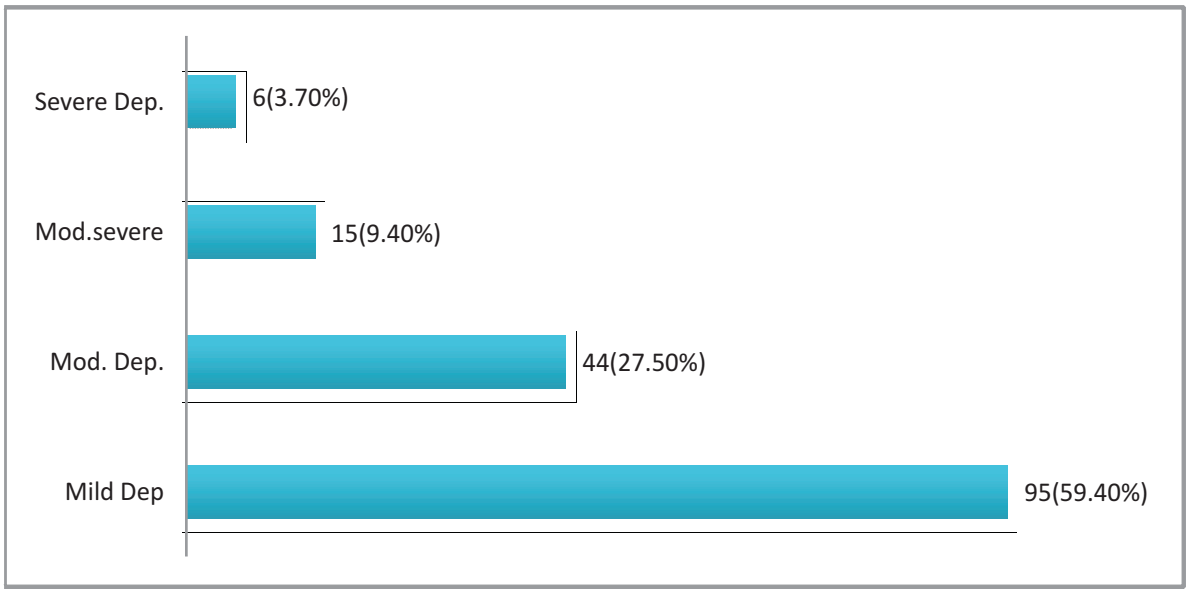

Table 2: Family characteristics of respondents **N=353**

Variables	Frequency (n)	Percentage (%)
Parents type of marriage (n=296)		
Monogamous	208	70.3
Polygamous	88	29.7
Order of birth		
First	116	32.9
Second	88	24.9
Third	74	21.0
Fourth	39	11.0
Fifth	22	6.2
Sixth	14	4.0
Family size		
= 6	203	57.5
= 7	150	42.5
Parents living together		
Yes	296	83.9
No	57	16.1
Family social class		
Upper class (1)	153	43.3
Middle class (II-III)	129	36.6
Lower class (IV-V)	71	20.1
Index of Family Relationship (IFR) Scores		
0-30 (Good relationship)	129	36.5
31-70 (Poor relationship)	167	47.3
71-100 (Severely poor relationship)	57	16.2

N = Total number of respondents n= number of respondents in each category

Table 3: Association between Family characteristics and Depression

Family relationship	Total	Depression		Df	χ^2	*P*
		Not depressed $n_{1=}$193(%)	Depressed n2=160(%)			
Good relationship	129	84 (65.1)	45 (34.9)			
Poor relationship	167	81 (48.5)	86 (51.5)			
Severely poor	57	28 (49.1)	29 (50.9)	2	8.951	**0.011***
Type of marriage	**(n=296)**					
Monogamous	208	99 (47.6)	109 (52.4)			
Polygamous	88	44 (50.0)	44 (50.0)	1	0.143	0.705
Parents living together						
Yes		171 (57.8)	125 (42.2)			
No		22 (38.6)	35 (61.4)	1	7.091	**0.008***
Order of birth						
1	116	52 (44.8)	64 (55.2)			
2	88	57 (64.8)	31 (35.2)			
3	74	43 (58.1)	31 (41.9)			
4	39	23 (59.0)	16 (41.0)			
5	22	6 (27.3)	16 (72.7)			
6	14	12 (85.7)	2 (14.3)	5	20.912	**0.001***
Social class						
Upper(I)	153	81(52.9)	72(41.7)			
Middle(II-III)	129	74 (57.4)	55 (42.6)			
Lower(IV-V)	71	38 (53.5)	33 (46.5)	2	0.600	0.741

χ^2: Chi square n_1, n_2: number of respondents in each category
* **p-value**<0.05 **df:** degree of freedom ^{y}=Yates Correction

Table 4: Multivariate logistic regression to determine the predictors of depression

