

# Prevalence of depression among health workers in Enugu, South East Nigeria

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## Abstract

**Aims:** Determination of the prevalence and distribution of depression among health workers at tertiary level of health care delivery in Enugu South East Nigeria.

**Settings and Design:** A cross-sectional descriptive survey of depression in health workers at tertiary level.

**Subjects and Methods:** By proportional quota sampling, the sample size of 309 was used. Ethical issues were given full consideration. A structured self-administered questionnaire including the Zung self-rating depression scale was used to collect data.

**Statistical Analysis Used:** Data entry and analysis were done using SPSS statistical package version 15. Statistical significance was considered present when  $P < 0.05$ .

**Results:** The total of 46 of the 309 workers (14.9%) were found to be depressed. Of the health workers found to be depressed, there were more females (18.0%) than males (8.7%). A feeling of sadness over family, living and working conditions was more consistent among the depressed.

**Conclusions:** The condition of depression is present among health workers in this part of the world. Being a female health worker, may be associated with depression in South East Nigeria. Studies to investigate the determinants and effects of depression in the Nigerian health work force are necessary.

**Key words:** Depression, health workers, prevalence

**Date of Acceptance:** 11-Nov-2014

## Introduction

Depression is a common problem worldwide, common among the working population as has also been reported in Nigeria<sup>[1]</sup> and its effects have been noted to be very costly for employees and employers.<sup>[2]</sup> It has been described as one of the most debilitating illnesses in the world, projected to be the second most common disease by 2020, though its worldwide prevalence and impact may have been underestimated.<sup>[3]</sup> Some features of depression are denial and a sense of helplessness, thus no employee would want to be termed depressed. Other symptoms of this disease include fatigue, irritability, inability to make decisions, somatic problems, lack of interest in day-to-day activities, and suicidal thoughts.<sup>[4]</sup>

Depression has been known to impair job performance.<sup>[5-7]</sup> It has led to presenteeism (a reduced job performance and productivity while at work).<sup>[3,5,6]</sup> Regardless of the fact that it has been known to cause physical and social limitations worse than most other chronic illnesses, it has not been recognized as an occupational disease.<sup>[2]</sup> Studies have related depression to 48% of lost productivity time in the depressed workers.<sup>[8]</sup>

The health sector in Nigeria has experienced crises and conflicts especially related to welfare of staff, conditions of service and poor infrastructure, despite also echoing “health care reforms” like a resounding mantra. Despite

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### Access this article online

#### Quick Response Code:



Website: [www.njcponline.com](http://www.njcponline.com)

DOI: 10.4103/1119-3077.151726

PMID: 25772916

having knowledge about stressors and health hazards, health professionals are often not aware of the factors that contribute to their own general and mental health.<sup>[9]</sup> Elements of the work environment have been noted to impact on the mental health of health care workers.<sup>[10]</sup> This information follows earlier knowledge that health care workers have been known to have as much as a 27% prevalence rate for mental health disorders (depression and anxiety) and that among all population groups, health workers have the highest prevalence of depression.<sup>[11]</sup> It should be worrisome that in health care delivery a health worker can be suffering from a mental illness like depression and not be as alert as should be. Some have postulated that treating depression in workers will result in savings of a value greater than just the cost of the treatment.<sup>[12]</sup>

The lifetime prevalence for depression in Nigeria has been put by a study at 3.3%.<sup>[13]</sup> There is widespread stigmatization against mental illness in Nigerian communities,<sup>[14]</sup> negative notions being as a result of the belief that the individual involved is responsible for his condition.

This article focuses on the burden of depression among health workers in teaching hospitals, its distribution by age, sex and marital status and how these respondents feel about their family, living and working conditions.

