Psychological well-being of medical students in a state university, Nigeria

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Original article

Abstract

Background: Medical school is a time of significant psychological distress for physicians-in-training. The objective of this study was to assess factors affecting the well-being of medical students undergoing clinical training at Olabisi Onabanjo University.
Methods: One hundred and forty seven 500 level medical students of Olabisi Onabanjo University were administered questionnaires to assess the socio-demographic characteristics, levels of stress and well-being, psychological distress, anxiety and depression.
Results: One hundred and thirty seven students completed their questionnaire out of a total of 147 students. Three quarters of the respondents were within ages 24 – 28 years with a mean of 26.3 ± 2.3 years. Seventy seven (56.2%) of the respondents were females. Close to half (48.9%) of the respondents had spent 8 years in school. About 30 % of the respondents were psychologically distressed while 21.9% and 14.6% had anxiety and depression respectively. Respondents who had spent more years in the school had a positive correlations with psychological distress ($r = 0.249$, $p = 0.003$) and anxiety ($r = 0.274$, $p = 0.001$). Having no one to talk to when respondents had a problem was significantly associated with psychological distress ($P = 0.00$), anxiety ($p = 0.00$) and depression ($p = 0.00$). Academic stress at school was strongly associated with psychological distress ($p = 0.00$) and depression ($p = 0.03$).
Conclusion: The study observed areas of possible stressful events (academics and non-academics) in medical education during the clinical periods. It is recommended that increased attention should be paid to building up the coping reserve of students.

Keywords: anxiety, depression, medical education, medical students, psychological distress

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Bien-être psychologique des étudiants en médecine de l'université d'état, le Nigéria

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L'article d'origine

Résumé

Contexte: l'école de médecine est un moment de grande détresse psychologique pour les médecins en formation. L'objectif de cette étude était d'évaluer les facteurs affectant le bien-être des étudiants en médecine en formation clinique au département Olabisi dans l'université.
Méthodes: cent quarante sept niveau 500 étudiants en médecine de Olabisi dans département université étaient administrés questionnaires pour évaluer les caractéristiques socio-démographiques, les niveaux de stress et de bien-être, détresse psychologique, d'anxiété et de dépression.
Résultats: cent trente-sept étudiants ont terminé leur questionnaire sur un total de 147 étudiants. Trois quarts des répondants étaient âgés de 24 à 28 ans, avec une moyenne de 26,3 ± 2,3 ans. Soixante-dix-sept (56,2 %) des répondants étaient des femmes. Près de la moitié (48,9%) des répondants ont passé 8 ans à l'école. Environ 30 % des répondants étaient psychologiquement affligés tandis que 21,9 % et 14,6 % avaient l'anxiété et la dépression respectivement. Les répondants qui avaient passé plusieurs années à l'école avait une corrélation positive avec détresse psychologique (r = 0,249 , p = 0,003) et l'anxiété (r = 0,274 , p = 0,001). N'ayant personne à qui parler lorsque les répondants avaient un problème était significativement associée avec détresse psychologique (P = 0,00), anxiété (p = 0,00) et la dépression (p = 0,00). Stress scolaire à l'école a été fortement associé avec détresse psychologique (p = 0,00) et de la dépression (p = 0,03).
Conclusion: L'étude a observé des domaines possibles événements stressants (universitaires et non universitaires) dans le cadre de l'enseignement médical au cours des périodes clinique. Il est recommandé qu'une attention accrue devrait être accordée au renforcement de la réserve pour faire face des étudiants.

Mots-clés : l'éducation médicale, détresse psychologique, d'anxiété, de dépression, d'étudiants en medicine

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Introduction

The rigorous nature of academic workload characteristic of medical education worldwide has long been known as a major stressor that can affect the psychological wellbeing of medical students (1,2). An average medical student has to cope with the intense pressure of mastering large amounts of information within a relatively short time, foreboding examinations, limited time for leisure and self in addition to coping with personal issues of daily living and relationships (3,4). These demands have been seen to extol a high psychological toxicity on the medical student far beyond that experienced by other university students (5,6).

Typical of most medical curriculum, medical education in Nigeria is divided into pre-clinical and clinical trainings. The Pre-clinical training provides the requisite basic medical foundation for further clinical clerkship and training .Transition from pre-clinical to clinical training often requires a higher level of adjustment and coping skills to face the rigors of clinical training. This phase of training involves more thorough knowledge of the basic fundamentals and application to real life situations in clinical experience. The nature of the experience in clinical training places an enormous workload on the student's ability to balance the need for greater acquisition of knowledge, increased demands by teachers, ward-rounds and dealing with patients. Socio-economic demands also increase with need for financial support as a result of increasing cost of medical education and personal requirements.