Variables	Odd Ratio	p-value	95% Confidence interval
Parents living together			
Yes (REF)			
No	2.176	**0.009**	1.217 – 3.891
Order of birth			
≤3 (REF)			
> 3	1.000	0.999	0.599 – 1.670
Family relationship			
≤30 (REF)	0.508	0.003	0.325 - 0.794

Discussion

The overall prevalence of depression among the studied undergraduates was high (45.3%).Though, this falls within wide range of the global prevalence of depression among undergraduates of 10-85%[3] earlier stated, it is higher than what was found in some studies in other Nigerian Universities. The study done in the University of Nigeria, Enugu, south-east Nigeria, got a prevalence of 23.3%[8] , Gesinde et al in south-west Nigeria, got a prevalence of 35.8%.[30]It is however, comparable with what was got in Ahmadu Bello University (ABU), Zaria northern Nigeria of 58.2%.[9]These disparities could be a reflection of the differences in the studied populations, the different regions or the rising trend of this condition with time as the quoted studies preceded this current study. In terms of severity pattern, more than half (59.4%) of the depressed students had mild depression, and the proportion of students decreases as the severity of depression increases. This has been a consistent study finding both globally and locally.[3-6, 26]However, the finding of approximately one out of four students with a risk of undiagnosed severe depression is worrisome with serious implications for the upcoming generation. It is therefore highly recommended that routine depression screening with such simple tools as PHQ-9 be incorporated into the usual clinic consultations by attending physicians at the school health centres.

This study also showed that certain family environmental characteristics such as parents living together and family relationship are predictors of undergraduate depression which could be used as resources for risk assessment and categorisation in school clinics. Some studies have consistently shown the association between depression and family environmental factors such as family relationships, family functionality, and family social support among the general population[14-16] but only few have looked at their associations with undergraduate depression especially in Nigeria. Parent living together and order of birth as were found to be associated with undergraduate depression in this current study have not been widely studied. There is the need to further study these family characteristics as a resource for assessment of students who are predisposed to developing depression for preventive intervention and early identification and treatment.

Other studied family characteristics such as family size, family social class and type of marriage were not significantly associated with depression in this study even though the study by Adewuya et al among Obafemi Awolowo University students in south-western Nigeria found large family size to be associated with depression,(OR 2.8, 95% CI 1.42–5.73).[30] This may be due to the difference in study population, changes with time or difference in tools used. There is therefore need for further studies into the role of family characteristics in undergraduate depression in Nigeria and the entire sub-Saharan region for better mental health outcome of this special population of the society.

Conclusion

The prevalence of depression among the studied students of the University of Ilorin is high and was found to be positively influenced by certain family characteristics like 'parent living together', 'order of birth', and 'family relationship'. These characteristics could be used in identifying the at risk students for preventive interventions, early detection and treatment.

Recommendation

We therefore recommend that attending physicians at the school health centre should be taught the use of simple screening tools like the PHQ-9 for routine screening of students and prompt referral of identified cases. Also, all stakeholders involved in marriage and family well being should ensure a more favourable family environment.

Acknowledgement

We want to acknowledge all the students of the University of Ilorin who gave their consent to participate in this study.

References

1. WHO. Depression and Other Common Mental Disorders: Global Health Estimates. Geneva: World Health Organization; 2017. Licence: CC BY-NC-SA 3.0 IGO

2. WHO.News –Room / Fact sheet on Depression,2019.https://www.who.int/news-room/fact-sheets/detail/depression

3. Ibrahim AK, Kelly SJ, Adams CE, Glazebrook C. A systematic review of studies of depression prevalence in university students. *J Psychiatr Res*. 2013;47(3) :391–400

4. Asante K O, Andoh-Arthur J. Prevalence and determinants of depressive symptoms among university students in Ghana.*Journal of Affective Disorders*.2015; 171(15):161-166

5. Othienoa C.J, Okoth R.O, Peltzer K, Pengpid S, Malla L.O. Depression among university students in Kenya: Prevalence and sociodemographic correlates. *Journal of Affective Disorders*.2014;165:120–125

6. Yalemwork G. Depression among Addis Ababa University Students Sidist Kilo Campus :Prevalence, Gender Difference and Other Associated Factors. (Masters Thesis) on the internet),AddisAbaba University;2015http://etd.aau.edu.et/bitstream/handle /123456789/11506/Yelemwork%20Reserach.pdf (Accessed last on 20/1/2020

