



Correlation of Depressive Illness with Academic Performance Among Medical Students at the University of Port Harcourt

Emen Asuquo¹, Nkporbu A Kennedy^{2*}, Okechukwu Chibuikwe², Okafor Nneka T¹ and Onoh Ifeanyinwa²

Affiliation

¹Department of Preventive and Social Medicine, University of Port Harcourt, Nigeria

²Department of Neuropsychiatry and Mental Health, University of Port Harcourt, Nigeria

*Corresponding author: Nkporbu A Kennedy, Department of Preventive and Social Medicine, University of Port Harcourt, Nigeria,

Email: nakpigi2008@yahoo.com

Citation: Asuquo E, Nkporbu AK, Okechukwu C, Onoh I and Okafor T. Correlation of depressive illness with academic performance among medical students at the university of port harcourt (2020) Edelweiss Psyi Open Access 4: 18-21.

Received: Feb 24, 2020

Accepted: Apr 06, 2020

Published: Apr 13, 2020

Copyright: © 2020 Asuquo E, *et al.* , This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Abstract

Background: The rising prevalence and burden of Depression among all age groups including medical students have continued to constitute enormous concern worldwide. Depression has been associated with cognitive impairment and may impair academic performance. **Aim:** To determine the relationship between depression and academic performance among medical students at the University of Port Harcourt. **Methodology:** This descriptive cross-sectional study gained ethical approval . Stratified random sampling method was used to select the subjects. A well-structured open ended self-administered socio-demographic questionnaire was administered to the students. The Zung Self Rated Depression Scale was used to assess the depression status of each respondent in conjunction with the Diagnostic Statistical Manual, Version Five (DSM V). The data were analysed using descriptive and analytical methods. **Results:** The prevalence of depression among the medical students was 5.3%. Fourteen students (4.6%) were mildly depressed while only two respondents had moderate depression. Academic performance was generally poor among the medical students with depressive illness compared to those without depression and was worse with increasing severity of depression($p=0.004$). **Conclusion:** Depression does occur among medical students at the University of Port Harcourt and significantly affects academic performance.

Keywords: Depression, Academic performance, Medical students, Uniport.

Introduction

The burden of depression and other mental health conditions is on the rise globally [1], among all age groups including medical students among whom it has continued to constitute enormous concern, often associated with poor academic performance, disability and poor quality of life [2-6].

Depression is a leading contributor to the global burden of disease and is a common illness with an estimated 350 million people affected worldwide [1]. The World Mental Health Survey conducted in 17 countries found that an average of 1 in 20 people reported having an episode of depression in the previous year [2]. Prevalence rates of depression vary by country and by region with highest rates in Afghanistan and lowest in Japan [3].

A medical school is a tertiary educational institution – or part of such an institution that teaches medicine, and awards a professional degree that qualifies one to practice medicine. Although there are several medical schools in Nigeria, gaining entrance and/or finishing from them is highly competitive and demanding respectively. It has been found that medical students have a higher level of depression than their colleagues in other departments as seen in studies carried out [7-9].

A depressive episode can worsen leading to suicide or resolve after a while or following treatment. Medical students because of their rigorous training have rates of depression that are higher than those of the general population [5]. Factors which could likely contribute to poorer mental health among medical students include stressors like having large volumes of material to study, academic evaluation with the risk of repeating the academic year if failed, lack of sleep, exposure to patient suffering and death, high expectations from family and friends and student abuse (bullying by senior colleagues and doctors). The factors which predispose medical students to depression include female gender, younger age, being in lower classes, poor social support, living alone and substance abuse.

In extreme depression, inability to cope successfully with the stress of medical education may result in a cascade of consequences like poorer academic performance, alcohol and substance abuse, impairment of functioning in classroom and clinical practice and suicidal ideations.

