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Assessments of Depression Anxiety and Stress among Volunteers Health Workers in Lagos, Nigeria

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ABSTRACT

This study aimed at investigating the prevalence and factors associated with depression, anxiety, and stress symptoms among volunteers who volunteered to carry out free health services in Lagos, Nigeria. It was a cross-sectional survey. The secondary objective was to determine whether there were differences between individuals who were experiencing depression, anxiety, or stress and those who were not. One hundred and sixty-three consecutive health workers were invited to take part in the study. Sociodemographic and clinical data were gathered using a semi-structured proforma. Assessments were further done using the Depression, Anxiety, and Stress Scale. According to the DASS-21 scale, 30.3% had various levels of depression, and various levels of anxiety were detected in 47.5% of participants. Similarly, various levels of stress were detected in 29.5% of the participants. There were significant associations between the sub-domains of depression anxiety and stress. High levels of depression, anxiety and stress were detected among the participants. The higher degree was evident, particularly among the single, female participants. The results will serve as supporting evidence for the timely intervention of further planning of preventative mental health services by the supervising ministry for volunteer health workers within the public and private health sectors. This implicates the need for mental health training. Hospital management and medical policymakers should continue to provide various types of therapies to increase the emotional resilience and coping skills of healthcare workers.

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Introduction

Regular and frequent assessments of the physical and mental health status of healthcare workers are needed to make them effective, fruitful and productive at the workplace to make them continue to deliver quality patient care. In the absence of such continuous evaluations to detect healthcare workers at risk of developing physical and health conditions, they could be vulnerable to developing various kinds of health disorders [1,2]. Documented evidence indicated that the common mental health disorders frequently experienced by health workers include symptoms of anxiety, stress and depression, especially when compared to other non-medical professional groups [1,2]. Therefore, when these salient mental health conditions among healthcare workers are not recognised and if psychological interventions are not applied to ameliorate such conditions, they can largely affect not only the physical and mental health of the healthcare workers, but they also become susceptible to the burnout syndrome such as emotional exhaustion, feelings of underachievement and may become cynical towards patients [3,4]. Depression, which manifests as low moods, loss of interest or pleasure in pleasurable activities, and constant decreased energy has been considered the commonest mental health problem [5,6]. The WHO also recently claimed that by 2030, depression is likely to be the third leading cause of disease burden in developing countries and the second highest cause of disease burden in middle-income countries [5,6].

Nonetheless, numerous studies have documented the prevalence and potential causes of depression in healthcare workers. Documented evidence also indicated that healthcare workers have an increased risk of clinical depression compared to other professional groups mostly due to the stressful nature of their work [7-10]. Regarding the prevalence of depression among healthcare workers, the recorded range was between 22·8% through 33.0% and 43% for frontline workers [7-10]. About anxiety among healthcare workers, anxiety has been described as an emotion characterized by feelings of tension, worried thoughts, and physical changes like increased heart rate. Healthcare workers have been observed to be vulnerable to developing anxiety due to high workloads, shortage of staff, and feelings of not being adequately supported by their management [11]. These workers also perceive a greater risk of anxiety due to their exposure to the nature of their job. If the

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experience of anxiety by healthcare workers is left untreated, it may have long-term health effects and may affect them to properly discharge their clinical responsibilities [11]. However, the literature documented the prevalence of anxiety among healthcare workers to range from 22% to 31.5% to as high as 93.4% [12-15]. Another psychopathology that was found to be associated with healthcare workers was stress. They were observed to be at higher risk of developing stress-related problems due to the nature of their job such as overwhelming clinical workload, prolonged working hours, poor leadership and supervision, and high turnover rates [16]. The reported prevalence of psychosocial stress from several studies ranged between 12% and 61.97%. The causes of occupational distress include work overload, lack of adequate communication, poor staff attitude and reduced resources and lack of equipment. Headache, neck and back pain, irritability, and difficulty concentrating were the most prevalent psychosocial stress-related health outcome [17-19]. If we consider these three aforementioned psychopathological conditions among healthcare workers, which have been reported to be on the increase and if there are no psychological interventions designed to reduce the degrees of the experienced psychopathology by these workers, they may lead to a reduction in job performance, effectiveness and work productivity and ultimately reduce quality patient care [1,5].

