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Prevalence and Pattern of Burnout Syndrome and Associated Quality of Life amongst Undergraduates of a Tertiary Institution in Northern Nigeria

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Abstract

Background: *Previous studies show that academic burnout among undergraduates in Nigeria is prevalent and impacts negatively on their mental well-being and quality of life. Few studies have looked at the relationship between burnout, psychological morbidity and quality of life. The objective of this study was to determine the prevalence of burnout syndrome among undergraduates and its relationship with psychological morbidity and quality of life.*

Methods: *A total of 933 undergraduates from the faculties of education, law and medicine, Bayero University Kano, participated in this descriptive, cross sectional study. Study instruments included a socio-demographic questionnaire, Maslach Burnout Inventory-students' survey, 12-item version of the General Health Questionnaire, and WHO Quality of Life Survey-Abbreviated Version. Statistical Package for Social Sciences version 16 was used to analyse the data using Chi square and ANOVA and a p-value of 0.05 or less was considered statistically significant.*

Results: *This showed a burnout prevalence of 153(16.4%) for emotional exhaustion, 230(24.7%) for cynicism and 194(20.8%) for reduced academic efficacy. Burnout increased with increasing length of academic activity, increasing psychological morbidity and decreasing Quality of Life. Education students had more burnout on cynicism subscale while medical students had more burnout on academic efficacy subscale. Overall, law students were the least burnout.*

Conclusion: *Burnout is common among undergraduates of Bayero University Kano. Families (through participatory parenting) and university authorities should put in place functional programmes to reduce the burden of burnout and more researches are needed to gain deeper understanding of burnout and its effects on students' mental health.*

Keywords: *Burnout, psychological morbidity, quality of life, undergraduates, Nigeria*

Introduction

Burnout has been traditionally considered a three-dimensional syndrome (emotional exhaustion, depersonalisation and reduced personal accomplishment) when measured with the Maslach Burnout Inventory-Human Services Survey (MBI-HSS).[1] Originally, all three dimensions of the MBI-HSS referred to contacts with

recipients like patients, students, or clients. However, research now show that burnout also exists outside the realm of the human services.[1]

Emotional exhaustion is characterized by intense fatigue, lack of force to face a working day and feeling of being demanded more than one's emotional limits. Depersonalization (or Cynicism) is characterized by emotional avoidance and indifference to work or service users. Reduced personal accomplishment (or professional efficacy) is expressed as lack of perspectives for the future, frustration and feelings of incompetence and failure. Common symptoms are insomnia, anxiety, difficulty in concentrating, changes in appetite, irritability and despondency.[2,3]

In Nigeria, there are few studies on burnout syndrome, much less among undergraduates in tertiary institutions. A pioneer study, "burnout and emotional well-being among workers and students in Nnewi" in south east Nigeria revealed a rate of 11.6 % for those with definite problems (burnout).[4]However it was noted that the Burnout Checklist used in this study was not widely validated as the Maslach Burnout Inventory in popular use. Also, the selection of the subjects was by convenience sampling and may not be representative of the general population.[4]

Similarly, a study on "incidence of psychological burnout among a group of Nigerian undergraduates" in south east Nigeria, found a lower percentage (10 %) of undergraduates having higher burnout symptoms, while a majority (90 %) of undergraduates having lower (fewer) burnout symptoms.[5] Although, the widely validated MBI-SS was used, the sample size of 130 comprised predominantly 3rd year students of psychology in the same university and cannot be said to be representative. While these pioneer studies have set the pace for burnout research among students of tertiary education in Nigeria, lots of unanswered questions remain. These include: what is the prevalence of burnout among undergraduates in northern Nigeria? What is the relationship between psychological morbidity and burnout among undergraduates? What is the relationship between quality of life (QoL) and burnout among undergraduates?

This study aimed at determining the prevalence of burnout syndrome among students in Bayero University, Kano (BUK) andto assess the relationship between burnout and length of academic activity, psychological morbidity and QoL of undergraduate students of BUK.

Methodology

This was a descriptive cross-sectional study conducted in Bayero University Kano, a federal tertiary educational institution in Kano, northwest Nigeria. It has two campuses: the old site in Gwale Local Government Area (LGA) and the new site located in Ungongo LGA. The faculties of Medicine and Law are located in the old site while the faculty of Education is located in the new site.