Depression has been associated with cognitive impairment and may impair academic performance. Depression is a common disorder that impacts an individual's ability to perform life activities [10]. It therefore comes as no surprise that the depressed medical student performs abysmally; because they lack self-motivation which is the key ingredient for success. A student who has consistently performed



poorly over a period of time gets depressed, losing the self-motivation that should have spurred him to try again, further gets depressed, gives up, feels worthless and academic performance worsens further and so continues the vicious cycle until the student is at the lowest ebb of depression.

Aim

To determine the relationship between depression and academic performance among medical students in the University of Port Harcourt.

Methodology

This study was a descriptive cross-sectional study. Appropriate sample size was calculated and the stratified random sampling method was used to select the subjects from all the classes except first year which was considered not a true medical class and fourth year because there were no medical students in the class as at the time of the study. A well structured open ended self-administered socio-demographic questionnaire was administered to the students. The Zung Self Rated Depression Scale was used to assess the depression status of each respondent in conjunction with the Diagnostic Statistical Manual, Version Five (DSM V). Depressive illness was then correlated with academic performance of the students. The data were analysed using descriptive and analytical methods.

Limitation

Industrial actions in the university and hospital affected the continuity of the study. The sample size was too small and the study is a cross-sectional type, hence, inadequate for the determination of association between depression and aforementioned factors.

Results

The prevalence of depression among the medical students was 5.3%. Fourteen students (4.6%) were mildly depressed while only two respondents had moderate depression. Year 3 had the highest prevalence with 10.5% followed by final year with 5.3%, while the only 2 cases of moderate depression were found among students in year 2 of their medical programme. Academic performance was generally poor among the medical students with depressive illness compared to those without depressive illness and academic performance was worse with increasing severity of depression.

Socio-demographic characteristics of respondents

Respondents within the age group of 20-24 constituted the largest percentage with 146 (47.9%), followed by the age group of 25-29 with 98 (32.1%) while that of 35-39 was the least with 4 (1.3%) (Table 1). Majority of the respondents were clinical students, constituting about 189 (62.0%) with the highest proportion of respondents belonging to the year 5 class: 79 (26.0%) (Table 2).

Discussion

A study among undergraduate medical students in the United States of America found that 23% of the students had clinical depression [6] and it was similar to the study conducted in the University of Nigeria Teaching Hospital, Enugu Campus which put the prevalence of depression among medical students at 23.3% [7]. When compared with a study done by Adevuya *et al.* on depression among undergraduate students in universities in Western Nigeria targeting 1206 nonmedical students found that 8.3% of the students met the criteria for major depressive disorder showing that depression rates are much higher among medical undergraduates compared with their nonmedical counterparts [8].

Socio-demographic Characteristics and other factors	Frequency (n=305)	Percentage (%)
Age Range		
15-19	29	9.5
20-24	146	47.9
25-29	98	32.1
30-34	22	7.2
35-39	6	2
≥40	4	1.3
Mean age: 24.29 ± 4.45		
Gender		
Female	138	45.2
Male	167	54.8
Faculty		
Basic Medical Sciences	116	38
Clinical Sciences	189	62
Level of Study		
Year 2	60	19.6
Year 3	57	18.7
Year 5	79	26
Year 6a	38	12.4
Year 6b	71	23.3
Family Position		
First	109	35.9
Middle	136	44.7
Last	59	19.4
Number of siblings		
None	5	1.6
1 – 4	190	62.3
5 – 8	103	33.8
9 – 12	5	1.6
≥ 12	2	0.7
Level of education of parents		
Father		
Primary	23	7.5
Secondary	53	17.4
Tertiary	229	75.1
Mother		
Primary	27	8.8
Secondary	67	22
Tertiary	211	69.2
Place of Residence		
Off Campus	142	46.6
On Campus	163	53.4
Academic performance		
Academic performance over period in medical school		
Don't know	39	12.8
Not dwindled	188	61.6
Dwindled	78	25.6
Relationship between academic performance and effort put in		
Don't know	29	9.5
Performance is a reflection of effort	125	41
Performance is not a true reflection of effort	151	49.5
If performance is not reflection of your effort, do you think you work too hard?(n= 151)		
I don't know	32	21.2
No	86	57
Yes	33	21.8
Constant academic pressure(n=299)		
Not under constant pressure to perform better	106	35.5
Under constant pressure to perform better	193	64.5
Performance in latest assessment (n=300)		
Excellent	35	11.6
Fair	65	21.7
Good	191	63.7
Poor	9	3