## Subjects and Methods

This study was carried out in Enugu, capital of Enugu state, South East Nigeria. Enugu state being one of the thirty-six states in Nigeria. It has two teaching hospitals, one a federal institution – University of Nigeria Teaching Hospital and the other owned by the state – Enugu State University Teaching Hospital, the study sites, where the different health workers could be well represented. The sample size was determined using the formula  $Z^2pq/d^2$ , ( $Z$  – the standard normal deviate, here set at 1.96,  $P$  – proportion of the target population estimated to have a particular characteristic,  $q = 1.0 - p$  and  $d$  = degree of accuracy desired, here 0.05).<sup>[15]</sup> A total of 309 health workers were studied, selected by proportional sampling technique and including doctors, nurses, medical laboratory scientists, physiotherapists, and pharmacists. A structured pretested questionnaire [Appendix] that included the Zung's self-rating depression scale, a simple quantitative measurement of the subjective experience of depression, was used to collect data. This instrument has been shown to be applicable to Nigerian patients.<sup>[16]</sup> It contains 20 items divided between negative and positive phrasing. Scores of 1, 2, 3, 4 are attached to each response depending on whether it is worded positively or negatively. These scores are added to get an index by dividing by 80 and multiplying by 100. A cut-off point of 50 was used to determine the prevalence of depressive symptoms in the study population. The questionnaire was also used to elicit respondent's

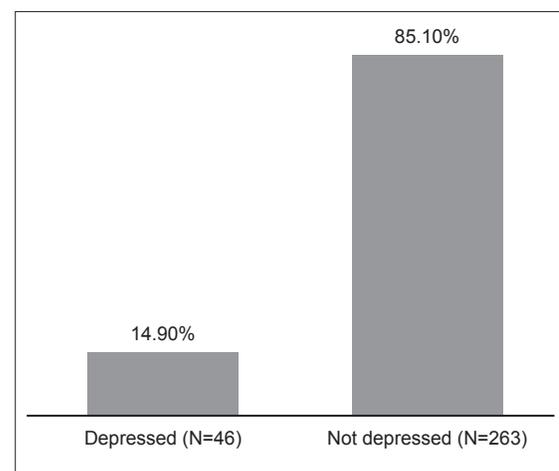
feelings (sadness, indifference or happiness) toward family, work, and living conditions. Ethical clearance was obtained from the ethics committee of both Teaching Hospitals and informed consent obtained from the respondents before handing over the questionnaire. Medical students specially trained for the survey assisted with data collection. Data entry and analysis were done using the SPSS Inc., 233 South wacker drive, 11<sup>th</sup> Floor, Chicago, IL. Statistical significance was considered present when  $P < 0.05$ .

## Results

The mean age of the health workers in the current study is  $33.3 \pm 8.7$  years, ranging from 22 to 59 years. The 20–29 year age range was in the majority (41.7%). There were 104 (33.7%) males and 205 (66.3%) females. 49% were married, 48% single and 3% were widowed. More nurses were studied (45.6%), followed by doctors (32%) as shown in Table 1.

Their years of service spanned from 1 to 34 years, with a mean of  $7.8 \pm 8.4$  years. Those with only 1–5 years working experience (56%) were predominant in the study. Christianity was the predominant religion (99.4%) and Igbo the predominant ethnicity (98.7%) [Table 1].

Figure 1 shows the prevalence of depression and 46 of the 309 workers (14.9%) were found to be depressed. More of the females (18.0%) were found to be depressed in comparison with their male counterparts (8.7%) and the difference observed was statistically significant. Depression was more common in the 50–59 year age group (30.4%) and least in the younger 20–29 year age group (10.8%) the observed difference was not significant. A greater percentage of the widowed (22.2%) were depressed in relation to the married at 16.6% and the singles at 12.9% as seen in Table 2. These observations were however not statistically significant.



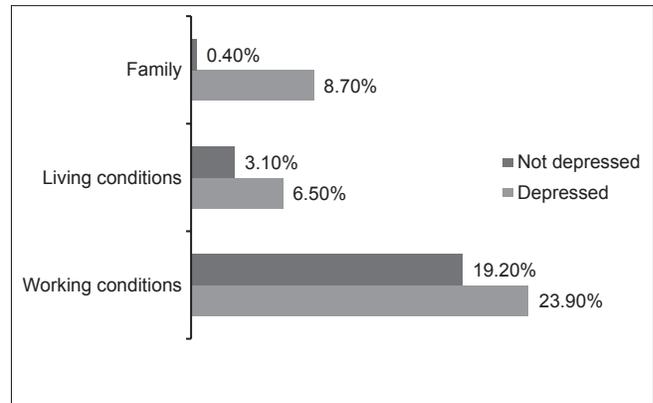
**Figure 1:** Prevalence of depression in the sample of health workers ( $n = 309$ )

