

East African Medical Journal Vol. 98 No. 6 June 2021

PREVALENCE AND DETERMINANTS OF DEPRESSION AMONG ACADEMIC STAFF IN A TERTIARY EDUCATIONAL INSTITUTION IN SOUTHERN NIGERIA

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ABSTRACT

Objective: This study assessed depression and its determinants among academic staffs in a tertiary education institution in Nigeria, to help improve their mental health status, academic wellbeing and work performance.

Design and setting: A descriptive cross-sectional study was conducted involving 330 academic staff of the University of Benin, Benin City, Edo State, using multistage sampling technique.

Intervention and outcome measures: Data was collected using self-administered structured questionnaire adapted from Depression Literacy Questionnaire, Mental Health Knowledge Schedule, Depression Stigma Scale and Zung Self-Rating Depression Scale. Depressed respondents were categorized as mild, moderate and severe. IBM SPSS version 22.0 statistical software was used for analysis with statistical significance set at $p < 0.050$ and 95% confidence interval.

Results: Two hundred and forty-five (74.2%) and 86 (26.1%) academic staff studied had good knowledge of depression and were depressed respectively. Among those depressed 32 (37.2%), 37 (43.0%) and 17 (19.8%) had mild depression, moderate depression and severe depression respectively. The risk for depression among study population was significantly higher in Nuclear than extended family type (OR=3.848; 95% CI = 1.216 – 12.179, $p = 0.022$); Junior than senior staff category (OR=3.066; 95% CI = 1.441 – 6.620, $p = 0.004$) and among respondents with good compared to poor knowledge of depression (OR=0.463; 95% CI = 0.259 – 0.827, $p = 0.009$).

Conclusion: A quarter of respondents studied were depressed with mild and moderate depression constituting majority of cases. Periodic mental health assessment is strongly recommended for academic staff to improve mental health and academic wellbeing.

INTRODUCTION

Globally, more than 300 million people are now living with depression, an increase of over 18% between 2005 and 2015.¹ The current estimated prevalence of depression according to World Health Organization is 4.4%.² It is projected to increase by 5.7% in the year 2020 if the current trends for demographic and epidemiological transition continue, making depression the second leading cause of Disability-Adjusted Life Years (DALYs), after ischemic heart disease.³

Depression is the 8th leading cause of DALYs⁴ in low-income countries and projected globally to increase by 66% in 2030, constituting a greater burden of disease than maternal, communicable, nutritional and perinatal conditions in these countries including Nigeria⁵⁻⁹.

Factors reported to be associated with depression include female gender, being a widow, divorced or separated, urban dwelling, and low level of education.¹ Other implicated factors include increasing age, poverty, and weak family support systems.¹ Lack of support for people with mental disorder, coupled with fear of stigma prevent many from accessing the treatment they need to live healthy, productive lives.¹ Even in high-income countries, nearly 50% of people with depression do not get treatment.¹ On the average, just 3% of government health budgets is invested in mental health, varying from less than 1% in low income countries to 5% in high income countries.¹

Depression contributes significantly to the global burden of diseases in developing countries.¹⁰ However, public knowledge about mental disorders (mental health literacy) in developing countries is considerably low.¹¹ People tend to have strong negative belief about mental illness, and many of these

concepts are based on prevailing local systems of belief.¹²⁻¹³

Nigeria's mental health policy¹⁴ was first formulated in 1991 and includes the following components: advocacy, promotion, prevention, treatment and rehabilitation of the mentally ill, but the level of implementation remains a challenge. This policy addressed integration of mental health into general health care services at all levels of health care, comprehensive coverage, appropriate training of mental health care personnel, intersectoral collaboration and promoting positive attitude towards those with mental illness.¹⁴ The policy also addressed the availability of essential drugs like antipsychotics, anxiolytics, antidepressants, mood stabilizers etc.¹⁴ Recently, a bill for the establishment of Mental Health Act was introduced to the National Assembly on March 20th, 2013. As part of the nation's health policy, mental health has been integrated as a component of primary health care delivery in Nigeria. Depression has been reported to be more prevalent in urban regions compared to rural areas.¹⁴ For all individuals, mental, physical and social health are vital elements of life that are closely interwoven and deeply interdependent.¹⁵

In many African countries, mental health is widely underfunded without separate budget for mental health.¹⁶ Poor case detection and inadequate numbers of mental health staff have been associated with increased morbidity among individuals with depression presenting to primary care.¹¹⁻¹⁷ However, a sizeable proportion of individuals who suffer from depression are unable to access care as services are poorly organized; with a dearth of mental health professionals and poor funding for adequate training of primary health care workers in the detection and management of the disorder prevalent.¹⁷ Furthermore, mental health service is grossly under-resourced in