The study population was made up of undergraduate students of all the faculties of BUK and sampling followed a multistage sampling method. In the first stage, three consecutive random sampling of three faculties, without replacement from a pool of eight faculties in BUK (by balloting).In the second stage, 3 classes were selected from each of the 3 faculties earlier selected in the first stage.
Inclusion criteria included bona fide students (authenticated by obtaining the complete list of class members from the class representatives) in the faculties of Medicine (First, third and sixth years),

Law (first, third, and fifth years) and Education (first, second and fourth years) while exclusion criteria were students with previously diagnosed psychiatric illness, students who declined to give consent.

The minimum sample size of 378 was calculated using the formula: $n = Z^2P(1-P) \div d^2$;[6] where n is the required sample size, Z = Z score at 95% confidence level which is 1.96; P = prevalence of burnout, 56% (0.56),[6] d = precision of 5% (0.05)

The minimum sample size was then multiplied by a factor of 2.47 (the sum of the proportions of the number of students in the three faculties) to give a total of 933 students. This is because there was no screening before administration of the study instruments. Also, increasing the sample size would give the study more power and increased representativeness. This sample size of 933 students was then divided proportionately among the three faculties as shown below: In Medicine, the estimated population of medical students = 600; total estimated number of students in all 3 faculties was 1700; therefore, the proportion of medical students out of a total sample size of 933 was 600/1700 x 933 = 329. This was repeated for the other two faculties so that Education with a total of 600 students had 329 and Law with a total of 500 students had 275. Data was collected between June and August, 2012. Questionnaires were administered to all the students during lecture periods with the cooperation of the students and the lecturers. Emphasis was made on the need to fill all items of the questionnaires completely and truthfully.

The instruments used in collecting the data included a Socio-demographic questionnaire. This was designed to obtain socio-demographic information which included age, sex, marital status, religion and current cumulative grade point average (CGPA). The Maslach Burnout Inventory-Student Survey (MBI-SS) was modified from the Maslach Burnout Inventory-General Survey developed for use in student population.[7] For instance the item "*I feel emotionally drained from my work*" was rephrased to "*I feel emotionally drained from my studies*". This to reflect this study population. This instrument is a 15-item questionnaire with 3 subscales: emotional exhaustion with 5items;cynicismwith 4 items and academic efficacy with 6 items.[5]Responses lie on a 4-point Likert scale as follows: "Almost never" (1), "Sometimes" (2), "Often" (3), "Almost always" (4). Higher levels of burnout are indexed by "often" and "Almost always". For scoring purposes all Academic Efficiency items (3, 6, 8, 9, 12 & 15) were scored in a reverse order.[8] It takes 10-15 minutes to self-administer.[9] The reliability coefficients of the MBI among Nigerians are: Cronbach alpha = .86, Split-half = .57 and odd-even= .92 with concurrent validity coefficients in the range of .01-.36.[10]

The third instrument was the twelve-item General Health Questionnaire (GHQ-12). This is a self-administered screening tool for non-specific psychiatric morbidity in the community. It assesses the respondent's current state and asks if it differs from the usual state. It has been validated in Nigeria, and is quick to administer (2 minutes). Various scoring methods are available. This study adopted the bimodal method which has 4 possible response options coded 0-0-1-1. A cut-off score of 4 and above defines "caseness".[11,12] Finally the WHO Quality of Life Survey-Abbreviated Version (WHOQOL-BREF) was used. This 26-item self-administered instrument is a reliable and valid instrument for measuring the four domains of quality of life: physical, psychological, social relationship and environmental domains. The instrument has been widely

used and validated.[13,14]

The categorization of quality of life items was done around the mean value with 'good' representing values greater than the mean +1SD, 'fair' representing values equal to mean ± 1SD and 'poor' representing values less than the mean – 1SD.

The 16th edition of Statistical Package for Social Sciences (SPSS-16) was used for data analysis. Statistical significance was set at 0.05.Data was summarized using descriptive statistics and test of association was also carried out using Chi square test for categorical variables. ANOVA was used to compare means of numerical variables between faculties.

Ethical approval was given for this study by the Ethics Committee of the Aminu Kano Teaching Hospital (AKTH). Participation in this study was entirely voluntary and students were informed that they were free to opt out at any stage without any negative consequences. Students were asked to sign an informed consent after the nature, aims, objectives and procedures had been explained to them.

