

DEPRESSION AMONG HEALTH WORKERS: A STUDY AT THE HO TEACHING HOSPITAL IN GHANA

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Abstract

Objective: The current study is an effort to examine the level of depression and associated factors among health workers in Ghana.

Methodology: The Patient Health Questionnaire 9 (PHQ-9) was used to screen 127 health workers of the Ho Teaching Hospital. These were participants who presented themselves for screening at the facility during the 2019 world mental health celebration in Ghana.

Results: Descriptive analysis revealed that over 30% of participants experience moderate level of depression with females experiencing higher levels than males.

However, inferential analysis revealed that differences in the levels of depression are not significant with regards to gender and department/job description, as well as no significance age impact on depression. However, married health worker reported significantly lower level of depression compared to health workers who are not married.

Conclusion: Health workers experience depression. Some factors determine the levels of these condition, thereby requiring further investigations.

Key words: Depression, Health workers, Ho, Teaching Hospital

Introduction

Depression and related mental health conditions among health workers in Ghana are under appreciated. Meanwhile, depression is the leading cause of disability,¹ thereby, affecting various aspects of life including work and productivity² such as the care the health worker gives to patients. Many experiences in life produce either an immediate or delayed overwhelming mental health consequence(s) such as depression for the individual³. Depression is a mental disorder largely affecting the mood of individuals and interrupting their sense of wellbeing emotionally, socially, and occupational functioning. This mental disorder is characterised by loss of interest in pleasurable events.

Depression has strong biological basis. For example, age and gender are strongly implicated in the development of depression.⁴ Talukder et al.⁵ found in their study that younger people experience higher levels of depression with decreased quality of life than their older counterparts. Factors accounting for depression across the lifespan have been identified to include income, body mass index (BMI), childhood abuse and chronic diseases⁶. For gender, females have been found to experience higher levels of depression than males.⁷ Sagud et al.⁸ pointed out that females are more prone to depression because they experience hormonal changes at various stages such as during pregnancy, and

menstrual cycles. Benneh et al.⁹ also indicated that depression in women can arise from childlessness, infidelity and domestic violence.

Meanwhile, social factors also have strong correlations with depression among all groups of people. Factors such as type and nature of job, family or relationship challenges and losses may influence levels of depression.

Healthcare workers such as physicians, nurses, pharmacists and laboratory technicians have health care opportunities at their disposal. Comparatively, they are expected to have easier access to health care than non-health care workers. However, this opportunity does not always amount to utility (perhaps it does for physical health), especially with regards to mental health among health workers. The mental health of healthcare providers/workers is crucial as this translates into how they render their services to patients. The nature of work of the health worker also predisposes them to several risk factors of mental ill-health.^{10,11} For example, it has been reported that health workers on shift duties experience more stress and insomnia.¹² Similarly, Perry et al.¹³ also found that, nurses experience many mental disorders and are usually on some form of psychoactive medications.

Maharaj et al.¹⁴ reported in their study among 102 Australian nurses that 32.4% of the nurses had high levels of depression and 86.3% reported some depressive symptoms. Regarding stress, the study reported that 41.2% of the participants recorded higher stress levels and 95% reported some level of stress symptoms. They also reported that participants who were not satisfied with job aspects reached a significantly higher level of distress and depression¹⁴.

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Similar results were found with a comprehensive meta-analysis by Mata et al.,¹⁵ who examined the prevalence of depression or depressive symptoms among interns and resident physicians. Overall, they used 54 studies published between January 1963 and September 2015 with 17560 participants. A total of 28.8% of them suffered from depression or depressive symptoms. Further significant increases of depressive symptoms in resident physicians over time and among trainees within a year of beginning were shown.

In a study by Yeboah et al.,¹⁶ the authors examined determinants of workplace stress among 453 healthcare professionals in Ghana. A questionnaire was used to identify the most important and common factors of stress and to relate them to occupation national groups. They were able to prove that physicians and nurses reported the highest amount of stress.

There is limited research on the mental health challenges among health workers in Ghana, making policy decisions regarding interventions at institutional and national levels deficient. Depression, as the leading cause of disability can render health workers incapable of rendering the best services to patients. Little is known about this condition among health workers in Ghana. This underscores the relevance of this current study within a newly inaugurated teaching hospital known as the Ho Teaching Hospital in the Volta region in Ghana.