Nigeria and most of the available services are located in a few urban areas, provided by non-specialist.¹⁸

Elements in the work environment have been noted to impact on the mental health. Stressors in the workplace also contribute to depressive symptoms inducing physical and social limitations than other chronic illnesses.¹⁹

This study assessed depression and its determinants among academic staffs in a tertiary education system in Nigeria, to help improve their mental health status, academic wellbeing and work performance

MATERIAL AND METHODS

An institutional based cross-sectional study was conducted involving 330 academic staff of the University of Benin, Benin City, Edo State, Nigeria. Minimum sample size²⁰ was calculated based on 14.9% prevalence of depression from a previous study.¹⁹ The University of Benin was established in 1970 and has two campuses; the Ugbowo Campus and the Ekenwan Campus. The campuses comprise 15 faculties, 14 of them are located at the Ugbowo Campus while 1 faculty at the Ekenwan Campus. The university has academic and non-academic staff with an estimated 75,000 student population comprising of both full-time and part-time.²¹ The study was carried out from April 2017 to April 2018. Multistage random sampling was used to select study participants by campus, faculty and departments respectively based on proportional allocation to the calculated minimum sample size for study.

Self-administered structured questionnaires containing open and close ended questions in line with study objectives was used for data collection. Data collected was sorted for completeness, collated and analyzed using IBM SPSS Version 22.0. Univariate analysis

was done to assess the distribution of variables, bivariate and multivariate analysis were conducted to identify significant predictors of outcomes of prevalence of depression with statistical significance set at $p < 0.050$ and at 95% CI.

Questions on knowledge of depression comprised of four parts, adapted from the Depression Literacy Questionnaire (D-Lit)²² and the Mental Health Knowledge Schedule (MAKS).²³ The first part comprised a question on definition of depression, the second part contained five questions dealing with knowledge of features commonly seen in people with depression, the third part contained six questions on causes of depression while the fourth part contained five questions on methods for the treatment of depression. Each correct answer was given a score of '1' while '0' for wrong every answer, with a maximum score of 17 for knowledge. The scores were computed into percentages and individuals scoring 50 and above were said to have good knowledge while those below 50 as having poor knowledge. The questions used were internally consistent with a Cronbach's alpha value of 0.680.

Prevalence of depression was assessed using the Zung Self-Rating Depression Scale.²⁴ The Zung Self-Rating Depression Scale is a 20-item self-report questionnaire that is widely used as a screening tool; covering affective, psychological and somatic symptoms associated with depression. It can be effectively used in a variety of settings, including primary care, psychiatric, drug trials and various research situations. The Zung Self-Rating Depression Scale was scored using Likert scale. Each item was scored on a Likert scale ranging from 1 to 4. The total score was derived by summing the individual item scores and ranged from 20 to 80. The scores were computed into percentages and

individuals scoring 50 and above were said to have depression while those below 50 as not having depression.

The questionnaires were pretested at Benson Idahosa University, Benin City, Edo State. Ethical clearance and approval were sought from the Ethical Committee of the University of Benin Teaching Hospital, before commencement of the Study. Informed

consent was gotten from the respondents, who were assured of confidentiality. The respondents were informed of their right to withdraw from the interview at any time and such withdrawal posed no loss or harm to them Health education was carried out on an individual basis after questionnaire administration.

RESULTS

Table 1

Socio-demographic characteristics of academic staff

Variable	Frequency (%) n = 330
Age (years)	
21-30	42 (12.7)
31-40	114 (34.5)
41-50	92 (27.9)
51-60	67 (20.3)
61-70	15 (4.5)
Mean age (S.D)	42.9 (10.0)
Sex	
Male	193 (58.5)
Female	137 (41.5)
Ethnicity	
Benin	150 (45.5)
Esan	61 (18.5)
Ibo	41 (12.4)
Yoruba	38 (11.5)
Estako	19 (5.8)
Urhobo	8 (2.4)
Hausa	4 (1.2)
Others*	9 (2.7)
Religion	
Christian	303 (91.8)
Islam	16 (4.8)
African Traditional Religion	11 (3.3)
Marital status	
Never married	52 (15.8)
Ever married	278 (84.2)
Family type	
Nuclear	297 (90.0)

