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Depression And Its Associated Factors Among A Group Of Women In Enugu State Nigeria: A Cross-Sectional Study

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Abstract

Aims & Background: *Depressive disorders are common in all regions of the world, and can affect the outcome of common chronic diseases. The study aimed to assess the prevalence and pattern of depression and associated factors among women in Enugu State Nigeria.*

Materials and Methods: *The study was a cross-sectional study conducted among women who attended a Christian conference in Enugu State, Nigeria. PHQ-9 questionnaire was used to collect data on consenting women. All the collected data were imputed into IBM SPSS version 25 for analysis. Continuous variables were summarized as mean and standard deviation while categorical variables were presented as frequencies and percentages. Bivariate analysis was done with a Chi-square test to test for associations between the socio-demographic characteristics and depression with a significance level placed at p-value ≤0.05.*

Results: *The mean age and standard deviation were 49.69±10.29 while most of them were in the 50-59 years age range (34.5%). About 34.5% had mild depression, 14.6% had moderate depression, 1.8% had moderately severe depression and 1.8% had severe depression. No socio-demographic characteristic was significantly associated with depression.*

Conclusion: *The prevalence of depression was high among the studied women and this calls for enhanced awareness among women on symptoms of depression for early self-diagnosis and presentation to the hospital.*

Keywords: Cross-sectional study; Depression; Nigeria; Prevalence; Women.

INTRODUCTION

Depression though presents in a vague and "chameleon-like" manner, is a mental health problem of global concern with dire consequences.[1] It is characterized by a profound and persistent sadness or despair and or loss of interest in once pleasurable things.[2] Symptoms of depression can vary from mild to severe according to the American Psychiatry Association, and can also include slowed movement and speech, changes in appetite (weight loss or gain unrelated to dieting), trouble falling asleep or sleeping too much, increase in purposeless physical activities, increased fatigue, feeling worthless or guilty, difficulty in thinking and concentrating or making decisions, suicidal thoughts. [3] Symptoms must last at least two weeks for a diagnosis of depression to be made.[3]

In terms of total years lost due to disability, depression is the leading cause of disability worldwide and it is predicted to be the leading cause of disease burden by 2030. It is already the leading cause of disability in women worldwide.[4] There is evidence that depression has been known to impair job performance [5] and interfere with sleep, eating, study, and enjoyment of daily activities, and is responsible for 48% loss of productivity time.[6] Despite WHO's estimate [2] that depressive disorders will be the second leading cause of global disease burden by 2030, the majority of persons affected are not even diagnosed. Depressive disorders are common in all regions of the world and can affect the outcome of common chronic diseases such as arthritis, asthma, cardiovascular diseases, cancer, diabetes, and obesity. [4] This brings to the fore the importance of non-communicable diseases such as depressive disorders for low-income countries where only a low percentage of gross domestic products are allocated to health services. [7]

Based on the World Health Organization (WHO) report of 2021, approximately 5% of adults worldwide suffer from depression [8] and it has continuously increased over the past three decades.[9] Depression can occur at any time in a person's lifetime but on average, it first appears during the late teenage to mid-twenties.[3] When it becomes long-lasting with moderate or severe intensity, depression may become a serious health condition. [10] Depression greatly affects the ability of the individual to perform well educationally and occupationally.[3] It has been proven that complex interplay between social, psychological, and biological factors are among the leading causes of depression. [8] Depression affects an estimated 1 in 15 adults (6.7%) in any given year and 1 in 6 people will experience depression at some point in their lifetime.[8] According to a 2015 global health estimate, 86 million (27%) people suffer depression in the Western Pacific Region, 48.16 million (15%) people in the Americas while in the Eastern Mediterranean Region, 26.19 million people (9%) suffer depression. An estimated 40.20 million people (12%) and 52.98 million people (16%) are affected in Europe and Africa respectively.[11]

Women are categorized as a high-risk group for poor mental health outcomes. Early childhood

hardships, lack of educational activities, and poverty are all factors that can contribute to and/or hasten the development of depression.[3] Other major factors that have impacted mental health and led to major depression include conflicts, migration, and displacement due to war, and the prevalence of lifetime major depressive disorder of 25% among adults living in low-income countries.[12]

Women are more likely to experience depression than men and studies have shown that one-third of women will experience a major depressive episode in their lifetime. [3, 13] Population studies have consistently shown that major depression is about twice as common in women as in men although it is still unclear why this is so.[10, 14] Factors that play a role in the etiology and clinical manifestation of depression include biochemistry, genetics, personality, and environmental factors amongst others. Changes in the level of neurotransmitters in the brain; like acetylcholine, serotonin, dopamine, and others, may contribute to symptoms of depression, which have been found to run in some families. [3] People with low self-esteem, those who are easily overwhelmed by stress, or those who are generally pessimistic appear to develop depression easily.[3] Also, the social environment of an individual can influence the development of depression as continuous exposure to neglect, abuse, violence or poverty might make some people more vulnerable to depression.

