

Knowledge and socio-demographic factors associated with depression among students on clinical rotation in a private university in Ekiti state, Nigeria

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ABSTRACT

INTRODUCTION: Depression is among the most common mental and public health problems globally. Depression is generally common among university students and is especially high among undergraduates on clinical postings. Clinical students are exposed to varying kinds of stressors ensuing from difficulties integrating into the hospital system and implicated in causing academic failure, disability, and poor quality of life. This study aimed to assess the knowledge and the socio-demographic factors associated with depression among clinical undergraduates in a private university.

METHODS: This was a cross-sectional study conducted among 242 students of the College of Medicine and Health Sciences of a private university who were undergoing their clinical rotations. Data was collected on the socio-demographic variable and knowledge of depression. The proportion of students with depression was determined with the 20-item Zung self-rating depression scale.

RESULTS: Less than half (43.0%) of the respondents had good knowledge of depression, with the majority using social media (82.6%) and one-third of Journals/textbooks (34.3%) as sources of information. The identified predictors of depression were being female (AOR:2.624; 95%CI:1.006-7.600) and having poor knowledge of depression (AOR:2.806; 95%CI:1.121-3.975).

CONCLUSION: This study revealed that less than half of the students had good knowledge of depression. Poor knowledge and female gender were identified as positive predictors of depression. Therefore, more effort should also be taken by the school authority to educate these students on depression.

Keywords: Clinical students, Depression, Knowledge, Socio-demographic, University

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INTRODUCTION

Depression is among the most common mental and public health problems and a major contributor to the overall global burden of diseases [1]. People who have gone through adverse life events such as unemployment and bereavement are more likely to develop depression, and depression can, in turn, lead to more stress and dysfunction, worsen the affected person's life situation, and further exacerbate their depressive condition [2]. It is characterized by the presence of either a depressed mood or loss of interest in pleasurable activities and four or more other symptoms such as weight loss when not dieting, or weight gain, sleeplessness or excessive sleepiness, psychomotor agitation or retardation, loss of energy, feelings of worthlessness or guilt, reduced ability to concentrate, and dreadful reoccurring thoughts of death or suicide for a period of 14 days [2]. Globally, it is estimated that 3.8% of the world population is affected by depression [3]. Depression is generally common among university students and is especially high among undergraduates on clinical postings [4-6]. Clinical students are exposed to varying kinds of stressors ensuing from difficulties integrating into the hospital system, demanding clinical posting workloads, academic pressure, financial worry, concerns about their own health, exposure to patients' suffering, substance abuse, withdrawal symptoms, and maltreatment as well as other factors such as moving away from their family home, residing with other students, reduced adult supervision, among others which exert negatively on their physical and psychological well-being [4,5].

Furthermore, depression among clinical students has been implicated in causing academic failure, disability, and poor quality of life [6]. At its worst, depression can lead to suicide, which is the fourth leading cause of death among young people, claiming almost a million lives annually [1]. According to a systematic review, the prevalence of depression among clinical students ranged between 9.3%-55.9%, with that of suicidal ideation between 7.4%-24.2% [7]. Social status has been reported to be inversely related to the prevalence of depression, as studies have reported that those in lower socioeconomic classes were more likely to be depressed [8]. Complex interactions between multiple social, demographic, and behavioral factors have been significantly associated with

most of the studied psychological morbidities, including gender, residence, feelings of loneliness, the inability to share families in social activities, and the presence of insomnia [9].

The recent ugly trend of increasing rates of suicide in different parts of the country, especially among undergraduates, strongly supports exposure to extreme mental distress [10,11]. There are known effective treatments for depression, which include psychological treatments, the use of antidepressant medication, and school-based programs to enhance patterns of positive coping among students [1]. However, more than three-quarters of the people in low-and middle-income countries receive no treatment [12]. Depression in undergraduate students represents a neglected public health problem with several barriers to effective care, which include a lack of material and trained manpower resources, as well as the social stigma associated with it [1].