Extended	33 (10.0)
Family structure	
Monogamous	295 (89.4)
Polygamous	35 (10.6)
Household size	
≤6	257 (77.9)
>6	73 (22.1)
Level of education	
Tertiary complete	32 (9.7)
Post graduate (masters)	116 (35.2)
Post graduate (Ph.D)	182 (55.2)
Faculty	
Medical sciences**	42 (12.7)
Non-medical Sciences***	288 (87.3)
Category of academic staff	
Junior staff****	230 (69.7)
Senior staff*****	100 (30.3)

*Others- Ijaw 2 (0.6%), Ibibio 5 (1.5%), Efik 1 (0.3%), Isoko 1 (0.3%). **Medical sciences- Basic medical sciences 25 (7.6%) and Pharmacy 17 (5.2%). ***Non-medical sciences- Agricultural science 25 (7.6%), Engineering 50 (15.2%), Education 36 (10.9%), Law 15 (4.5%), Life science 55 (16.7%), Physical science 37 (11.2%), Management science 35 (10.6%), Social science 35 (10.6%). ****Junior staff- graduate assistant 45 (13.6%), assistant lecturer 60 (18.2%), lecturer 2 66 (20.0%), lecturer 1 59 (17.9%). *****Senior staff- Senior lecturer 36 (10.9%), Associate professor 25 (7.6%), Professor 39 (11.4%).

Three hundred and thirty academic staff of the University of Benin participated in the study. The mean (SD) age of respondents studied was 42.9(10.0) years. All other socio-demographic characteristics of respondents studied are shown in Table 1 above.

All respondents studied had heard of the term depression, health care workers 180 (54.5%), electronic media 116 (35.2%) followed by internet 107 (34.4%) and friends 94 (28.5%) were the main source of information.

Table 2
Knowledge of depression among academic staff

Variable	Frequency (%) n = 330	
	Correct (%)	Incorrect (%)
Definition	265 (80.3)	65 (19.7)
Features of depression		
Speak in rambling and disjointed ways	129 (39.1)	201 (60.9)
More tired than usual	258 (78.2)	72 (21.8)
Irritable	252 (76.4)	78 (23.6)
Difficulty making decisions	255 (77.3)	75 (22.7)
Hear voices	92 (27.9)	238 (72.1)

Causes of depression		
Alcohol and drug misuse	243 (73.6)	87 (26.4)
Evil spirit	143 (43.3)	187 (56.7)
Stress	270 (81.8)	60 (18.2)
Genetic inheritance	167 (50.6)	163 (49.4)
Curse	136 (46.4)	177 (53.6)
Brain disease	244 (73.9)	86 (26.1)
Treatment of depression		
Hospitalization	141 (42.7)	189 (57.3)
No antidepressants when they feel better	99 (30.0)	231 (70.0)
Traditional medicine	133 (40.3)	197 (59.7)
Counseling	290 (89.9)	40 (12.1)
Social support	286 (86.7)	44 (13.3)

In relation to the thematic areas from which knowledge of depression was assessed (See table 2 above). Two hundred and forty-five (74.2%) respondents studied had good knowledge of depression while 85 (25.8%) respondents had poor knowledge

In relation to prevalence and severity of depression among respondents 244 (73.9%) were not depressed while 86 (26.1%) were depressed. Out those depressed 32 (37.2%), 37 (43.0%) and 17 (19.8%) of them had mild, moderate and severe depression respectively.

Table 3

Logistic regression model for determinants of prevalence of depression among academic staff

Predictors	B (regression co-efficient)	odds ratio	95% CI for OR		p-value
			Lower	Upper	
Age					
21-30	0.445	1.560	0.253	9.627	0.632
31-40	-0.246	0.782	0.135	4.511	0.783
41-50	0.156	1.168	0.208	6.568	0.860
51-60	1.093	2.982	0.535	16.622	0.213
61-70		1			
Sex					
Male	-0.152	0.859	0.499	1.480	0.585
Female		1			
Marital status					
Ever married	0.061	1.063	0.439	2.576	0.892
Never Married		1			
Family type					
Nuclear	1.348	3.848	1.216	12.179	0.022*
Extended		1			
Family structure					
Monogamous	-0.533	0.587	0.142	2.431	0.462
Polygamous		1			

Household size					
≤6	-0.100	0.905	0.441	1.857	0.786
>6		1			
Level of education					
Above tertiary	0.693	1.999	0.735	5.438	0.175
Tertiary		1			
Faculty					
Medical sciences	0.003	1.003	0.402	2.502	0.995
Non-medical sciences		1			
Category of staff					
Junior	1.120	3.066	1.441	6.520	0.004*
Senior		1			
Knowledge of depression					
Good knowledge	-0.771	0.463	0.259	0.827	0.009*
Poor knowledge		1			

$R^2 = 13.0\% - 19.1\%$, $CI = \text{Confidence interval}$, $OR = \text{Odds Ratio}$ *Statistically significant ($p < 0.050$).