This study aimed to assess the prevalence and pattern of depression and its associated factors among a group of married women who attended a Christian conference at New Haven, Enugu North LGA Enugu State Nigeria.

MATERIALS AND METHODS

Study area

The study was conducted in New Haven Enugu North LGA, Enugu State. It is within the Enugu Metropolis. Enugu state is one of the states in Southeast Nigeria. Was the capital of East Central State before the further division of the region into five States.

Study design

The study was a cross-sectional study conducted among a group of married women.

Study population

This included a group of women who attended an all-women Christian conference in New Haven Enugu, the capital of Enugu State in April 2024.

Study instrument

A self-administered questionnaire was used to collect data from consenting women. It had 2 sections. The first section contained questions on the socio-demographic characteristics of the women. The second contained the PHQ-9 questions which was a nine-item standardized instrument used for screening, monitoring, and measuring the severity of depression. [15]

Data Collection Method

The questionnaire was administered while the conference was ongoing by the principal investigator. The women filled out and returned the questionnaire before the end of the conference the same day.

Data Management

Independent variable

The independent variables which included age, residence, educational level, occupation, ethnicity, and income were analyzed using univariate analysis and, results were presented as frequencies and per-

centages.

Dependent variable

The PHQ-9 has 9 standardized questions with 4 responses for each question (not at all scored 0, several days scored 1, more than half the days scored 2, and nearly every day scored 3). The minimum score is 0 while the maximum score is 27. A score of 1-4 was graded as not depressed, 5-9 as mild depression, 10-14 as moderate depression, 15-19 as moderately severe depression, and, 20-27 as severe depression.

Statistical Analysis

All the collected data were imputed into IBM SPSS version 25 for analysis. Continuous variables were summarized as mean and standard deviation while categorical variables were presented as frequencies and percentages. Bivariate analysis was done with a Chi-square test to test for associations between the socio-demographic characteristics and depression with a significance level placed at p-value ≤0.05. Results were presented in tables.

Ethical Consideration

Oral informed consent was obtained from the women who participated in the study. Anonymity was maintained by not writing names on the study materials. Confidentiality was maintained by keeping all the generated data in a safe box.

RESULTS

One hundred and ten women participated in the study.

Table 1: Socio-demographic characteristics of the women

Variable	Frequency N=110	Percent
Age (years)		
Mean ±SD	49.69±10.24	
Age in group		
30-39	18	16.4
40-49	34	30.9
50-59	38	34.5
60-69	14	12.7
70-79	6	5.5
Residence		
Rural	6	5.5
Urban	104	94.5
Educational level		
None	4	3.6
Primary	2	1.8
Secondary	8	7.3
Tertiary	96	87.3
Occupation		
Civil/public servant	66	60.0
Trader	18	16.4
Crafts/artisan	6	5.5
Farmer	2	1.8
Unemployed	6	5.5
Retired	12	10.9
Ethnicity		
Igbo	108	98.2
Others	2	1.8
***SES based on Annual income (Naira)**		
Poor; <150,000	28	25.5
Lower class; 150,000-1,190,000	54	49.1
Middle class; 1,200,000-11,900,000	10	9.1
Lower upper class; 12,000,000-59,900,000	0	0.0
Upper class; >60,000,000	0	0.0
NA	18	16.4

SES= Socioeconomic status; NA= not applicable (these includes retirees and unemployed). * As reported by 9jareporters.com.ng

Table 1 shows the socio-demographic characteristics of the women who participated in the study. The mean age and standard deviation were 49.69±10.29 while most of them were in the 50-59 years age range (34.5%). The majority were urban dwellers (94.5%), had tertiary education (87.3%), were civil/public servants (60.0%), and were of the Igbo ethnic group (98.2%). About half of them (49.1%) earn about ₦150,000-₦1,190,000 per annum.