Therefore, prevention of occupational distress and dissatisfaction caused by these psychopathological conditions and early psychological interventions are desirable to allow healthcare workers to continue to provide quality patient care for patients and clients. Albeit, one of the aims of these kinds of studies is to assist the management of hospital settings to assist to identify healthcare workers who are at a higher risk of developing mental health issues. Again, despite the increasing prevalence of mental health conditions in Nigeria, data on specific occupational groups, such as healthcare workers who volunteer to serve as frontline workers in sub-Saharan countries were found to be scanty in the literature as compared to the bulk of the literature that explored other professional groups. It was, therefore, important to determine the mental health conditions from the health workers' provider perceptions. In the same vein, the findings of this study would contribute to the literature and further be available to assist to help to identify the negative psychological effects of volunteer health workers not only in Nigeria but also in sub-Saharan African countries and at the same time help in determining a proactive holistic approach to the well-being of volunteers. The detection and eventual provision of psychological interventions will not only enhance the psychological resilience of volunteer health workers but also give them the motivation to continue to be productive and fruitful at the occupational levels.

This study therefore aimed at assessing the prevalence of depression, anxiety and stress among volunteer health workers in Lagos, Nigeria and to identify the demographic and other factors, which can be predictive of levels of depression, anxiety and stress. The secondary objective was to determine whether there were differences between individuals who experienced depression, anxiety, or stress and those who were not regarding their genders.

Materials and Methods

The study took place at the Ibeju-Lekki Local Government Area, which is one of the 37 Local Government Areas in Lagos state. Lagos State is a city in southwest Nigeria on the Bight of Benin (Lagos, 2017). The participants were volunteer health workers that carried out free medical services initiated by the BOSKOH health mission, a free medical outreach initiative introduced in 2019 by the first lady of Lagos State, Dr. Ibijoke Sanwo-olu on behalf of her husband Governor Babajide Olushola Sanwo-Olu, and his deputy Kadiri Obafemi Hamzat. BOSKOH health is an annual outreach that provides free medical services to residents of Lagos state. One hundred and sixty-three consecutive volunteer healthcare workers that included medical doctors, nurses, social workers, psychologists, and laboratory scientists that fulfilled the inclusion criteria, were invited to take part in the study. Sociodemographic and clinical data were gathered using a semi-structured proforma. Assessments were further done using the Depression, Anxiety, and Stress Scale. The Depression Anxiety Stress Scale was used to collect data from the participants. The Depression Anxiety Stress Scale (DASS; Lovibond and Lovibond, 1995) is a self-report psychometric tool made up of 21 items (7 items for each category) based on a four-point rating scale. DASS is a validated and reliable tool used to screen depression, anxiety, and stress symptoms within the last week. It was also designed to measure the severity of the negative distress of depression, anxiety, and stress. DASS-21 includes twenty-one questions and three components of depression (7 questions), anxiety (7 questions), and stress (7 questions). Questionnaire scoring is a four-point Likert scale (0 = does not apply to me at all, 3 = applies to me very much or most of the time). The depression sub-domain measures dysphoria, anhedonia, lack of interest, and low self-esteem. The anxiety sub-dimension assesses the subjective experience of the anxiety effect, autonomic arousal, skeletal muscle effects, and situational anxiety while the stress sub-domain evaluates and assesses irritability, being overactive, impatience, tension, and persistent arousal. The result is obtained by summing the scores of the items on each subscale. The depression score results are classified as normal (0–9), mild depression (10–12), moderate depression (13–20), and severe depression (21–42). The anxiety score results are classified as normal (0–6), mild anxiety (7–9), moderate anxiety (10–14), and severe anxiety (15–42). The stress score results are classified as normal (0–10), mild stress (11–18), moderate stress (19–26), and severe stress (27–42). To calculate comparable scores with full DASS (42 items), each 7-item scale was multiplied by 2. The higher the score the most severe the emotional distress was. The psychometric properties have been validated for use in Nigeria [20].