Results

A total of 933 students participated in this study. Law students were 275 (29.5%) while Medicine and Education were 329 (35.5%) each. The socio-demographic characteristic of the participants is shown in Table 1. Male students were 638 (68.4%) with an M: F ratio of 3.17:1. The medical students were the youngest with mean age of 23.29(±3.76) followed by law students 24.33(±5.02) and then education students 26.15 (±5.01). The difference in their mean ages was statistically significant (p<0.001). Majority were Muslims 898 (96.2%), (p-value <0.001). Two thirds of respondents 623 (66.8%) were of Hausa ethnic group, followed by the Fulani ethnic group 167 9 (17.9%). Most of the participants were single 781(83.7%), with 146(15.6%) being married.

Table 2 shows the factors associated with burnout. Over half of the participants 512 (54.9%) described their living conditions as poor. Education students reported poorer living conditions 208(63.2%). Medical students lived in significantly better accommodation than other students (p<0.001). Nearly two thirds 601 (64.4%) of the participants disliked weekend lectures. Medical students disliked weekend lectures the most; 233(70.8%) followed by law students; 189(68.7%), (p<0.001). Medical students reported more academic overload; 217(66.0%) followed by law students; 169(61.55%), p= 0.08. Comparing the psychological morbidity of participants across all three faculties, nearly a third of participants; 296 (31.7%) had psychological morbidity. There were more cases of psychological morbidity among law students; 90(32.7%) compared to education; 106(32.2%) and medicine 100; (30.4%) but the difference was not statistically significant (p=0.805).

Table 3 shows the burnout triad of high emotional exhaustion, high cynicism and mild (reduced) academic efficacy. For high cynicism, the rate was 24.7%, with education students exhibiting the highest rate of 35.6%, followed by medical students 20.4%. The difference was statistically significant (p<0.001).
The rate of reduced academic efficacy of participants was 20.8% with medical students showing the highest burnout rate of 30.4 % followed by education students; 24.3%, (p<0.001). The rate of emotional exhaustion was 16.4% and the differences between the faculties failed to reach statistical significance (p=0.521). The

pattern of burnout showed that medical students had the worst outcome of 17.9% and law students the least burnout 15.3%.

Table 4 shows the relationship between burnout and length of academic activity. Final year students had the highest burnout score of 11.03(±3.03) on Emotional Exhaustion subscale. Therefore as academic activity increases, burnout also increased among study participants. For cynicism, even though the pattern of burnout was not progressively uniform and was not statistically significant p=0.397, it showed that final year students had the highest mean burnout score of 7.16 (±2.80) compared to first year students; 7.01(±2.92). For academic efficacy, the difference in mean burnout score was not statistically significant (p=0.121) and final year students had the highest burnout score; 13.18 (±5.40).

Table 5 shows the relationship between burnout and quality of life. Participants with poor QoL had the highest emotional exhaustion (burnout); 11.51(±3.00) compared to10.58 (±3.04) from those with fair QoL and10.13 (±3.08) from students with good QoL (p<0.001). Similarly, students with poor QoL had the highest cynicism (burnout); 7.75(±2.93) and 6.66(±2.84) from those with good QoL, (p<0.001). A similar pattern was observed for Q2 component of QoL. The relationship was that as QoL decreases, burnout was more likely among participants.

The result of burnout and QoL [Physical (D1) and Psychological (D2) domains] was analysed and showed that participants with poor QoL on physical domain had the highest emotional exhaustion (burnout) with mean score of 11.81(±3.33), compared with burnout of 9.92(±3.23) for those with good QoL, (p<0.001). This is similar for cynicism scores and QoL (p=0.003). Conversely, students with poor QoL on physical domain had the highest mean score of academic efficacy 14.73(±5.08) compared to a mean burnout of 12.35(±5.91) from those with good QoL (p<0.001). A similar pattern is seen in the psychological domain. An analysis of the relationship between burnout, social relationship and environment domains of QoL revealed that participants with poor QoL on the social relationship domain had the highest emotional exhaustion; 11.29(±3.26) compared to 10.34(±3.18) from those with good QoL (p=0.032). The reverse was the case for academic efficacy. Participants with poor QoL were least burnout 14.73(± 5.29) compared to 13.04(±5.78) from those with good QoL (p=0.026). Participants with poor QoL on environment domain had the highest emotional exhaustion with a mean score of 11.18(±3.16) compared to a mean score of 10.29(±3.25) from those with good QoL (p=0.075). This is similarly to findings on the cynicism scale, (p=0.044).The relationship was that as QoL decreases, burnout was more likely among study participants.