Considering the risks and consequences of this disease on clinical students and the notable increase in the number of medical, nursing and health sciences schools in sub-Saharan Africa, there is a need to understand the knowledge and the socio-demographic factors associated with depression as well as the effect of depression on educational attainment and prospective occupational success of these students. This will not only help policymakers in developing intervention programs for depression among health professionals in training but would also create supportive environments for clinical students who may be having mental health difficulties during their training. It is important to study depression among this group of people because most lifetime depressive disorders have their first onset during this typical university age [13]. Additionally, a dearth of studies assessed the knowledge and socio-demographic factors associated with depression among clinical students in Nigerian universities, hence this study.

METHODS

This cross-sectional study was conducted at Afe Babalola University, Ado-Ekiti, Ekiti State, Nigeria (ABUAD). ABUAD is a private University with 6 colleges, including the College of Medicine and Health Sciences. This college is made up of Departments of Nursing Science, Medical Laboratory Science, Medicine and Surgery,

Anatomy, Physiology, Pharmacy, Pharmacology, Optometry, Dentistry, and Public Health. Training of students in the Departments of Nursing, Medical Laboratory Science, as well as Medicine and Surgery, is in two stages- the preclinical stage, which takes place on campus in Ado-Ekiti, and the Clinical Stage, which takes place at the ABUAD Multisystem Hospital and the Federal Teaching Hospital, Ido-Ekiti.

ABUAD Multisystem Hospital is a well-equipped health facility and serves as one of the teaching hospitals for the training of ABUAD medical (400 level class), nursing (300 level class), and medical laboratory science (300 level class) students. It is the only private tertiary hospital in Ekiti State, taking referrals from other peripheral health institutions. Federal Teaching Hospital, Ido-Ekiti (FETHI), on the other hand, serves as the apex federal government health facility in Ekiti State. The hospital trains final and penultimate year students from ABUAD in addition to students from the School of Nursing and Midwifery, Ido-Ekiti, and College of Health Technology, Ijero. Hostel accommodation is available for these students in both hospitals. However, the students were not under strict regulation to take leave and could freely go in and out of the hospitals, unlike their counterparts in preclinical years on campus.

This study included all ABUAD students in clinical rotations in the College of Medicine and Health Sciences, irrespective of age and sex, who have been on clinical rotation for at least 6 months. A sample size of 242 students was arrived at after using Leslie Fisher's formula for cross-sectional study, proportion of depression from a previous study [14], standard normal deviation of 1.96 at 95% confidence level, precision of 0.05, and 10% adjustment for non-response.

All departments and levels in clinical rotations were selected for the study. The questionnaires were then proportionately allocated to each. The respondents were selected randomly from their list through the use of a table of random numbers. A self-administered semi-structured questionnaire was used to collect data from the selected students. Data was collected on the socio-demographic characteristics (age, sex, religion, ethnicity, relationship status) and knowledge of depression (cause, risk factor, treatment options, among others). The proportion of students with depression was determined with the 20-item Zung self-rating depression scale [15]. The survey

questionnaire was pre-tested on 25 (10%) clinical students from a nearby university with characteristics like those of the survey population. The questionnaires were checked for errors and completeness. Filled questionnaires were then sorted and coded. Data was analyzed using SPSS (statistical package for the social sciences) statistics version 25.0. The data was represented in proportions in frequency tables and cross-tabulation tables. The 20 items of the Zung Self-Rating Depression Scale were rated on a 4-point scale (1 to 4). A score less than 50 is normal while scores of 50 and above qualify for a different range of depression. The Chi-square test and binary logistic regression were used to determine association at bivariate and multivariate levels of analysis. The level of significance was set at a p-value of less than 0.05.

Ethical approval for the study was obtained from the Health Research and Ethics Review Committee of the Federal Teaching Hospital Ido Ekiti. Consent for the interview was obtained from all respondents. Permission was also obtained from the university.