**Table 1: Distribution of the health workers by sociodemographic characteristics and professional designation**

Characteristics	Frequency (%) (n=309)
<b>Sex</b>	
Male	104 (33.7)
Female	205 (66.3)
<b>Age</b>	
20-29	129 (41.7)
30-39	110 (35.6)
40-49	45 (14.6)
50-59	23 (7.4)
<b>Marital status</b>	
Single	147 (48.0)
Married	150 (49.0)
Widowed	9 (3.0)
<b>Professional designation</b>	
Doctors	99 (32.0)
Nurses	141 (45.6)
Medical lab scientists	25 (8.1)
Physiotherapists	15 (4.9)
Pharmacists	28 (9.1)
Others	1 (0.3)
<b>Years of service</b>	
1-5	173 (56.0)
6-10	61 (19.7)
11-15	17 (5.5)
16-20	19 (6.1)
21-25	12 (3.9)
26-30	12 (3.9)
31-35	9 (2.9)
No response	6 (1.9)
<b>Religion</b>	
Christianity	307 (99.4)
Others	2 (0.6)
<b>Ethnicity</b>	
Igbo	304 (98.7)
Others	4 (1.3)

**Table 2: Relationship between sociodemographic characteristics of the health workers and prevalence of depression**

Sex	Depressed (n=46) (%)	Nondepressed (n=263) (%)	$\chi^2$	P
Male (n=104)	9 (8.7)	95 (91.3)	4.81	0.028*
Female (n=205)	37 (18.0)	168 (82.0)		
<b>Age range in years</b>			6.21	0.101
20-29 (n=129)	14 (10.8)	115 (89.2)		
30-39 (n=110)	18 (16.3)	92 (83.7)		
40-49 (n=45)	7 (15.5)	38 (84.5)		
50-59 (n=23)	7 (30.4)	16 (69.6)		
<b>Marital status</b>			1.19	0.552
Single (n=147)	19 (12.9)	128 (87.1)		
Married (n=150)	25 (16.6)	125 (83.4)		
Widowed (n=9)	2 (22.2)	7 (77.8)		

\*Significant  $P \leq 0.05$ **Figure 2:** Percentage of health workers expressing sadness over family, living and working conditions.  $\chi^2 = 10.02$ ,  $P = 0.007$  (significant [ $P \leq 0.05$ ])

Sadness over working conditions was the more common complaint among the health workers, for the depressed (23.9%) and nondepressed (19.0%) alike. However, more of the depressed expressed sadness over family, living and working conditions respectively than the nondepressed and the observed differences were statistically significant [Figure 2].

## Discussion

This study revealed a high prevalence of depression among health workers, which compares with findings in other studies among health workers,<sup>[17]</sup> among other occupations<sup>[5]</sup> and within the general public.<sup>[17]</sup> Since depression is known to impair job performance this finding is a cause for worry as health workers are in a sensitive profession requiring fully alert/functional individuals, for efficient health care delivery.

Prevalence of depression in the general public in Nigeria however has been put at 3.3%.<sup>[13]</sup> In Pakistan, a review of prevalence studies revealed a mean prevalence from six studies of 33.62%.<sup>[18]</sup>

The finding here that depression is more common among the female gender, which was significant, agrees with other studies that have shown depression and depressive symptoms to be more prevalent in the female gender.<sup>[1,3,4,18-21]</sup> Some other studies find that mental disorders in general, depression included, occur more in women,<sup>[13]</sup> while some others show men with a greater prevalence.<sup>[5,17]</sup> No difference in the prevalence of depression between men and women has also been reported in other studies.<sup>[22]</sup>

A higher incidence of depression has been associated with late middle age and early retirement in men and women alike.<sup>[19,23]</sup> Other studies however have shown the reverse with higher prevalence in the younger age groups.<sup>[5,19]</sup> No association with age was demonstrated here.

Higher prevalence of depression has also been reported among women who have lost husbands by being widowed, divorced or separated.<sup>[18,24]</sup> Absence of someone to confide in is a vulnerability factor to depression<sup>[25]</sup> while marriage has been reported to have a protective effect on depression.<sup>[26]</sup> In this study, the observations were not significant.