In relation to determinants of depression among respondents studied (See Table 3) the following were identified as significant determinants of depression; nuclear family type ($OR = 3.848$, $95\% CI = 1.216 - 12.179$, $p = 0.022$) were 3.848 times more likely to be depressed compared with extended family type, respondents in junior staff category ($OR = 3.066$, $95\% CI = 1.441 - 6.620$, $p = 0.004$) were 3.066 times more likely to be depressed compared with senior staff category. Finally, respondents with good knowledge ($OR = 0.463$, $95\% CI = 0.259 - 0.827$, $p = 0.009$) were 0.463 times less likely to be depressed compared to respondents with poor knowledge of depression

DISCUSSION

About one-third of respondents studied were aged 31-40 years with mean age (S.D) of 42.9 (10.0) and over half were males. This is in contrast with an Ethiopian study²⁵ where more than half of the respondents were female, aged between 25-34 years with a mean age of 29.7.

About half of the respondents were Benin, this is in keeping with the socio-demographics of the study location²⁶

The prevalent family type and structure was nuclear family and monogamy, as the practice of Christianity was prevalent in the study area, this finding similar to an Ethiopia²⁵. Majority of the respondents were married; this is in contrast to the Ethiopia²⁵ study where less than half of the respondents were married. This could be due to the relatively older population studied, who may be psychologically and physically matured to cope with the financial requirement to raise a family. The household size of respondents was less than or equal to 6, this is in keeping with the demographic data of household size for Nigeria. More than half of the respondents had postgraduate (PhD) degree, in contrast with the Ethiopia²⁵ study where less than one-tenth of the respondents post graduate degree. This is in keeping with the average age of the study population which further reflects their higher academic exposure and qualification, this was reflective in their high level of knowledge of depression.

The results of this study showed that majority of academic staff of the University had good knowledge of depression in relation to its features, common causes and methods of treatment. Respondents aged 51-60 years were more knowledgeable while females were more knowledgeable than males, although this was not statistically significant., this finding was similar to that from a Kenya study²⁶. Respondents from medical sciences were not significantly more knowledgeable than other respondents studied in contrast to findings from an Indian study²⁷.

The good knowledge base about depression observed in this study may be related to the educational level of respondents as majority of them already had postgraduate level of education. Good knowledge of depression will support informed decision-making process and choices such as seeking medical care and providing advice to depressed persons to seek proper and adequate medical attention.

One-fourth of study respondents were depressed, with majority having mild to moderate depression with more females than males affected, this finding is similar to the Ethiopia²⁵ Study. Respondents from extended families were significantly less depressed compared to those from nuclear families, this could be due to the strong social support structure and care that extended family system can provide in addressing health and other socio-cultural challenges in families and community at large. Respondents with household size of greater than 6 were found to be more depressed, although finding was not statistically significant, this could be linked to the possible financial and non-financial stress factors associated with large family size. This finding is similar to a Tehran²⁹ study where increase in household size was found to be associated with increase prevalence of depression. Furthermore, junior academic staff

were significantly more depressed compared to senior staff, this could be due to the possibility that they are more likely to have a larger workload due to the additional task from their senior colleagues, and are expected to carry out such additional workload without complaint or excuse due to mentor and mentee expectations. More than one-third of respondents with poor knowledge were statistically more depressed compared to those with good knowledge. Knowledge is power and as such respondents with more knowledge are better positioned to search for and obtain information concerning their health and wellbeing than others. This is similar to an Enugu study¹⁹ Nigeria and a China³⁰ study but in contrast to another study in Hong-Kong³¹ with a higher prevalence of depression among two-fifth of Chinese hospital nurses. This shows that depression seems to be a common finding among these special work force (i.e., academics and health care workforce)

The prevalence of depression among the respondents studied may be attributable to stress and competing academic workload and demand associated with lecturing at undergraduate and post graduate level (i.e., part-time and full-time students). Awareness of the risk of depression among academic staff will enable the university to put in appropriate checks and enforce adequate mitigatory measures such as leave (sick, study, annual leave etc.) to help staff cope with the stress of the university setting and prevent any further increase in the rate of depression and attendant consequences among academic staff.

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