RESULTS

The respondents' age range was 17- 27 years, with the majority (87.2%) above 20 years of age. The male-to-female ratio was 1:3.7. The majority were Christians (78.9%) and not dating (74.8%). In Table 1, all the respondents have heard/read about depression. The majority of respondents consider depression a health problem (94.2%), agreed that patients with depression can break down at any time (97.1%), are dangerous to themselves and to others (81.0%), can lead to suicide and suicide attempts (99.2%), and that depression can be treated with pharmacological methods and psychotherapy (90.9%). In terms of drugs, 47.5%, 33.5%, 26.9%, and 7.9% of the respondents agreed that amitriptyline, fluoxetine, carbamazepine, and methotrexate are antidepressants. A minority agreed that depression affects people of a particular age group (7.9%), depression is caused by witchcraft, charms or evil spirits (3.7%), depression is best managed by traditional doctors/healers (2.5%), and that depression responds better to traditional remedies than orthodox treatments most of the time (0.4%). Only 6.2% of the respondents knew of tools used to classify depression.

Table 1: Knowledge of respondents about depression

Variable	Yes n (%)	No n (%)	Don't know n (%)
Ever heard/read of depression	242 (100.0)	0 (0.0)	-
Do you consider depression as a health problem	228 (94.2)	7 (2.9)	7 (2.9)
Depression affects people of a particular age group	19 (7.9)	216 (89.2)	7 (2.9)
Depression is caused by witchcraft, charms or evil spirit	9 (3.7)	219 (90.5)	14 (5.8)
Patients with depression can break down at any time	235 (97.1)	3 (1.2)	4 (1.7)
Patients with depression are dangerous to themselves and others	196 (81.0)	35 (4.5)	11 (4.5)
Depression can lead to suicide and suicide attempts	240 (99.2)	1 (0.4)	1 (0.4)
Depression can be treated with pharmacological methods and psychotherapy	220 (90.9)	7 (2.9)	15 (6.2)
Depression is best managed by traditional doctors/healers	6 (2.5)	204 (84.3)	32 (13.2)
Depression responds better to traditional remedies than orthodox treatment most of the time	1 (0.4)	188 (77.7)	53 (21.9)
Amitriptyline is an anti-depressant drug	115 (47.5)	21 (8.7)	106 (43.8)
Methotrexate is an anti-depressant drug	19 (7.9)	112 (46.3)	111 (45.9)
Fluoxetine is an anti-depressant drug	81 (33.5)	31 (12.8)	130 (53.7)
Carbamazepine is an anti-depressant drug	65 (26.9)	71 (29.3)	106 (43.8)
Do you know of a tool used to classify depressed patients	15 (6.2)	227 (93.8)	-

Table 2 shows that less than half (43.0%) of the respondents had good knowledge about depression, while 57.0% had poor knowledge, with a mean (\pm SD) knowledge score of 66.1 ± 12.1 . Figure 1 (multiple responses applied) reveals respondents' sources of information on depression. Social media (82.6%) was the source of information on depression for most of the respondents, while radio (11.2%) was the source of information for a minority of them. Other sources of information included friends (57.4%), television (45.9%), journals/textbooks (34.3%),

family (20.7%), newspapers (18.6%), and others (17.4%). The proportion of respondents with depression in this study was 28.1%, while 71.9% had no depression.

In Table 3, there is a statistically significant association between depression and gender ($P=0.003$), with higher proportions of depression among female respondents (32.6%) compared to males (11.5%). Knowledge of depression has a significant statistical association ($P=0.037$) with depression in the respondent. A higher proportion of respondents with poor knowledge

Table 2: Assessment of respondents' knowledge about depression

Variable	Frequency N = 242	Percentage (%)
Knowledge		
Good ($\geq 70\%$)	104	43.0
Poor ($< 70\%$)	138	57.0
- Mean knowledge score \pm SD (%)	66.1 ± 12.1	
- Range (%)	35.7 – 92.9	

SD: Standard deviation

Table 3: Relationships between Knowledge, Socio-demographic characteristics and Depression among respondents