Depression has been related with less than optimal working conditions<sup>[1,3]</sup> and workplace bullying among hospital personnel.<sup>[27]</sup> Workers found to be depressed in this study also mostly expressed sadness with their working conditions.

A review in Pakistan revealed that the supportive family and friends were associated with decreased prevalence of anxiety and depression.<sup>[18]</sup> More of the health workers found to be depressed in this study also expressed sadness over their families.

Study limitations; include the cross-sectional study design as causality cannot be inferred for any factor found to be associated with depression here. Applying an analytical study design would help to achieve this. The Zung's depression rating scale has limited diagnostic validity, and other factors in this vicinity could have been examined for their relation to depression through the inclusion of specific questions in the questionnaire.

## Conclusion

Depression is prevalent among health workers in south east Nigeria. Being female was significantly associated with being depressed. Feeling sad about family, living and working conditions was more common among the health workers found to be depressed.

## Recommendation

Further studies to investigate the determinants and effects of depression in the Nigerian health work force, will be useful.

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**How to cite this article:** Obi IE, Aniebue PN, Okonkwo K, Okeke TA, Ugwunna N. Prevalence of depression among health workers in Enugu, South East Nigeria. *Niger J Clin Pract* 2015;18:342-7.

**Source of Support:** Nil, **Conflict of Interest:** None declared.

## Appendix

QUESTIONNAIRE  
UNIVERSITY OF NIGERIA TEACHING HOSPITAL  
COLLEGE OF MEDICINE  
DEPARTMENT OF COMMUNITY OF MEDICINE

Information provided by this questionnaire is strictly private and confidential; no form of personal identification of respondents is required or intended.

Please kindly tick (v) beside the most appropriate option.

The questionnaire is aimed at determining the prevalence of depression.

1. Age at last birthday \_\_\_\_\_
2. Sex
  - a. Male [    ]
  - b. Female [    ]
3. Marital Status
  - a. Single [    ]
  - b. Married [    ]
  - c. Separated/ Divorced [    ]
  - d. Widowed [    ]
4. Religion
  - a. Christianity [    ]
  - b. Islam [    ]
  - c. Traditional religion [    ]
  - d. Others [    ]
5. Ethnicity
  - a. Igbo [    ]
  - b. Yoruba [    ]
  - c. Hausa [    ]
  - d. Others [    ]
6. Years of service in your profession \_\_\_\_\_
7. Profession
  - a. Doctor [    ]
  - b. Nurse [    ]
  - c. Medical Laboratory scientist [    ]
  - d. Physiotherapist [    ]
  - e. Pharmacist [    ]
  - f. Others, specify \_\_\_\_\_

Please tick (V) in the box

8. How often do you suffer from any of these symptoms?	Never	Sometimes	Often	Always
Headache				
Insomnia (sleeplessness)				
Easy fatigability				
Aggression				
Anxiety				
Frustration				
Unable to think clearly				
Decreased desire for sex				

**9. Please answer the following question**

	None or a little of the time	Some of the time	Good part of the time	Most of the time
1. I feel down hearted, sad and have no joy				
2. Morning is when I feel the best and strong				
3. I have crying spells or feel like crying				
4. I have trouble sleeping through the night				
5. I eat as much as I used to eat before				
6. I enjoy looking at, talking and being with attractive women (men)				
7. I notice that I am losing weight				
8. I have trouble with constipation				
9. My heart beats abnormally fast or my heart beats faster than usual				
10. I get tired for no reason				
11. My thought is as it used to be				
12. I find it easy to do as I used to do				
13. I am restless and can't keep still				
14. I feel hopeful about the future				
15. I am more irritable than usual				
16. I find it easy to make decisions				
17. I feel that am useful and needed				
18. I feel satisfied and fulfilled about life				
19. I feel that others will be better off if I were dead				
20. I still enjoy the things I used to do				

**10. How do you feel about the following?**

	Sad	Indifferent	Happy
Your family			
Your job			
Your working conditions			
Your living conditions			
Promotion in your job			
Relationship with superior colleagues			

Thanks for your cooperation