Table 2: PHQ-9 result

Variable	Frequency	Percentage
Little interest or pleasure in doing things		
Not at all	40	36.4
Several days	40	36.4
More than half the days	12	10.9
Nearly every day	18	16.3
Feeling down, depressed, or hopeless		
Not at all	60	54.5
Several days	38	34.5
More than half the days	8	7.3
Nearly every day	4	3.7
Trouble falling or staying asleep, or sleeping too much		
Not at all	60	54.5
Several days	30	27.3
More than half the days	10	9.1
Nearly every day	10	9.1
Feeling tired or having little energy		
Not at all	40	36.4
Several days	54	49.1
More than half the days	10	9.1
Nearly every day	6	5.5
Poor appetite or overeating		
Not at all	80	72.7
Several days	18	16.4
More than half the days	8	7.3
Nearly every day	4	3.6
Feeling bad about yourself – or that you are a failure or have let yourself or your family down		
Not at all	76	69.1
Several days	26	23.6
More than half the days	4	3.6
Nearly every day	4	3.6
Trouble concentrating on things, such as reading the newspaper or watching television		
Not at all	54	49.1
Several days	34	30.9
More than half the days	6	5.5
Nearly every day	16	14.5
Moving or speaking so slowly that other people could have noticed. Or the opposite- being so fidgety or restless that you have been moving around a lot more than usual		
Not at all	84	76.4
Several days	16	14.5
More than half the days	4	3.6
Nearly every day	6	5.5
Thoughts that you would be better off dead, or of hurting yourself		
Not at all	102	92.7
Several days	8	7.3

Table 2 shows the result of the PHQ-9

Table 3: Prevalence and pattern of depression among the women

Variable	Frequency	Percent
Mild	38	34.5
Moderate	16	14.6
Moderately severe	2	1.8
Severe	2	1.8
None	52	47.3
Depression re-categorized		
Depressed	58	52.7
Not depressed	52	47.3

Table 3 shows the prevalence of depression among the women. About 34.5% of them had mild depression, 14.6% had moderate depression, 1.8% had moderately severe depression while 1.8% had severe depression. On re-categorization, 52.7% were depressed.

Table 4: Bivariate analysis of socio-demographic characteristics and depression

Variable	Depression		X2	P value
	Yes N (%)	No N (%)		
Age in group				
30-39	12(66.7)	6(33.3)	4.645	0.326
40-49	20(58.8)	14(41.2)		
50-59	16(42.1)	22(57.9)		
60-69	8(57.1)	6(42.9)		
70-79	2(33.3)	4(66.7)		
Residence				
Rural	4(66.7)	2(33.3)	0.495	0.482
Urban	54(51.9)	50(48.1)		
Educational level				
None	0(0.0)	4(100.0)	6.358	0.095
Primary	2(100.0)	0(0.0)		
Secondary	4(50.0)	4(50.0)		
Tertiary	52(54.2)	44(45.8)		
Occupation				
Civil/public servant	34(51.5)	32(48.5)	6.419	0.268
Trader	12(66.7)	6(33.3)		
Crafts/artisan	2(33.3)	4(66.7)		
Farmer	2(100.0)	0(0.0)		
Unemployed	4(66.7)	2(33.3)		
Retired	4(33.3)	8(66.7)		
Ethnicity				
Igbo	56(51.9)	52(48.1)	1.826	0.177
Others	2(100.0)	0(0.0)		
SES based on Annual income (Naira)				
Poor; <150,000	14(50.0)	14(50.0)	0.964	0.810
Lower class; 150,000 -1,190,000	30(55.6)	24(44.4)		
Middle class; 1,200,000-11,900,000	6(60.0)	4(40.0)		
NA	8(44.4)	10(55.6)		

Table 4 shows the bivariate analysis of the socio-demographic characteristics of the women and depression. No socio-demographic characteristic significantly affected the prevalence of depression.

DISCUSSIONS

This study was conducted among a group of married women who attended a Christian conference in Enugu North LGA of Enugu State Nigeria, to determine the prevalence and associated factors of depression among the women.

The overall prevalence of depression in our study was 52.7% out of which 34.5%, 14.6%, 1.8%, and 1.8% had mild, moderate, moderately severe, and severe depression respectively. Our finding was comparable to the report of a similar study conducted in Northern Nigeria among married Muslim women where 52.1% of them had one form of depression or the other.[16] This shows that religious belief may not have any effect on the prevalence of depression. Other studies from Pakistan, (51%) [17] Oshogbo South-west Nigeria (59.6%) [18] corroborated our finding

Some hospital-based studies from Nigeria (Ilorin, 44.5%) [13] and (Shagamu, 29.1%) [19] reported lower prevalence. The difference can be explained by the fact that these hospital-based studies may follow the "Iceberg Phenomenon" of disease, in which only the symptomatic cases are seen in the hospital, while the vast majority of mostly asymptomatic cases remain undetected within the community. [20] Thus our study that is community based is likely to detect hidden cases of depression within the community. Other studies from Afghanistan (79.1%) [21] and Pakistan (72%) [22] reported a higher prevalence of depression. The higher prevalence of depression among women in these studies may be due to the lingering conflicts in these countries which might have led to loss of jobs, economic sustenance, and no access to mental health services. The differences between the observed prevalence of depression in this study and the values from other countries may reflect a variation in local rates of predisposing factors for depression in the various communities, as had also been suggested by a previous study.[23]