Table 1: Socio-Demographic Characteristics and other factors of respondents.



Depression and academic performance						
	Mildly Depressed (50-59)	Moderately Depressed (60-69)	No Depression (≤ 49)	Chi-squared	df	P-value
Academic performance has dwindled over time						
No	3 (25.0%)	0 (0.0%)	185(73.4%)	17.8111	2	0.0001
Yes	9 (75.0%)	2 (100%)	67 (26.6%)			
TOTAL	12(100%)	2 (100%)	252(100%)			
Those whose performance is a true depiction of effort						
No	10 (76.9%)	0 (0.0%)	141 (54.0%)	5.0545	2	0.0799
Yes	3 (23.1%)	2 (100%)	120 (46.0%)			
TOTAL	13 (100%)	2 (100%)	261 (100%)			
Those under constant pressure to perform better at tests						
No	3 (21.4%)	0 (0.0%)	103 (36.4%)	2.4118	2	0.2994
Yes	11 (78.6%)	2 (100%)	180 (63.6%)			
TOTAL	14 (100%)	2 (100%)	283 (100%)			
Performance in latest assessment						
Excellent	1 (7.1%)	0 (0.0%)	34 (12.0%)	22.7974	6	0.0009
Good	9 (64.3%)	0.00%	181(63.7%)			
Fair	2 (14.3%)	1 (50.0%)	63 (22.2%)			
Poor	2 (14.3%)	1 (50.0%)	6 (2.1%)			

Table 2: Academic factors which could lead to depression.

In our study, the prevalence of depression among medical students in the University of Port Harcourt was 5.3%, with mild depression 4.6%, moderate depression 0.7% and there were no respondents found with severe depression. This did not agree with the study done on Mental Depression and coping strategies among medical students in the University of Nigeria, Enugu Campus by Nwobi in 2009, which put the prevalence of mild depression at 27.6%, moderate depression at 8.9% and severe depression 1.6% [11]. It also differed from the study done by Aniebue *et al.* also in the University of Nigeria, Enugu Campus which put the prevalence of depression at 23.3% [7]. It also differs from findings in other parts of the world which put the prevalence of depression among medical students between 21-39% [9,12-15].

Possible reasons for this disparity in findings between our study and others already done may be that our respondents possibly were not very honest with information provided in the questionnaires, they have better coping mechanisms and social support structures as most of our respondents have parents who live together.

Also, the low prevalence of depression found could also be due to the fact that our study was done at a time when access to the internet, social media and other forms of relaxation are easier to access. Information is just a click away from the average medical student, the volume of work to be studied is available as soft copy on smart phones and the availability of e-library in the institution of study, thus helping to reduce the burden of learning on the medical student. This was different from what was obtainable a decade ago.

Majority of our respondents who were found to be depressed were female and there were more students found to be depressed in the lower classes (basic medical sciences), though these factors were not statistically significant.

However, in our study, most of those found to be depressed fell into the age bracket of 25 to 29 years with a lower level of depression among the very young (15 -19 years) and those greater than 30years. In our study, there was no established relationship between depression and other factors like having mother alive respondents living alone, if respondents were living on or off campus, if they were coerced into studying medicine and if they had lost any close friends or relatives in the last two years.