Table 1: Socio-demographic variables of respondents: three faculties compared (n = 933)

Variable	Education	Law	Medicine	Total	Test Statistic	p-value
Age						
n	329	275	329	933		
Mean	26.15	24.33	23.29		F=29.595	<0.001*
SD	5.01	5.029	3.761			
Sex						
Male	258(78.4)	162(58.9)	218(66.3)	638(68.4)	X^2=27.429	<0.001*
Female	71(21.6)	113(41.1)	111(33.7)	295(31.6)		
Marital Status						
Single	244(74.2)	236(85.8)	301(91.5)	781(83.7)	X^2=38.410	<0.001*
Married	81(24.6)	37(13.5)	28(8.5)	146(15.6)		
Others	4(1.2)	2(0.7)	0(0)	6(0.6)		
Ethnic Group						
Hausa	229(69.6)	176(64.0)	218(66.3)	623(66.8)	X^2=3.588	0.0892
Fulani	50(15.2)	54(19.6)	63(19.1)	167(17.9)		
Yoruba	18(5.5)	16(5.8)	19(5.8)	53(5.7)		
Igbo	5(1.5)	5(1.8)	6(1.8)	16(1.7)		
Others	27(8.2)	24(8.7)	23(7.0)	74(7.9)		
Religion						
Islam	315(95.7)	272(98.9)	311(94.5)	898(96.2)	X^2=8.317	0.016*
Christianity	14(4.3)	3(1.1)	18(5.5)	35(3.8)		

F = one way analysis of variance (anova), SD = Standard deviation
t = independent sample t-test
*Statistically significant
Others = divorced and separated

Table 2: Factors associated with Burnout: three faculties compared (n=933)

	Faculty				Statistics
Factors	Education F (%)	Law F (%)	Medicine F (%)	Total F (%)	Test Statistic, df; p-value
Poor living conditions					
Yes	208(63.2)	162(58.9)	142(43.2)	512(54.9)	X^2= 29.295
No	121(36.8)	113(41.1)	187(56.8)	421(45.1)	df = 2
No. of Years in School					p < 0.001*
1	120 (36.5)	90 (32.7)	108 (32.8)	318(34.1)	
2	49 (14.9)	15 (5.5)	1 (0.3)	65(7.0)	
3	81 (24.6)	68 (24.7)	42 (12.8)	191(20.5)	X^2= 4.004
4	69 (21.0)	4 (1.5)	51 (15.5)	124(13.3)	df = 10
5	5 (1.5)	86(31.3)	15 (4.6)	106(11.4)	p < 0.001*
≥ 6	5 (1.5)	12 (4.4)	112 (34.0)	129(13.8)	
Problem with weekend lectures					
Yes	179(54.4)	189(68.7)	233(70.8)	601(64.4)	X^2= 22.496
No	150(45.6)	86(31.3)	96(29.2)	332(35.6)	df = 2
Difficult with Lecturers					p < 0.001*
Yes	115(35.0)	83(30.2)	88(26.7)	286(30.7)	X^2= 5.253
No	214(65.0)	192(69.8)	241(73.3)	647(69.3)	df = 2
					p = 0.072
Pressure with assignments					
Yes	189(57.4)	169(61.5)	217(66.0)	575(61.6)	X^2= 5.044;
No	140(42.6)	106(38.5)	112(34.0)	358(38.4)	df = 2
					p=0.080
Work strain on studies (employed)					
Yes	95(39.6)	38(25.2)	24(18.0)	157(30.0)	X^2= 21.243
No	145(60.4)	113(74.8)	109(82.0)	367(70.0)	df = 2
Pressure from home					p < 0.001*
Yes	115(35.0)	77(28.0)	72(21.9)	264(28.3)	X^2= 13.867
No	214(65.0)	198(72.0)	257(78.1)	669(71.7)	df = 1
Marital strain on study					P < 0.001*
Yes	115(35.0)	66(24.0)	63(19.1)	244(26.2)	X^2= 22.213
No	214(65.0)	209(76.0)	266(80.9)	689(73.8)	df=2
					p<0.001*

Df = Degree of Freedom, X^2 = Chi Square; *Statistically significant, F= frequency

Table 3: Burnout rates among participants: three faculties compared (n=933)