Ethical Issues

The permission to carry out the study was taken from the Research and Ethics Committee of the Lagos State Ministry of Health, which was the main supervisor of the BOSKOH projects.

Data analysis

The Statistical Package for the Social Sciences (SPSS) version 26 was used for data analysis. Categorical data were summarised with frequencies and percentages while numeric data were summarized with medians and interquartile ranges. The

results of the respondents were categorized into normal, mild, moderate, severe and extremely severe according to the cut-off of the domains of the DASS. This depression domain was divided into normal (0–9), mild depression (10–13), moderate depression (14–20), severe depression (21–27) and extremely severe depression (>28). The anxiety subdomain was divided into normal (0–7), mild anxiety (8–9), moderate anxiety (10–14), severe anxiety (15–19) and extremely severe anxiety (>20). The rest of the questions make up the stress subscale. The scale was divided into normal (0–14), mild stress (15–18), moderate stress (19–25), Severe stress (26–33) and extremely severe stress (>34). Bivariate and multiple logistic regression was used to determine risk factors for and protective factors against stress, anxiety and depression (binary variables). A backward conditional method was used to select the most parsimonious model. A p-value of <.05 was considered significant.

Results

Out of the 163 participants, 56 (34.4%) were male and 107 (65.5%) were female. The age of the participants ranged from 20 to 60 years (M = 38.52, SD = 7.84). Concerning the religion of the respondents, the majority were Christians 116 (71.2%) and the rest were Muslims 47 (28.8%). If we look at their marital status, almost half of them were single and never married 76 (46.6%), 78 (47.9% were married or in domestic relationships, 3 (1.8%) were widow/widower, and 6 (3.7%) were either separated or divorced. Regarding the educational status of the participants, 17 (10.4%) had secondary school finished, 17 (10.4%) had postsecondary school technical or vocational training, 22 (13.5%) possessed OND/HND degrees, the majority had a first degree 69 (42.3%), 18 (11.0%) had master's degree and 20 (12.3% possessed professional degrees as reflected in Table 1. Table 2 shows the probable prevalence of depression, anxiety, and stress of the different types of the five categories, such as normal, mild, moderate, severe, and extremely severe based on the Lovibond and Lovibond's percentile cut-offs (1995). According to the DASS21 scale, 30.3% of the participants had various levels of depression, which were mild depression at 8.0%, moderate depression at 14.7%, severe depression at 5.5% and 3.1% extreme depression. Various levels of anxiety were detected in 47.5% of participants. The frequency of mild anxiety was 10.4%, moderate anxiety 17.2%, severe anxiety 11.7% and extremely severe was 9.2%. Similarly, various levels of stress were detected in 29.5% of the participants. The frequency of mild stress was 9.2%, moderate stress was 12.3%, severe stress was 5.5% and extremely severe stress was 2.5%. The present study revealed that almost 68.7% of the study participants never experienced depression, 51.5% did not experience anxiety and 70.6% also didn't perceive stress during the period of the study.

With regards to the gender of the participants, 40 (71%) of the male participants did not experience any form of depression while 16 (28.6%) had probable depression. In the same vein, 72 (67.3%) of the female respondents showed no trace of depression while 28 (32%) of them perceived probable depression. Regarding the manifestations of anxiety, 31 (55.4%) of the male participants did not have anxiety while 25 (44.6%) had anxiety. About half of the females 53 (49.5%) did not have anxiety while half of the female population 55 (50.4%) experienced probable anxiety. As for the manifestations of symptoms of stress, 44 (78.6%) of the males and 71 (66.3%) of the female respondents did not experience any form of stress, however, 12 (21.5%) of the male and 36 (33.6%) of the female participants manifested with probable stress. Nonetheless, the findings of the study do not show a statistically significant difference in the stress levels of men and women. All these are reflected in Table 3. Table 4 indicates the correlation between depression, anxiety, and stress. All the correlation coefficients were found to be significant. All three aspects of psychological distress shared a highly significant positive correlation. The correlation coefficients between depression and anxiety were found to be 0.458. Similarly, between anxiety and stress, the correlation coefficient was found to be 0.478. Tables 5, 6 and 7 show the predictors of depression anxiety and stress regarding gender, age, marital status, education and religion in the bivariate and multivariate regression models. None of the sociodemographic variables was a statistically significant predictor of depression in the multivariate model. Concerning the independent predictors of anxiety, apart from religion (1.597(1.140-2.238: p = 0.005) that was predictive of anxiety, all other variables were statistically insignificant. Concerning the independent predictors of stress**,** none of the sociodemographic variables was statistically significant predictors of stress in the multivariate model. The comorbidity between anxiety and stress was 9 (5.5%), depression and stress 3 (1.8), depression and anxiety 10 (6.1%) and the respondent that experienced depression, anxiety and stress were 32 (19.6%). In the same light, the mean ages of those that experienced anxiety and stress were 29.89 (SD 7.60), depression and stress were 42 (SD 15.1), depression and anxiety were 29.4 (SD 10.8) and those that manifested with probable depression, anxiety and stress were 33.19 (SD 12.01). These are shown in figure 8.