Variable	Depression		Chi-square	p-value
	Yes n (%)	No n (%)		
Age group (in years)			0.304	0.581
≤ 19	10 (32.3)	21 (67.7)		
20 and above	58 (27.5)	153 (72.5)		
Gender			8.991	0.003
Male	6 (11.5)	46 (88.5)		
Female	62 (32.6)	128 (67.4)		
Religion			0.362	0.834
Christianity	53 (27.7)	138 (72.3)		
Islam	12 (27.9)	31 (72.1)		
Others	3 (37.5)	5 (62.5)		
Ethnicity			5.703	0.127
Yoruba	35 (29.4)	84 (70.6)		
Igbo	12 (26.1)	34 (73.9)		
Hausa	5 (62.5)	3 (37.5)		
Others	16 (23.2)	53 (76.8)		
Relationship Status			1.070	0.301
Single	54 (29.8)	127 (70.2)		
In a relationship	14 (23.0)	47 (77.0)		
Knowledge			4.354	0.037
Good (≥ 70%)	22 (21.2)	82 (78.8)		
Poor (< 69%)	46 (33.3)	92 (66.7)		

(33.3%) were depressed compared to those with good knowledge (21.2%). However, there was no statistically significant association between depression and age ($p=0.581$), religion ($p=0.834$), ethnicity ($p=0.127$) or relationship status ($p=0.301$).

Results of binary logistic regression in Table 4 show that respondents who are female are about two and a half times (AOR: 2.624; 95% CI: 1.006-7.600) more likely to be depressed compared to those who are male. Likewise, respondents with

Table 4: Binary logistic regression for the predictors of depression among respondents

Variable	AOR	95% CI for AOR		p-value
		LB	UB	
Gender				
- Male	1.000			
- Female	2.624	1.006	7.600	0.047
Knowledge				
- Good (≥ 70%)	1.000			
- Poor (< 69%)	2.806	1.121	3.975	0.041

AOR: Adjusted odds ratio; CI: Confidence interval; LB: Lower border; UB: Upper border

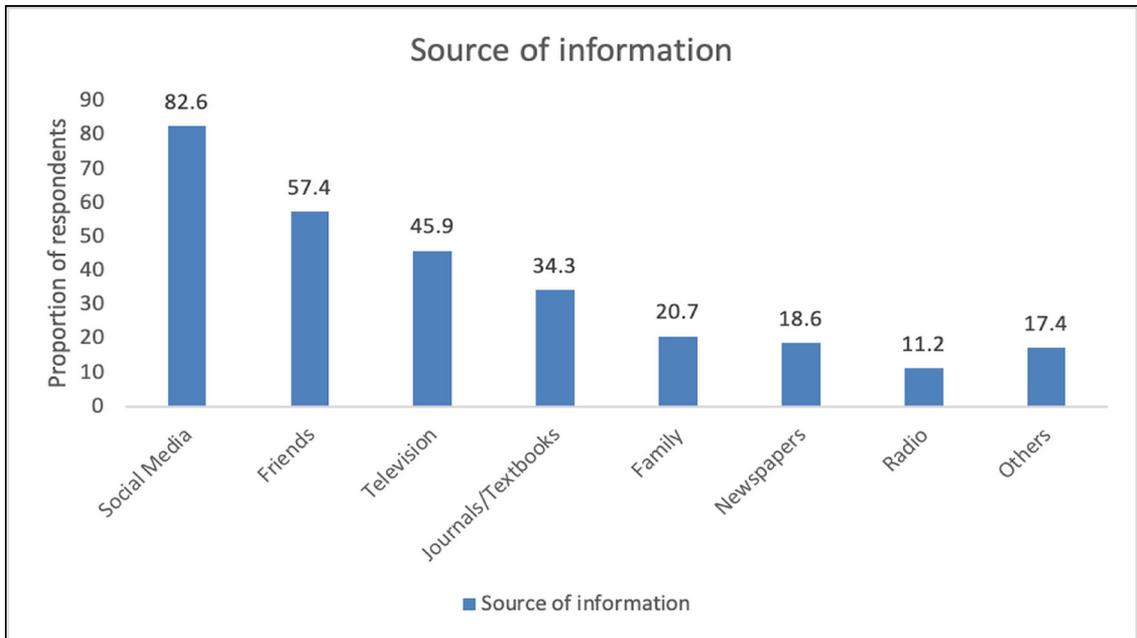


Figure 1: Respondents' source(s) of information on depression

poor knowledge of depression are about 3 times (AOR: 2.806; 95% CI: 1.121-3.975) more likely to be depressed than those with good knowledge of depression.