Aims of the Study

This study aimed to find out the prevalence of depression among health workers in the Ho Teaching Hospital. By this, the study aims at distinguishing which portfolio of health workers express higher levels of depression within the hospital.

Hypotheses

It was therefore hypothesised that, 1) single female health workers will show a significantly higher levels of depression than their married female counterparts, 2) females will have a significantly higher level of depression than males, 3) the age of health workers will significantly correlate with their level of depression, and 4) the job descriptions of the health worker (here seen as the department) will significantly predict depression.

Materials and Methods

Research Design

This study used a cross-sectional survey design. This design allows for the collection of information from across the various sections of a population on a particular subject. Indeed, data for this study was gathered from health workers across the various departments, gender and ages population under study.

Population / Sample

The target population for this screening was all staff of Ho Teaching Hospital. Ho Teaching Hospital was built in 1998 as the Volta regional hospital. The hospital was upgraded after 21 years to a teaching hospital status in

the second quarter of 2019 in order to serve training purposes for the University of Health and Allied Sciences in the same region. Out of the population, one hundred and twenty-seven (127) willingly presented themselves for the screening, thereby making the sampling method a convenient one. This consisted of 38 males and 89 females during a mental health week screening exercise. [Note: We realised that apart from the about 5% of the participants who are national service personnel in the facility during the study, 30.7% of the participants are captured as students. However, these students are actually in the terminal years of their medical training. These are mostly final year medical and physician assistantship students who are working on the wards on daily basis as part of their training. A few of them are postgraduate allied health students (e.g., biomedical laboratory science, medical imaging) who as part of their training are providing services to patients in the hospital on daily basis. As much as they are still students, there are very much into the healthcare activities]. Other demographics of the participants are presented in the following table (Table 1).

Table 1 Demographic Information of Participants

Demographic Variable	Frequency	Percentage
Sex		
Male	38	29.9
Female	89	70.1
Age [Mean (Std. Dev.)]	28.45 (8.74)	
Marital status		
Single/ divorced/ separated	92	72.4
Married/ cohabiting	35	27.6
Occupation		
Student	39	30.7
Nursing	55	43.3
NSS	7	5.5
Other staff	26	20.5

Instrument

The Patient Health Questionnaire 9 (PHQ-9) was used for the data collection. It is a self-report screening tool to used assess the presence and severity of depressive symptoms of an individual. The scale is a shorter form of the Primary Care Evaluation of Mental Disorders (PRIME-MD). The PHQ-9 was developed by Spitzer, Williams, Kroenke and the Patient Health Questionnaire Primary Care Study Group in 1999¹⁷. It includes nine items which screen the participant's

behavior and thinking with regard to the most important depressive symptoms such as interest in things, feeling down, sleep, energy level, eating, self-perception, concentration, speed while doing things and thoughts of suicide. Responses range from “0” (not at all) to “3” (nearly every day). Thus, a total sum between 0 and 27 can be obtained at the end, which indicates the severity of the depression. Usually a total sum above 10 shows presence of depression. The PHQ-9 can be used to diagnose depressive disorders. However, it should be extended by further information and the history of the patient in order to be able to make an adequate diagnosis¹⁸.

Data was collected through a mental health screening exercise organized during the 2019 national mental health week celebration in Ghana. At the Ho Teaching Hospital, permission was sought for the Mental Health Celebration from the hospital management. As part of the celebration in the Volta region of Ghana, among other activities, the staff of Ho teaching Hospital were sensitized on mental health and the need to partake in the screening exercise. An announcement was conveyed to all departmental staff through their respective heads. This announcement was repeated at a staff durbar and on the staff social media platforms. Staff who willingly reported for the screening were informed that the data to be obtained will be used for research purposes as well. Participants were presented with the questionnaire for them to answer to items. Their scores were aggregated and their levels of depression was revealed to them on an individual basis before they left the screening centre. Participants whose depression levels were high were referred to a clinical psychologist or psychiatrist for intervention. Participants were informed that their participation is purely voluntary. Confidentiality was strictly adhered to. The screening took place at the hospital for only a day.

Results

Data collected was entered and analysed using the SPSS version 16. Results are presented in this section in the order of the hypotheses stated above. Prior to this, some descriptive analyses are also presented to buttress the findings.