Table 1: Sociodemographic characteristics of the Participants.

Variables	Characteristics	Age Range	Mean (SD)	n (%)
Age (years)		15-61	34.41	(10.99)
Gender	Male		56 (34.4)	
	Female		107 (65.6)	
Age groups	below 20		20-24	
	21(12.9)		11 (6.7)	
	25-29		33 (20.2)	
	30-34		26 (16.0)	
	35-39		18 (11.0)	
	40-44		26 (16.0)	
	45-49		12 (7.4)	
	50 and above		16 (9.8)	
Religion	Christianity		116 (71.2)	
	Islam		47 (28.8)	
Marital Status	Single Never Married		76 (46.6)	
	Married or Domestic Partnership		78 (47.9)	
	Widow/Widower		3 (1.8)	
	Divorced		1 (0.6)	
	Separated		5 (3.1)	
Educational Status	Secondary School		17 (10.4)	
	Post secondary/technical/ vocational training		17 (10.4)	
	OND/HND		22 (13.5)	
	Bachelor degree		69(42.3)	
	Masters degree		18 (11.0)	
	Professional degree		20 (12.3)	

Table 2: Prevalence of Depression, Anxiety and Stress of Participants.

Severity	Depression	Anxiety	Stress
Normal	112 (68.7)	84 (51.5)	115 (70.6)
Mild	13 (8.0)	17 (10.4)	15 (9.2)
Moderate	24 (14.7)	28 (17.2)	20 (12.3)
Severe	9 (5.5)	19 (11.7)	9 (5.5)
Extremely Severe	5 (3.1)	15 (9.2)	4 (2.5)

Table 3: Total scores from the DASS-21 Questionnaire and by Gender.

Domains	Symptoms Severity	Total n (%)	Male n (%)	Female n (%)	T	p-value
Depression	No Depression	112 (68.7)	40 (71.4)	72 (67.3)	-0.760	0.177
	Mild	13 (8.0)	3 (5.4)	10 (9.3)		
	Moderate	24(14.7)	11 (19.6)	13 (12.1)		
	Severe	9 (5.5)	1 (1.8)	8 (7.5)		
	Extremely Severe	5 (3.1)	1 (1.8)	4 (3.7)		
	Mean (SD)	0.66 (1.107)	0.57 (0.988)	0.71 (1.166)		
Anxiety	No Anxiety	84 (51.5)	31 (55.4)	53 (49.5)	-1.449	0.011
	Mild	17 (10.4)	7 (12.5)	10 (9.3)		
	Moderate	28(17.2)	11 (19.6)	17 (15.9)		
	Severe	19 (11.7)	4 (7.1)	15 (14.0)		
	Extremely Severe	15 (9.2)	3 (5.4)	12 (11.2)		
	Mean (SD)	1.17 (1.402)	0.95 (1.242)	1.28 (1.472)		
Stress	No Stress	115 (70.6)	44 (78.6)	71 (66.3)	-1.356	0.051
	Mild	15 (9.2)	3 (5.4)	12 (11.2)		
	Moderate	20 (12.3)	6 (10.7)	14 (13.1)		
	Severe	9 (5.5)	2 (3.6)	7 (6.5)		
	Extremely Severe	4 (2.4)	1 (1.8)	3 (2.8)		
	Mean (SD)	0.6 (1.057)	0.45 (0.952)	0.68 (1.104)		

Table 4: Correlation Coefficients.