	Faculty				
Factors	**Education Freq (%)**	**Law Freq (%)**	**Medicine Freq (%)**	X^2	***P-value***
Emotional Exhaustion					
Mild	22(6.7)	21(7.6)	15(4.6)	*3.222*	*0.521*
Moderate	255(77.5)	212(77.1)	255(77.5)		
Moderately High	52(15.8)	42(15.3)	59(17.9)		
Cynicism					
Mild	52(15.8)	77(28.0)	87(26.4)	*38.708*	*<0.001**
Moderate	160(48.6)	152(55.3)	175(53.2)		
Moderately High	117(35.6)	46(16.7)	67(20.4)		
Academic Efficacy					
Mild(Reduced)	80(24.3)	14(5.1)	100(30.4)	*2.127*	*<0.001**
Moderate	161(48.9)	93(33.8)	202(61.4)		
High	88(26.7)	168(61.1)	27(8.2)		

*statistically significant, Freq = frequency

Table 4: Burnout and length of academic activity: three levels compared (n=933)

Burnout components	**Academic level**	**n**	**mean Burnout**	**SD**	**F**	**p-value**
Emotional exhaustion	First	311	10.23	3.10	5.756	**0.003***
	Middle	312	10.85	3.04		
	Final	310	11.03	3.03		
	Total	933	10.70	3.07		
Cynicism	First	311	7.01	2.92	0.925	0.397
	Middle	312	6.85	2.77		
	Final	310	7.16	2.80		
	Total	933	7.01	2.83		
Academic efficacy	First	311	14.06	5.60	2.120	0.121
	Middle	312	13.71	5.10		
	Final	310	13.18	5.40		
	Total	933	13.65	5.37		

*Statistically significant

Table 5: Burnout and QoL of Participants: (n=933)

Factor	QoL	Freq	Mean burnout	SD	*F*	*p-value*
RATING OF QUALITY OF LIFE						
Emotional Exhaustion	Poor	220	11.51	3.00	11.759	<0.001*
	Fair	511	10.58	3.04		
	Good	202	10.13	3.08		
Cynicism	Poor	220	7.75	2.93	10.493	<0.001*
	Fair	511	6.82	2.73		
	Good	202	6.66	2.84		
Academic Efficacy	Poor	220	13.97	5.06	0.956	0.385
	Fair	511	13.67	5.33		
	Good	202	13.25	5.78		
SATISFACTION WITH CURRENT STATE OF HEALTH						
Emotional Exhaustion	Poor	209	11.67	3.30	15.097	<0.001*
	Fair	494	10.54	2.85		
	Good	230	10.17	3.13		
Cynicism	Poor	209	7.63	3.07	7.802	<0.001*
	Fair	494	6.94	2.73		
	Good	230	6.59	2.72		
Academic Efficacy	Poor	209	14.21	4.75	1.699	0.183
	Fair	494	13.58	5.34		
	Good	230	13.29	5.92		

SD = Standard Deviation; QoL = Quality of Life, Freq - frequency
*Statistically Significant

Discussion

In this study, the threefold prevalence of burnout include: 16.4%, 24.7% and 20.8% for high Emotional Exhaustion, high Depersonalization and reduced Academic Efficacy respectively. To be burnout means to have high emotional exhaustion, high cynicism and a reduced academic efficacy.

This is in keeping with findings from previous studies of high prevalence of burnout among undergraduates in most parts of the world.[5,15,16] However, the prevalence of burnout in this study was higher than the prevalence of burnout of 10-11% in some studies in Nigeria[4-5]. This may be attributed to their small sample sizes compared to that in this study as well as differences in instruments used. All dimensions of burnout in this study were greater than 15%.

In comparison, notable differences exist in burnout rates among participants of different faculties in this study. Education students were more cynical (cynicism) towards their studies than medical students while law students were the least cynical. In Cynicism, students become mechanical, detached and unconcerned about school work. Burnout has however been studied more among medical students, perhaps as an extension of the traditional bias of being a problem of the helping profession. Possible reasons for increased cynicism include poor living conditions, combining job with education, pressure from home, job putting strain on studies, relationship difficulties, factors found to be more among education students in this study. Although as much as 40.4% of medical students reported combining their studies with jobs, they were actually not working. Majority of them were on the payroll of

their state governments in the North under a bond agreement.