7. Peltzer K, Pengpid S, Olowu S, Olasupo M.

Depression and Associated Factors Among University Students in Western Nigeria. *J Psychol Africa*. 2013;23(3):459–466.
8. Aniebue, P.N., Onyema, G.O.Prevalence of depressive symptoms among Nigerian medical undergraduates. *Trop. Dr*.2008;38 (3):157–158
9. Dabana A, Gobir AA. Depression among students of a Nigerian University: Prevalence and academic correlates. *Arch Med Surg* [serial online] 2018; 3:6-10 [Accessed on 17th January 2020].
10. United Nations Department of Economic and Social Affairs. Definition of youth. *United Nations Dep Econ Soc Aff*. 2014;1–3.
11. Arslan G, Ayranci U, Unsal A, Didem A. Prevalence of depression, its correlates among students, and its effect on health-related quality of life in a Turkish University.*Upsala Journal of Medical Sciences*. 2009;114(3):170-177, DOI: 10.1080/03009730903174339
12. 12 Reyes-Rodríguez M.L, Rivera-Medina C.L, Cámara-Fuentes L, Suárez-Torres A, The Role of Family Environment in Depressive Symptoms among University Students: A Large Sample Survey in China. *PLoS ONE*.2015;10(12): e0143612. doi:10.1371/journal.pone.0143612
13. Iloh GUP , Orji UN , Chukwuonye ME , IfedigboCV.The Role of Family Bio-Social Variables in Depression in a Resource-Constrained Environment: A Cross-sectional Study of Ambulatory Adult Patients in a Primary Care Clinic in Eastern Nigerian.*J Med Sci*.2018;38(1):29-37 DOI: 10.4103/jmedsci.jmedsci_122_17.
14. Ghamari.M.Family Function and Depression, Anxiety, and Somatization among College Students.*International Journal of Academic Research in Business and Social Sciences.*2012;2(5):2222-6990
15. Shalchi B, Esmaeili Shahna M. Relationship of family functioning, satisfaction of basic psychological needs and depression considering the mediatory role of emotion regulation difficulty. *HMJ*.2018;22(1):52-61
16. Nam CB. The Concept of the Family: Demographic and Genealogical Perspectives. Sociation Today. 2008;2(2): 1-9.
17. Martey-Marbell D. Definition of Family. In: Bruce-Taagoe AA, editor Basic Principles of Family Medicine. Accra-North: Ghana. Son Life Press; 2005. p16.
18. Sharma BB. Family Relationship Pattern and Mental Helath in Adolescents. Int J Adv Res Technol. 2013;2:1–8.
19. Olanrewaju A, Akintunde A, Femi F, Ibrahim B, Olugbenga A. Pattern of Depression and Family Support in a Nigerian Family Practice Population. *Internet J FamPract*. 2007;6(1):1–6.
20. Turagabeci A, Nakamura K, Kizuki M, Takano T. Family structure and health, how companionship acts as a buffer against ill health. Heal Qual Life Outcome. 2007;5:61–63.
21. Marshall C, Henderson J. The Influence of Family Context on Adolescent Depression: A Literature Review. *Can J Fam Youth*. 2014;6(1):163–187.
22. Adelusi J, Coker A. The Relationship Between Family Structure and Psychopathology Among Adolescents and Young Adults in Lagos,South-Western Nigeria. *Niger J Psychiatry*. 2013;11(1):10–14.
23. Diego Garcia-Huidobro K, Soto G. Family functioning style and health?: opportunities for health prevention in primary care. *Br J Gen Pract*. 2012;(3):198–203.
24. Rawatlal N, Kliewer W, Pillay BJ. Adolescent attachment , family functioning and depressive symptoms. *S Afr J Psychiatr*. 2015;21(3):80–85.
25. Pritchett R, Kemp J, Wilson P, MinnisH, Bryce G, Gillberg C. Quick, Simple Measures of Family Relationships for use in Clinical Practice and Research. A Systematic Review. *FamPract*. 2011;28(2):172–187.
26. Araoye MO. Research Methodology with Statistics for Health and Social Sciences.First. Ilorin: Nathadex Publishers; 2004. p25-120
27. Adewuya AO, Ola BA, Afolabi OO. Validity of the patient health questionnaire (PHQ-9) as a screening tool for depression amongst Nigerian university students. *J Affect Disord.* 2006;96(1-2):89-93. doi: 10.1016/j.jad.2006.05.021. Epub 2006 Jul 20. PMID: 16857265.
28. Edwards B, Clarke B. The validity of the family relationships index as a screening tool for psychological risk in families of cancer patients. *Psychooncology*. 2005;14(7):546–554.
29. Gesinde A, Sanu J. Prevalence and Gender Difference in Self-Reported Depressive Symptomatology Among Nigerian University Students: Implication for Depression Counselling. *Couns*. 2014;33(2):129–140.
30. Adewuya A.O, Ola B.A, Aloba O.O, Mapayi B.M,Oginni O.O. Depression amongst Nigerian University Students; Prevalence and SociodemographicCorrelates.*Soc Psychiatry PsychiatrEpidemiol*. 2006; 41:674–678. DOI: 10.1007/s00127-006-0068-9.