Descriptive Results

The descriptive results presented in this section show the severity of depression across the various demographics of the participants in the study. This is to present a picture of the level of depression as exhibited among staff at the Ho Teaching Hospital. **Figure 1** presents the general severity of depression among the staff. It is recorded in the pie chart that many participants (37%) experience moderate level of depression. However, it is worth noting that some 7% of the participants experience severe level of depression among the workers.

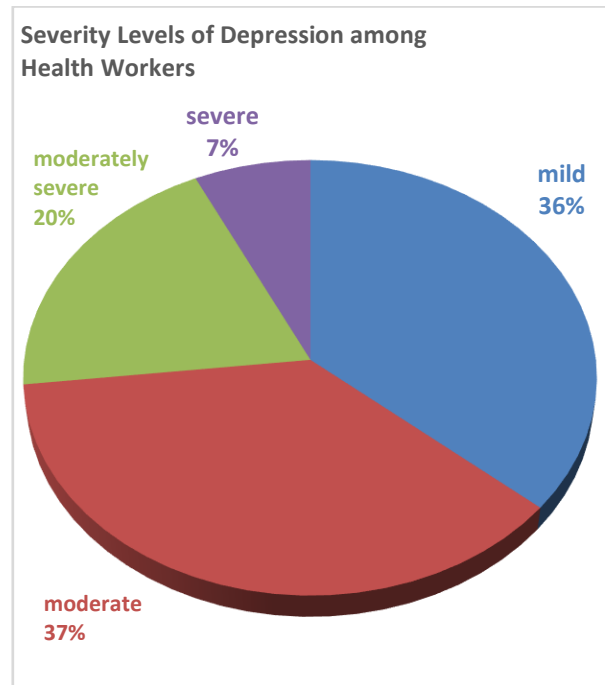


Figure 1
Severity Level of Depression among Participants

In **figure 2** below, it is observed that at all levels, females experience higher severity than males. For example, 8 females as against only one male experience the severe level of depression. As seen in the previous figure that majority of the participants experience moderate depression, it also appears in figure 2 that more females (exceedingly above males) recorded this level of depression.

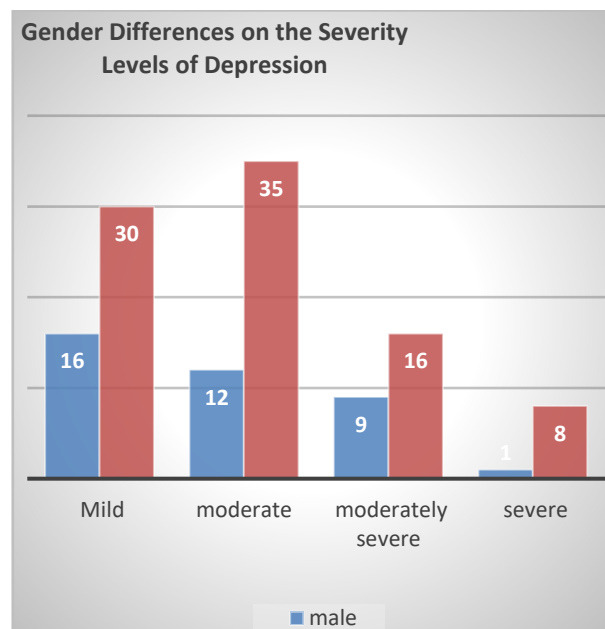


Figure 2
Gender Differences in Severity Level of Depression

Figure 3 also shows the severity levels across marital status. Participants who are single showed higher severity than those who are married. While 8 singles are reporting severe depression, only 1 married reported same. Again, while 19 singles reported moderately severe depression, 6 married reported same.