Variable	Depression	Anxiety	Stress
Depression		0.458**	0.580**
Anxiety	0.458**		0.478**
Stress	0.580**	0.478**	

**Correlation was found to be significant at 0.01level (2-tailed)

Table 5: Predictors of Depression.

Variable	Crude Odds Ratio	P value	Adjusted Odd Ratio	P value
Gender			0.901 (0.58-1.4)	0.642
Age <40 ≥40			1.267 (0.814-1.97)	0.294
Marital Status				
Education			0.636(0.338-1.195)	0.16
Religion			0.995(0.638-1.552)	0.982

Table 6: Predictors of Anxiety.

Variable	Crude Odds Ratio	P value	Adjusted Odd Ratio	P value
Gender	-0.105		1.150 (0.829-1.597)	0.402
Age <40 ≥40			0.997 (0.721-1.379)	0.986
Marital Status				
Education			1.142 (0.682-1.912)	0.612
Religion			1.597 (1.140-2.238)	0.005

Table 7: Predictors of Stress.

Variable	Crude Odds Ratio	P value	Adjusted Odd Ratio	P value
Gender			1.202 (0.731-1.976)	0.469
Age <40 ≥40			0.728 (0.439-1.206)	0.218
Marital Status				
Education			1.209 (0.567-2.575)	0.623
Religion			0.697 (0.422-1.152)	0.159

Figure 8: Comorbidity of the three domains of DASS.

Domains	n (%)	Mean Age (SD)
Anxiety and Stress	9 (5.5)	29.89 (7.607)
Depression and Stress	3 (1.8)	42 (15.1)
Depression and Anxiety	10 (6.1)	29.4 (10.8)
Depression, Anxiety and Stress	32 (19.6)	33.19 (12.01)

Discussion

This study sought to determine the prevalence and associated factors of self-reported depression, anxiety, and stress symptoms among health worker volunteers in Lagos, Nigeria. The results showed that 30.3%, 47.5% and 29.5% of the participants experienced depression, anxiety and stress respectively in various grades of severity. Concerning the manifestations of depression of the participants in this study, 30.8% reported symptoms of depression. This finding can be compared to the range of findings from researchers from other countries. For example, in Saudi Arabia, 43% [21], Egypt, 71.4 % [22], Iraq, 70.2 % [23], and Pakistan, 69.4 % [24]. However, one recent systematic review and meta-analysis of published twenty-four studies of a large number of hospital staff numbering 42,010 showed that the prevalence of depression among hospital workers was 26% (95% Cl, 0.18–0.35). The highest and lowest prevalence of depressive disorder among hospital staff was in Africa 82% (95% Cl, 0.35–0.97) and in Asia 19% (95% Cl, 0.11–0.29). [25]. Nonetheless, the variation observed between the different types of studies, including could be attributed partially to the difference in the target population, different methodological approaches as well as different psychometric instruments used to carry out the research. One of the observations of this study and other related ones regarding depression was that, if healthcare workers experienced depression persistently at the work front and the management of hospital settings do not provide consistent psychological interventions and support, the emotional adverse effects of health workers might include impairment of work performance, reduced productivity, poor quality patient care, and increase in the employee turnover rates.

Concerning the degrees of probable anxiety among the participants, 47.5% of the respondents experienced symptoms of anxiety. This result was in agreement with previous studies that found anxiety to be more prevalent in health workers as compared to the general population. For example, in one Ethiopian study, 63% experienced symptoms of anxiety [26], and in China, 44.7% manifested symptoms of anxiety [27]. However, according to one systemic review and meta-analysis, the overall prevalence of anxiety is 25.8% but it ranges from as low as 10.5% through 50.1% to as high as 73%. [28,29].

These high rates of anxiety should be taken seriously because the manifestation of the emotional state of anxiety is often caused by the inability to resolve psychological conflicts, and the person experiencing anxiety spends quality time resolving the disturbing psychological distress and conflicts which could lead to cognitive functions distractions and may also prevent the individual from being optimally productive and fruitful occupationally. Collectively, persistent occupational psychological distress may also reduce their physical and mental energies and may lead to burnout syndromes such as emotional exhaustion, and cynical behaviour towards patients.