In a similar vein there seems to be a low premium placed on the teaching profession and education related issues in many developing countries. Thus, students who are studying education related courses are sometimes viewed even by their colleagues in the university as dull, unintelligent, unserious and other ill-conceived perceptions. This leaves many of these students with low self-esteem and double mindedness towards their studies with its attendant consequences on academic performance.[17,18]

This study found that as academic activity increases, burnout increased among participants. Therefore, it could be reasoned that medical students were more burnout because they probably stayed longer in the university than other students. Medical students were less academically efficacious (burnout) than education and law students. This may be as a result of increased number of years in school, pressure with assignments and pressure from weekend lectures. This is in keeping with the findings in a U.S based multicentre study of medical students which found out that burnout may be increased by year of schooling.[19]It may be deduced that other studies which correlate increasing students stress with increasing length of stay in the university could be referring to burnout inadvertently.[20-22]

In this study burnout increased as the risk for psychological morbidity increased. Literature search has revealed a paucity of local data which looked at burnout and psychological morbidity among students of different faculties/departments. Studies have however linked stress among university students with increased psychological disturbance. For instance, in the U.S., studies have linked burnout, depression and suicide among medical students.[22]

WHOQOL BREF instrument showed that as QoL decreases, burnout components increased except academic efficacy which was expected to reduce (burnout) but increased. These two items of burnout which increased (EE and DP) have been considered by some researchers as the main components of the multi-dimensional construct of burnout. This finding of burnout and low QoL in a number of domains is consistent with findings in a number of studies.[19,23]

There are generally more studies detailing this complex inter-relationship among medical students compared to their peers in other disciplines. Medical students appear to be more vulnerable to this complex interplay of burnout, psychological morbidity and a decline in quality of life than their peers in other disciplines given their unique academic demands, exposure to patient care, diseases and deaths in the course of their training. Psychological morbidity in this study was high and was found to be 31.7%. This is similar to findings from other parts of the world among university students.[24-28] Some studies suggest that psychopathology especially depression could be negatively associated with the quality of life of an individual[29,30.]

A strength of this study compared to many other studies is that the large sample size increased its power and representativeness to other institutions and faculties. As a limitation, many of the participants failed to include their CGPA and hence could not be used in the statistical analysis.This could have revealed the intricate relationship between psychological distress, reduced quality of life, burnout and academic performance.

Conclusion

Burnout is highly prevalent among undergraduates of Bayero University Kano, with students in the faculty of education having more cynicism and medical students having less academic efficacy. The study also found that burnout increases significantly with increasing length of academic activity, psychological morbidity and decreasing quality of life. Burnout may have long term implications for the overall mental health of the students even after graduation. Therefore, families and university authorities should put in place strategic and effective programmes to improve students' mental health and adjustment in later life.

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References

1. Breso E, Salanova M, Schaufeli WB. In Search of the "third Dimension" of burnout: Efficacy or Inefficacy? Applied Psychology 2007:56(3): 460-478
2. Vieira I, Ramos A, Martins D, Bucasio E, Benevides-Pereira AM, Figueira I, Jardim S. Burnout in Psychiatric Practice: A Case Report. http;/www.scielo.br/pdf/rprs/v28n3/en_v28n3a15.pdf. 2006. Accessed 11/01/2020.
3. Mealer M, Moss Marc, Good V, Gozal D, Kleinpell R, Sessler C. What is Burnout Syndrome. Am J RespirCrit Care Med. 2016: 194; 1-2.
4. Uwakwe R. Burnout and Emotional Well-being among workers and Students in Nnewi, Nigeria; J Biomedical Investigations 2005:3(2): 21-30.
5. Ifeagwazi CM. Incidence of Psychological Burnout Among a group of University of Nigeria undergraduates. Nig. Journal of Psychological Research. 2006:5(70): 69-81.
6. Rooyen MV. The prevalence and perceived reasons for burnout and depression amongst students. http://www.faimer.org/education/fellows/06vanrooyen.pdf. Accessed 04/10/10.
7. Schaufeli WB, Martinez IM, Marques-Pinto AM, Salanova M, Bakker AB. Burnout and Engagement in university students: a cross-national study. Journal of Cross-Cultural Psychology. 2002:33: 464-481.
8. Maslach C, Jackson SE. Maslach Scoring Guide. http://archotol.ama-assn.org/cgi/content/full/136/10/950/00A05065T1. Accessed 03/02/2011
9. Maslach C, Jackson SE, Leiter MP, Schaufeli WB, Schwab RL. Maslach Burnout Inventory: Creative Organisational Design. http://www.creativeorgdesign.com/tests-page.htm?id=154&title=Maslach_Burnout_Inventory. Accessed 04/02/2011
10. Coker AO, Omoluabi PF. Validation of Maslach Burnout Inventory. Ife Psychologia, 2009:17(1):231-242.
11. Gureje O, Obikoya B. The GHQ-12 as a screening tool in primary care setting. Soc Psychiatry PsyiatrEpidemio. 1990:25(5): 276-80.
12. Uwakwe R, Modebe I. Disability and care-giving in old age in a Nigerian community. Niger J Clin Pract. 2007:10(1): 55-65.