In addition, the personality traits of perfectionism, competitiveness, and obsession for success as well as meeting parental demand of most medical students forge undue fear and stress (5-8). Studies have consistently reported an upsurge in stressful activity during the clinical period. These can exert damaging effect on their adaptive skills and long-term wellbeing as medical students and their career as medical doctors (9). Medical students have been reported to have higher rates of mental illness, substance dependence, sleep difficulties and irritability (5).

In Nigeria, the wellbeing of medical students remains an under-researched area as there exist considerable dearth of information on factors affecting the well-being of medical students and relationship with their mental health. This study sets out to assess factors affecting the well-being of medical students undergoing clinical training and relate it to their mental health. The aim is to improve the quality of medical education, make it less stressful to the student and still maintain the high standard needed in training of medical doctors.

Methodology

Setting

Olabisi Onabanjo University is a State University located in the South West region of Nigeria. It is the first state university in Nigeria and the first to start medical training at state levels. The University admits students from all over the federation.

Study design and Procedure

The study was a cross sectional survey of 500 level Medical students of Olabisi Onabanjo University, Faculty of Clinical Sciences and was carried out just before the beginning of lectures during the mandatory psychiatry rotation over a period of two months. Informed consent was obtained from all participating medical students. The sampling frame included all 500 level students (totalling 147) undergoing their clinical training during the period of study. The level was targeted as they have had sufficient exposure in clinical training and had undergone a number of rotations in the main clinical Departments. They were also not yet too busy with their final MBCHB preparations.

Participants

Respondents were recruited from the entire 500 level of the Faculty of medicine, Obafemi Awolowo college of Health Sciences, Olabisi Onabanjo University, Ogun State. One hundred and thirty-seven students (137) out of a total of 147 consented to participate in the study.

Instruments

Self-administered questionnaires were used to assess the socio-demographic characteristics, levels of stress and well being, psychological distress, anxiety and depression using the following instruments:

Socio-demographic data: A specially designed questionnaire was used for the socio-

demographic information including age, sex, ethnicity, marital status and number of years spent in medical school.

Stress and Well-Being questionnaire: This questionnaire was adapted from a similar study by Cohen *et al* (10) but modified to fit our setting. It assesses 9 domains which were seen as potential sources of stress in medical school. These include health, appearance, financial issues, academic stress, family life, recent painful occurrence, difficulties with intimate relationships, having a confidant and past painful occurrence. Respondents were required to indicate whether they were bothered or not bothered with each domain assessed.

12-item General Health Questionnaire (GHQ): The 12 item General Health Questionnaire was used in assessing psychological distress, which has been previously validated in Nigeria by Gureje and Obikoya (11). It is a simple and easy to use screening tool that has been used in primary health care studies and population studies in Nigeria. The cut off point for psychological distress is 3 and above.

Hospital Anxiety and Depression scale (HADS): Anxiety and Depression symptoms were assessed using the 14-item Hospital Anxiety and Depression scale (HADS), which has been validated and used in several studies in many countries including Nigeria (12,13). Each scale has equal number of anxiety and depressive items of measure. The authors adopted a cut-off score of 8 and above for significant levels for both anxiety and depression.

Data analysis

The data obtained was analyzed using Statistical Package for Social Sciences (SPSS) software version 16. Results are presented in frequencies and percentages. Mean values and standard deviations were calculated for continuous variables. Comparisons of categorical data were done using Chi square test. A *P*-value less than 0.05 was considered statistically significant.

Results

One hundred and thirty seven students completed their questionnaire out of one hundred and forty seven students giving a response rate of ninety three percent. Table 1 showed the demographic characteristic of the subjects. The mean age of the respondents was 26.3 ± 2.3 years, with about three quarter of them within age range of 24 – 28 years. Seventy seven (56.2%) of the respondents were females, one hundred and twenty (87.6%) were Christians, one hundred and twenty five (91.2%) were from the Yoruba tribe while one hundred and twenty respondents (87.6%) were never married. About half of the respondents (48.9%) had already spent 8 years in the medical school as at the time of this study.

Stress / well being

Majority of the respondents (82.5% n=113) were bothered about the daily stress they face at school. About half of the respondents (51.1%) reported being bothered about their health while 48.9 % were bothered about their financial capabilities. Ninety two percent (n=126) reported that the most stressful event in their life were the MBChB examinations, as shown in table II

Psychological morbidity, Anxiety and Depression

The GHQ-Scores ranged from 0-11 with a mean score of 2.10 ± 2.26. Using a cut off score of 3 and above as evidence of psychological distress, One third of the respondents (29.9%) had psychological distress as depicted in Table III.