On bivariate analysis, no socio-demographic characteristic was significantly associated with depression. There was no significant association between age and depression. This was similar to the report of another Nigerian study[24] and the Harvard Medical School study. [25]

However, the prevalence of depression was highest among the age group 30-39 years and least among the 70-79 years age group. Similar studies reported similar findings. [1, 26] Evidence has shown depression can occur in all age groups but may be more prevalent in the reproductive age. [27] A plausible reason for this could be biological because of hormonal variation in menopause. It could also be a result of stressful life events like bereavement, financial failures, and loneliness.[28] Contrastingly, some other studies from Nigeria, [13] Ethiopia, [29,] and Colombia [30] reported a higher prevalence of depression in older patients. Urban dwellers had a higher prevalence of depression than rural dwellers. Other studies corroborated our findings. [21, 22] Some potential factors have been found that may contribute to higher rates of depression in a rural setting, including lack of access to jobs leading to unemployment,[31] stigma associated with seeking treatment for mental illnesses,[32] and poorer physical health.[33]

Those with primary education were more de-

pressed when compared to those with tertiary education. Other studies corroborated our findings. [13, 34] Education is a critical social determinant of health hence, people with higher levels of education are often healthier than people with lower levels of education. Having a higher education level can have a protective role in depression. Education enhances coping mechanisms in different ways, increasing women's self-efficacy and subsequently self-esteem. Additionally, it provides women with a greater sense of control over their environment and reduces their sense of helplessness in challenging circumstances.[35]

Although depression was not significantly associated with occupation, farmers had the highest prevalence followed by traders and the unemployed. A similar study also reported no significant association between occupation and depression. [18] Other studies reported an association between depression and unemployment.[36, 37] There has been a report on an increase in depression due to unemployment. [25] Unemployment leads to poor physical and mental health in several ways; it is a stressful event that affects their self-esteem. Since employment generates income, a positive identity, and the ability to live healthy lifestyles, unemployment leads to impoverishment, psychological stress, and participation in health-threatening coping behaviors such as alcohol abuse, tobacco consumption, and promiscuity.

Surprisingly the prevalence of depression increased progressively as the annual income increased. This is in contrast to the report of similar studies.[13, 38] The serious economic meltdown in Nigeria presently seems to affect every social class but those of the lower class that have learned to survive with low income seem to cope more than those in the upper class. This may explain the higher prevalence of depression among higher-income earners.

On the pattern of depression in our study, 34.5% of our patients had mild depression. This was lower than the report of a similar study in South-West Nigeria where 42.8% of their patients had mild depression [18] and North Central Nigeria (84.9%) [39] but higher than the report of another study from Northern Nigeria (25.2%). [18] Reasons for the disparity could be explained by the fact that different denominators were used between our study and the other studies. In our study, the denominator was made up of all the patients whereas the other studies considered the prevalence of mild depression among those with depression.

About 14.6% had moderate depression, and this was similar to other Nigerian studies from Sokoto (14.8%)[16] and Ilorin (14.2%) [39] Other studies reported a higher prevalence of 16% [18] and 22%. [40] The overall prevalence of severe depression in our study was 3.6% and a similar study reported the same prevalence. [16] The prevalence is higher than the report of severe depression from a similar study in North Central Nigeria (0.94%). [39] The differences between the observed degrees of depression in this study and the values from other parts of the country may indicate a variation in local rates of predisposing factors for depression in these various communities.

CONCLUSIONS AND RECOMMENDATIONS

The prevalence of depression in this study was high, thus the use of interventions like regular screening for symptoms of depression, and educating women on these symptoms for early self-diagnosis is essential and should be provided by

the stakeholders in mental health in the state. Critical planning for providing psychiatric treatment for young married women, women living in rural areas, and unemployed women is necessary.

Increased awareness, information, advocacy, and access to healthcare services, especially for the early detection and preventive care of depression, are of utmost importance.

Limitations

The study involved only a group of women who attended a conference in Enugu State and may not be a true representation of all the women in Enugu State Nigeria.

The study also involved only married women, thus the prevalence among unmarried women is excluded.

CLINICAL SIGNIFICANCE

The high prevalence of depression from our study follows the "Iceberg Phenomenon" of disease, in which only the symptomatic cases are seen in the hospital, while the vast majority of mostly asymptomatic cases remain undetected within the community. Our study was community-based and hence detected the "asymptomatic" cases that may not even realize that they have depression and hence may never seek treatment.

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