13. Adewuya AO, Makanjuola RO. Subjective quality of life of Nigerian Schizophrenic patients: Socio-demographic and clinical correlates; ActaPsyhiatrScand 2009:120(2): 160-64.
14. Hamzat TK, Peter GO. Motor function recovery and quality of life among stroke survivors in Ibadan, Nigeria: A 6-month follow-up study. Eur J PhysRehabil. 2009:45(2): 179-83.
15. Dyrbye LN, Thomas MR, Massie FS, Power DV, Eacker A, Harper W, et al. Burnout and Suicidal Ideation among U.S Medical Students. Annals of Internal Medicine. 2008:149(5): 334-41.
16. Kaori F, Yukari M. A Study of Burnout Syndrome among University Students. Analysis through PIL, Self Esteem and Type A Scale. Annals of Gunma University School of Health Sciences. 2000:20: 97-102.
17. Koruk S. The Effect of Self-esteem on Student Achievement; in, The Factors Effecting Student Achievement. Edt, Karadag E. 2017: Ch 15; 247-257
18. Booth MZ, Gerard JM. Self-esteem and academic achievement: A comparative study of adolescent students in England and the United States. Compare: A Journal of Comparative and International Education. 2011: 41(5), 629–648.
19. Dyrbye L, Thomas M, Huntington J, Lawson K, Novotny P, Sloan J, et al. Personal Life Events and Medical Students Burnout: A Multicentre Study. Aca Med. 2006:81: 374-384.
20. Stewart SM, Lam TH, Betson CL, Wong CM, Wong AM. A Prospective analysis of stress and academic performance in the first two years of medical school. Med Educ. 1999:33:243-250.
21. Guthrie EA, Black DW, Shaw CM, Hamilton J, Creed FH, Tomenson B. Embarking upon a medical career: Psychological morbidity in first year medical students. Med Edu. 1995:29: 337-41.
22. Ossasona SO, Morakinyo O, Akhigbe KO. Study difficulty amongst undergraduate in a Nigerian University: Pattern and Relationship with Psychiatric Morbidity and Academic Performance. Nig J. Psy. 2011:9(3):46-53.
23. Shanafelt TD, Kolars JC. Quality of life, burnout, education debt, and medical knowledge among internal medicine residents. JAMA. 2011:306(9); 952-960.
24. Adewuya AO, Ola .B, Aloba OO, Mapayi BM, Oginni OO. Depression amongst Nigerian University Students: Soc Psychiatr Psychiatric Epidemiol. 2006:41(8): 674-78.
25. Firth J. Level and Sources of Stresses in medical students: BMJ; 1986:292: 1177-80.
26. Guthrie EA, Black D, Shaw CM, Hamilton J, Creed FH, Tomenson B. Psychological stress in medical students: A Comparison of two very different University courses. Stress Med. 1997:13: 179-84.
27. Nerdrum P, Rustoen T, Ronnestad MH. Student psychological distress: A Psychometric study of 1750 Norwegian 1st-Year undergraduate students. Scand. J. Educ. Res; 2006:50(1): 95-109.
28. Ovuga E, Boardman J, Wasserman D. Undergraduate Student Mental health at

Makerere University, Uganda. World Psychiatry. 2006:5(1);51-52.

29. Gore-Felton C, Koopman C, Spiegel D, Vosvick M, Brondino M, Winningham A. Effects of Quality of Life and Coping on depression among adults living with HIV/AIDS. J Health Psychol. 2006:11(5): 711-29.

30. McAlinden NM, Oei TPS. Validation of the Quality of Life Inventory for patients with anxiety and depression. Comprehensive Psychiatry. 2006:47:307-14.