The mean score on the anxiety scale was 4.9±3.60 and on the depression scale was 4.5±3.40. Using a cut-off score of 8 and above for anxiety and depression respectively, 21.9% (n=30) of the respondents had anxiety while 14.6% of the respondents (n=20) had depression (Table III).

Association between socio-demographic characteristics and psychological distress, anxiety and depression

Those respondents who had spent more years in school had a positive correlations with psychological distress ($r = 0.249$, $p = 0.003$) and anxiety ($r = 0.274$, $p = 0.001$), but no significant relationship with depression ($r = 0.057$, $p = 0.512$). Females were more likely to have anxiety than their male counterpart ($\chi^2 = 4.01$,

p=0.04). No socio-demographic characteristic was significantly associated with depression.

Association between stressors / well being and psychological morbidity, anxiety, and depression (table IV).

Having no one to talk to when respondents had a problem was significantly associated with psychological distress (χ^2 = 25.21, P = 0.00), anxiety (χ^2 = 12.46, p = 0.00) and depression (χ^2 = 9.85, p = 0.00). Those who worry about a terrible past occurrence reported significantly more psychological distress (χ^2 = 12.84, p = 0.00) and anxiety (χ^2 = 5.15, p = 0.03). Academic stress at school was strongly associated with psychological distress (χ^2 = 11.72, p = 0.00) and depression (χ^2 = 5.02, p = 0.03). Stress experienced at home was significantly associated with anxiety (χ^2 = 20.40, p = 0.00), and depression (χ^2 = 9.80, p = 0.00). Physical health was associated with significant anxiety (χ^2 = 8.36, p = 0.01), while those that recently experienced a bad occurrence reported more anxiety symptoms. (χ^2 = 13.27, p = 0.00).

Discussion

This study assessed the psychological stress medical students experienced during their clinical training in a Nigerian University. The age distribution of the study subjects is typical of most Nigerian Universities (14). This study observed that nearly all of the students (82.5%) were bothered about the stress of medical school which was not surprising considering the level of academic workload involved in medical education. Local studies have also reported similar findings among medical students in different universities which potentially mirrors the views of medical students undergoing clinical training in other parts of the country (15,16).

Psychological distress did not significantly differ across most socio-demographic characteristics inclusive of age and gender, but was significantly associated with increasing number of years spent in the program. This finding did not differ significantly from a similar study in a South western Federal University (16). Understandably, respondents who had spent longer years in school were more exposed to constant academic stress and have reported worsening mental health over increasing duration of their stay in the medical school (9,17-21). Moreover, prolonged years spent can have a negative effect on cognitive ability of students (6,9,18-20). Ideally, they were expected to have spent five years at their level, but the average years spent as at the time of the study was 8 years. This could be due to repeated classes or prolonged strikes. The frequency of strike actions by all cadres of health care and university staff is a major stressor of its own (16).

It is noteworthy that certain factors in the life of the medical students were strongly related to psychological distress beyond the academic environment, such as worries over past painful occurrences and having no one to confide in. Report of anxiety was higher (21.9%) than that of depression (14.6%). Females were more anxious than their male counterpart. Females are more likely to report concerns about the volume of work and feelings of lack of competence. Anxiety was associated with worries about the academic workload, past and present occurrence of a bad experience and worries about physical health. Similar factors outside the stress of studies were associated with depression, such as worries over having no confidant, situations at home and poor finances.

The finding of psychological morbidity, anxiety and depression in clinical students is not unique to our study as several other studies have reported similar prevalence estimates (16,17,22). However our study revealed several other issues beyond the stress of medical school (eg having no one to confide in, stress at home etc) that are significant contributors to the level of stress.

Other factors contributing to the stress of medical training include mandatory presentations, signing of procedures, volume of reading, keeping up with competition, restricted social life, tasking examinations and fear of failure. Beyond these issues, our study explored other possible stressful events and their relationship to psychological morbidity, anxiety and depression among the medical students.

In conclusion, this study observed areas of possible stressful events in medical education during the clinical periods. Therefore, there is

the need to further review the medical curriculum in order to make it less stressful, yet maintaining the core principles of qualitative medical training. Furthermore, attention should be paid to building up the coping reserve of students especially those who have spent more years in the system.