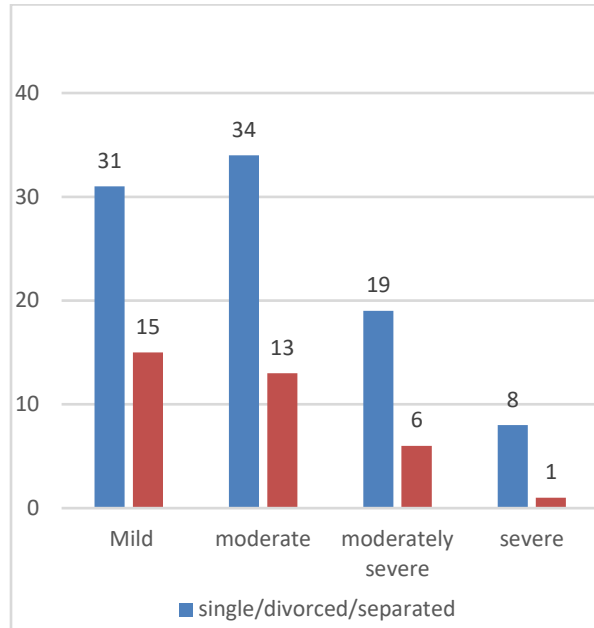


Figure 3 Marital status and Severity level of Depression

From the figure 4, it is observed that nurses reported highest on the first severity levels of depression compared to the other job categories. On the highest severity level however, nurses ranked second to students and other staff. Service persons reported the least of the severity levels of depression.

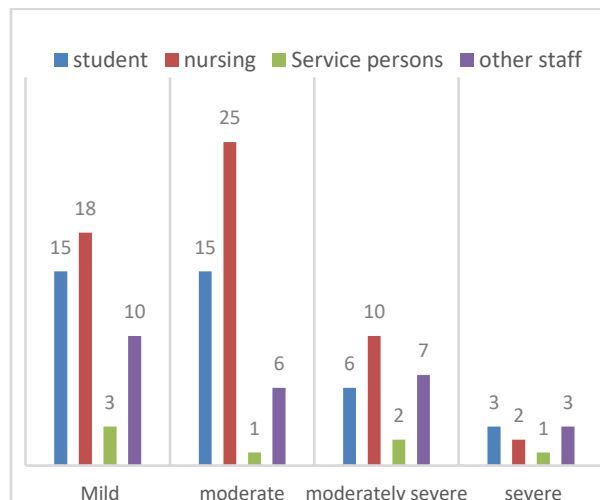


Figure 4 Job category/description and severity level of depression

Hypothesis Testing

The first and second hypotheses predicted sex and marital status differences in depression among health workers. Specifically, single females were predicted to have higher levels of depression than married females in the first hypothesis whereas the second hypothesis predicted a higher depression level for females than males. The results are presented in tables 2 and 3 below.

Table 2 Descriptive Statistics

Sex of Participants	Marital Status	N	Mean	Std. Dev.
Male	Single/Divorced/ Separated	25	13.20	4.19
	Married/ Cohabiting	13	11.00	2.65
	Total	38	12.45	3.85
Female	Single/Divorced/ Separated	67	13.78	4.74
	Married/ Cohabiting	22	12.41	3.80
	Total	89	13.44	4.54
Total	Single/Divorced/ Separated	92	13.62	4.58
	Married/ Cohabiting	35	11.89	3.45
	Total	127	13.14	4.35

Table 3 Two-Way ANOVA Test of Between-Subjects Effects

Source	Sum of Squares	df	Mean Square	F	p
Sex	22.23	1	22.23	1.19	.28
Marital Status	71.76	1	71.76	3.86	.05
Sex * Marital Status	3.91	1	3.91	.21	.65
Error	2288.96	123	18.61		
Total	24321.00	127			

In Table 2 above, single females (n=67) had a mean of 13.78 (SD=4.74) and the married females (n=22) had a mean of 12.41 (SD=3.80). From table 3 however, it is shown that the interaction between sex and marital status is not statistically significant [F(1,127)=.21, p=.65]. This indicates that the difference between the means scores of single females and their married female counterparts is not significant. Thus, the first hypothesis is not supported.

However, it was observed from the results in table 3 that marital status in general has a significant effect on depression among health workers [F (1,127) =3.86,

p=.05]. It is observed in table 2 that, the single health workers (n=92) show higher depression levels (mean=13.62, SD=4.58) than the married ones (n=35, mean= 11.89, SD=3.45). The results regarding the second hypothesis that female will show higher depression level than males indicate that there is no significant gender effect on depression among health workers [F(1,127)=1.19, p=.28]. However, female health workers (n=89) scored slightly higher (mean=13.44, SD=4.54) than males (n=38, mean=12.45, SD=3.85). The hypothesis is not supported since the difference between the two groups is not significant.