Academic performance is influenced by mental health, financial background and age. In this study, it was observed that 78 (25.6%) of the respondents admitted that their academic performance has dwindled, while admitted that their performance is not a reflection of efforts put in to academic study. A total of 193 (69.4%) respondents reported being under constant pressure to perform better. A total of 16 respondents met the criteria for depression. Previous studies found that depression was a form of mental health problem, which interferes with daily life functioning and causes emotional pain to the affected individual as well as the people around him [16,17]. University medical students face many problems such as prolonged separation from their families, entrance into a new environment, academic pressures occasion by programme policies like withdrawal after certain number of examination attempts and period of stay, and adaption to educational standards [16,17]. These cumulatively predispose them to having psychological problems particularly depression and anxiety [16,17].

Conclusion

Depression remains a major cause of morbidity and reduced productivity the world over. It is closely associated with anxiety and stressful conditions. Depression was found to correlate positively with reduced academic performance. Efforts should be put in place to reduce stress, anxiety and depression and encourage healthy living among our future doctors.

Recommendations

- It is needful for the school authorities, student bodies, religious associations and families to be aware of the risks of depression and continually reach out to, and provide loving support and encouragement for those living with depression.
- The student-advisor-mentorship structure should be improved upon so that students may be able to relate their academic challenges to their mentors, who in turn can offer solutions to them.
- Students should be encouraged to pursue extracurricular activities of interest to help ease off the stress of medical training.



References

1. [CMHC UT Counselling and Mental Health Centre, Division of Student Affairs: Depression. University of Texas, Austin; 2015.](#)
2. Oxford Advanced Learners Dictionary. 7th Ed (2005) Oxford University Press, USA.
3. Ahuja N., Ahuja S. A short textbook of psychiatry. 7th Ed (2011) Jaypee Brothers Medical Publishers New Delhi, India.
4. [World Health Organisation. Media centre: Depression 2012.](#)
5. Marcus M, Yasamy M, van Ommeren M, Chisholm D, Saxena S. Depression - A Global Public Health Concern (2012) WHO Department of Mental Health and Substance Abuse 6-8.
6. Ferrari AJ, Charlson FJ, Norman RE, Patten SB, Freedman G. Burden of Depressive Disorders by Country, Sex, Age, and Year: Findings from the Global Burden of Disease Study (2010) PLoS Med 10: e1001547. doi: 10.1371/journal.pmed.1001547
7. [World Health Organisation. Mental Health; Suicide Data 2012.](#)
8. [American Foundation for Suicide Prevention. Physician and Medical Student Depression and Suicide Prevention. 2016.](#)
9. Sherina MS, Rampal I, Kaneson N. Psychological stress among undergraduate medical students (2004) Med J Malaysia 59: 207-211.
10. Aniebue PN, Onyema GO. Prevalence of depressive symptoms among Nigerian medical undergraduates (2008) Trop Doct 38: 157-158.
11. Adewuya A O, Ola B A, Aloba O. Depression amongst Nigerian University Students; Prevalence and sociodemographic correlates. Soc Psychiat Epidemiol 41: 674. doi: 10.1007/s00127-006-0068-9.
12. [Depression \(major depressive disorder\).](#)
13. [World Health Organisation. Health topics: Depression 2016.](#)
14. Sidana S, Kishore J, Ghosh V, *et al.* Prevalence of depression in students of a medical college in New Delhi: A cross-sectional study (2012) AMJ 5: 247 -250. <http://dx.doi.org/10.4066/AMJ.2012.750>
15. Zoccolillo M, Murphy GE, Wetzel RD. Depression among medical students. J Affect Disord. 1986; 11: 91-96.
16. Fawzy M, Hamed SA. Prevalence of psychological stress, depression and anxiety among medical students in Egypt (2017) Psychiatry Res 255:186-94.
17. Mahroon ZA, Borgan SM, Kamel C, Maddison W, Royston M, Donnellan C. Factors associated with depression and anxiety symptoms among medical students in Bahrain (2018) Acad Psychiatry 42: 31-40.