Counselling units should be established to help students in our medical institutions. The limitation of this study is the cross-sectional nature of the study and relatively small sample size which limits the generalization of the study.

Conflict of interest: The authors declare no conflict of interest.

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Table 1: Socio -demographic characteristics or respondents

Variables	Frequency	Percentages
Ages(years)		
<24	8	5.8
24-28	102	74.5
29-32	27	19.7
Sex		
Male	60	43.8
Female	77	56.2
Religion		
Christianity	120	87.6
Islam	17	12.4
Ethnicity		
Yoruba	125	91.2
Ibo	8	5.8
Others	4	3.0
Marital Status		
Never Married	120	87.6
Married	17	12.4
Year at School		
< 8	20	14.6
8	67	48.9
9	30	21.9
> 9	20	14.6

Table II: Stressors experienced by the respondents

Stressors	Bothered (%)	Not bothered (%)
Physical Health	70(51.1)	67(48.9)
Weight/Appearance	60(43.8)	77(56.2)
Financial Issues	67(48.9	70(51.1)
Academic Stress	113(82.5)	24(17.5)
Family Stress	34(25)	103(75)
Recent Occurrence	37(27)	100(73)
Personal Relationship	22(16)	115(64)
No confidant	34(25)	103(75)
Past Painful Occurrence	20(14.6)	117(85.4)

Table III: Level of psychological distress, anxiety and depression among respondents

Items of measure	Abnormal scores f (%)	Normal scores f (%)	Mean ±sd
Psychological Distress	41(29.9)	96(70.1)	2.10 ± 2.26
Anxiety	30(21.9)	107(78.1)	4.90 ± 3.60
Depression	20(14.6)	117(85.4)	4.50 ± 3.40

Table IV: Relationship between potential stressor, psychological distress, anxiety and depression

	Psychological Distress				Anxiety				Depression			
	Present (%)	Not present (%)	x^2	p	Present (%)	Not present (%)	x^2	p	Present (%)	Not present (%)	x^2	p
Health												
Bothered	46(66.0)	24(34)	1.76	0.26	47(67.0)	23(33)	8.36	0.01	58 (83)	12(17)	0.53	0.33
Not bothered	51(76.0)	16(24.6)			57(85.1)	10 (14.9)			60 (89.6)	7(10.4)		
Appearance												
Bothered	42(70)	18(30)			46(77)	14(23.0)	0.10	0.54	47(78.0)	13(22.0)	2.40	0.15
Not bothered	57(74.0)	20(25.0)	0.49	0.50	60(79)	17(21)			69 (90)	8(10.0)		
Financial Issues												
Bothered	44(65.7)	23 (34.7)	1.36	0.26	48(71..6)	19(28.4)	2.02	0.15	51(76)	16(240)	9.29	0.00
Not bothered	5375.7)	17 (24.3)			58 (82.9)	12(17.1)			65(93)	5(7)		
Academic												
Bothered	73(65.1)	39(34.9)	11.72	0.00	86(77)	26(23)	3.20	0.07	92(82)	20(18)	5.02	0.03
Not bothered	24(96)	1(4)			22(88)	3(12)			25(100)	0(0)		
Stress at Home												
Bothered	21(65.6)	11(34.6)	0.82	0.85	15((47)	17((53)	20.40	0.00	21(65.6)	11(34.4)	9.80	0.00
Not bothered	76(72.4)	29(27.6)			91(87)	14(13)			95(90.5)	10 (9.5)		
Recent occurrenc												
Bothered	25(68)	12(31.6)			21(56.8)	16 (43.2)	13.27	0.00	29(78.4)	8(21.6)	1.90	0.13
Not bothered	73 (73)	27(27)	0.35	0.56	85(85)	15(15)			87(87)	13(13)		
Home difficulties												
Bothered	13(59)	9(41)	1.07	0.30	13(59)	9(41)	3.71	0.05	19(86.4)	3(13.6)	0.53	0.37
Not bothered	84(73)	31(27)			93(81)	22(19)			97 (84.3)	18(15.7)		
No confidant												
Bothered	11(35.5)	20(64.5)	25.21	0.00	17(55)	14(45)	12.46	0.00	21(68)	10(32)	9.85	0.00
Not bothered	88(83)	18(17)			89(84)	17(16)			95 (90)	11(10)		
Past occurrence												
Bothered	7(37)	12(63)	12.84	0.00	11(58)	8 (42)			15(79)	4(21)	0.71	0.40
Not bothered	83(77)	25(23)			22(18.6)	96 (81.4)	5.15	0.03	101(86)	17(14)		