DISCUSSION

The knowledge of depression assessed in this study included beliefs, risk factors, causes, and treatment options. Less than half of this study's participants (43%) had good knowledge of depression. This is low compared to a study conducted among medical students at the University of Port Harcourt, Nigeria, where the majority of the respondents were found to have a good knowledge of depression [16]. Similarly, another study conducted in South Korea showed that medical students had good knowledge about the etiology of depression and psychiatric medicine [17]. These differences may be due to a prior exposure of the students in the University of Port Harcourt and South Korea to the subject of depression and the use of psychiatric services.

The majority of the respondents in this study (94.2%) considered depression as a health problem, while a few respondents (19%) believed that depression affects people of a particular age group. This agrees with a study done in Cameroon among primary healthcare workers in which

92.9% and 26.5% of respondents considered depression as a health problem and believed that depression affects people of a particular age group, respectively [18]. Also, this study revealed that the majority of respondents were against the opinion that depression is caused by witchcraft, charm or evil spirits. This is similar to the findings in a study done among health providers in India, where most did not believe that clinical depression results from punishment from God and is caused by evil spirits [19]. Furthermore, the majority agreed that patients with depression can break down at any time, are dangerous to themselves as well as others, and can lead to suicide and suicide attempts. These results are comparable to the outcome of the study done in China [20]. The knowledge of antidepressants assessed in our study showed that respondents were not very familiar with antidepressants. Another study among non-medical students in Malaysian universities revealed that only about one-third of the respondents mentioned the use of antidepressants as their first drug of choice while evaluating their knowledge of medications for treating depression [21].

The low level of knowledge in this study may be attributed to the fact that social media and friends were the major sources of information on depression among the students. Information and content on social media may sometimes be

based on the beliefs and personal opinions of the bloggers and not necessarily on scientific facts. Journals, textbooks, and other literature where credible scientific information may be obtained were not patronized by many of the students. It is important to encourage these students to read scientific journals and textbooks as well as create spaces on social media where credible scientific information could be shared.

This study also showed a significant association between depression and gender. A higher ratio among female students than males was shown. This is supported by other studies, including those conducted by Dahlin et al. [22] and Waffa et al. [23]. Sarah et al., however, noted a male predominance in their study [24]. The reason for the female preponderance of depression in the adolescent age group has been attributed to differences in coping styles and hormonal changes in puberty [25].

It was also revealed that knowledge of depression was a predictor of depression among the students. Those with poor knowledge of depression were about 3 times more likely to be depressed than those with good knowledge of depression. This is against the findings in a study that assessed mental health literacy among non-medical students at a Malaysian university, where those with personal experience of depression were found to have significantly better knowledge [21]. Part of the explanation could be that this present study excluded the knowledge of symptoms of depression, which was tested for in the Malaysian study using the nine items of depression adapted from the Diagnostic Statistical Manual (DSM IV), as their personal experience of depression could have been over-diagnosed as knowledge of symptoms does not translate to diagnosis especially as the respondents in that study were non-medical students who are not proficient in clinical diagnosis, coupled with the fact that our study used a separate rating scale to assess the diagnosis of depression in respondents. Additionally, the use of 70% as a benchmark to differentiate between poor and good levels of knowledge in our study might be responsible for the high proportion of respondents with poor knowledge.

This study being cross-sectional may make it difficult to propose causal associations among variables. This study was carried out in a single private university with its own uniqueness and peculiarities; therefore, the cause must be taken in

generalizing the study's results.

Conclusion

This study showed that less than half of the clinical students had good knowledge of depression, with social media and friends being the commonest sources of information. Identified positive predictors of depression were female gender and poor knowledge of the disease. We, therefore, recommend that stakeholders should create special corners and blogs on social media where scientifically correct information and facts on depression could be shared. More effort should also be taken by the school to educate these students on depression.

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