The third hypothesis predicted a correlation between age and level of depression among health workers. In a similar vein, hypothesis 4 predicted that job description will predict depression among health workers. These two hypotheses were analysed using a hierarchical multiple regression where age is entered into the first model, followed by job descriptions in the second model. Also, since job descriptions are categorical, they were dummy coded into continuous variables with student nurses being the reference point. The results are presented in the following table. In the Table 4 below, a significant model is observed at step 1 where the influence of age on depression is tested ($R^2=.02, F=1.41, p<.01$). It was observed however that age does not significantly predict depression among health workers ($\beta=-.11, p=.23$). This means that the third hypothesis is not supported, indicating that the age of the health worker may not necessarily be the basis for their depression.

Table 4
Hierarchical Multiple Regression showing how Age and Job Description predict Depression

Model		B	Std. Error	β	t	p
1	(Constant)	14.670	1.318		11.134	.000
	Age	-.054	.044	-.108	-1.213	.227
2	(Constant)	15.670	1.467		10.681	.000
	Age	-.121	.059	-.243	-2.039	.044
	Nurse	.413	.993	.047	.415	.679
	Others (Lab, admin)	2.828	1.464	.263	1.932	.056
	Service persons	2.935	1.760	.155	1.668	.098

$R^2=.02, F=1.471, p<.001$ for step 1; $\Delta R^2=.05, F=2.106, p<.001$ for step 2

Their fourth and final hypothesis of this study tested for the effect of job category/description on depression

among health workers. The result is also presented in the regression table under model 2 above where a significant model was also observed ($\Delta R^2=.05, F=2.106, p<.001$). However, it is observed that none of the job categories significantly predict depression; nurse ($\beta=.05, p=.68$), others ($\beta=.26, p=.06$), and service persons ($\beta=.16, p=.10$). This hypothesis is also not supported.

Discussion

Globally, mental health requires extensive research for understanding and promotion. In Ghana and many developing countries however, in spite of the limited understanding, research efforts have been limited and narrow. There is little evidence on the mental health of health workers in Ghana. Thus, factors that may promote or risk the mental health of health workers is less known. The current study attempted to unravel some of these factors with regards to depression among health workers in the Ho Teaching Hospital.

Inasmuch as the hypotheses were not supported, it provides evidence for the fact that the factors considered may not be of the biggest concerns in mental health among the said population. However, these findings may not apply to other population. For example, in the current study, there was no significant gender difference in depression from the hypothesis tested. This is not the case in the findings of Sagud et al. ⁸ who indicated that females experience higher levels of depression than males due to differences in biological experience females go through. Similarly, age was not a significant predictor of depression in this study. However, Talukder et al.⁵ reported that younger people experience more depression with reasons such as childhood abuse, BMI and income to be accounting for the age impact on depression assigned by Schaakxs et al.⁶

An interesting observation from the results of the current study however is the impact of marital status on depression among health workers. It was observed that health workers who are not married experience higher depression levels than their married counterparts. Marriage may come with its challenges however; it may serve some soothing purposes in stressful situations. Spouses may be available for the health worker to discuss frustrations and other burdens. Generally, social support becomes readily available for the married, as such they would receive comfort, motivation and direction from each other. Regardless of the fact that there were no statistically significant observations made in the results, there is yet the indication from the histograms and pie chart that female experienced higher levels of depression, and nurses compared to the other health workers recorded higher numbers on the levels of depression.

This could still call for concern and attention to such variables in health settings in order to avoid surprise outcomes among such groups on the job. Generally, these findings project an idea of the situation among health workers in the Ho Teaching Hospital and so, can

serve as a basis for follow ups and prospective mental health activities among health workers.

Conclusion

Mental health needs more attention in Ghana. No population in Ghana and every other country is immune to mental health challenges. Several factors form the basis for the development of mental health challenges. Though these factors explored in this study did not give significant and distinguishable outcomes, there are still many others that require scientific exploration.

The study is worthwhile especially among the very population that is tasked with the general health of the population of the country. There is the need to replicate the study in other facilities and populations to understand the picture of mental health in the country. Since avenues such as mental health celebrations, community lectures and many others could be tapped to extract data in order to study and understand Ghana's mental health status.

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