For these reasons, if psychological interventions are not given to the affected healthcare workers, the negative consequences could include reduced quality of life, pitiable quality patient care, irritability at work and home and greater need for health services. It is therefore pertinent that early detection and appropriate treatment should be given to the affected workers to prevent such emotional distress and consequences [28,29].

Concerning the grades of the experienced symptoms of stress experienced by the participants, 32.5% of the respondents experienced probable stress. This result aligned with previous studies that found stress to be highly prevalent in health workers as compared to the general population. Many studies that evaluated anxiety in healthcare workers have reported various prevalence rates that range from 27% to as high as 92.8% [30-36]. For instance, in Jordan, 27% [30], of the sampled healthcare workers experienced stress, similarly, in Ghana, 30.5% [31], were stressed at the work front, and also in line with other studies in Iran (34.9%) [32], and in Ethiopia (37.8%) [33]. However, higher results were declared in countries such as Ethiopia (68.2%) [34], and even higher in Nigeria (92.8%) [35]. Again, the obvious explanations for these observed variances might be due to differences in the psychometric instruments and tools used in their various studies, the severity of stress prevalence of the target populations, study designs and sample populations. The findings of this study did not show any statistically significant difference in the stress levels of men and women. These results were found to be consistent with other studies from other countries. However, on one hand, Nirmala and Babu [36] reported higher levels of stress in male healthcare workers as compared to their female colleagues. On the other hand, Pawlina and Schnorr [37] noted that female healthcare workers suffered more stress as compared to males. These differences could be attributed to the male and female ratio of the health workers mostly found in healthcare settings.

Previous studies on occupational distress and dissatisfaction have severally indicated that they also occur in other professions; however, they were reported to be more pronounced in healthcare workers. This may probably be due to the dynamic and complex nature of the health sectors that expose healthcare workers to high levels of work-related stress observed to be emotionally tasking, and physically draining and could negatively impact their general well-being [1,13,14,38].

Regarding gender and manifestations of psychopathology, the female participants scored higher in three domains of the DASS, 32.0%, 50.4% and 36.6% in the depression, anxiety and stress domains respectively. The male counterparts scored lesser with 28.6%, 44.6% and 21.5% respectively in the domains of depression, anxiety and stress. Nonetheless, these findings did not show any statistically significant difference in the depression, anxiety and stress levels of men and women. However, in one meta-analysis study on the gender differences in depression, the findings showed larger gender differences in nations with greater gender equity. The gender difference in depression represents a health disparity, especially in adolescence, yet the magnitude of the difference indicates that depression in males should not be overlooked [39]. About anxiety, women were more likely than men to be diagnosed with anxiety disorder, and depression and they were more likely than men to meet the criteria for all anxiety disorders [40]. Regarding gender and manifestations of stress at the workplace, some studies noted that females were more stressed than men and that females that were exposed to increased occupational distress experienced a greater risk of physical discomfort compared to males [41,42]. However, no consensus exists regarding gender susceptibility to work-related stress in the healthcare sector because concrete empirical findings found significant statistical relationships between gender and work-related stress [41,42].

Considering the comorbidity of the three domains of the DASS, 1.8% experienced the comorbidity of depression and stress, 6.1% manifested with depression and anxiety, 5.5% had anxiety and stress and a high number of 19.6% perceived the three forms of depression anxiety and stress. The comorbidity of anxiety and stress have been recorded to be significant positive associations [43,44]. In the same light, Stress, anxiety, and depression have been noted to correlate significantly [20,43,44] Empirical studies indicated that despite the state of anxiety being generally considered a high-energy state and depression a low-energy state, both anxiety and depression are more closely related. This is because an individual that may be experiencing depression may also have symptoms of anxiety and stress. One can therefore state that when these three morbid states are comorbid, the severities of these morbid states are much more than when each disorder occurs alone. Similarly, symptoms of depression take longer to resolve and it causes anxiety and stress for the individual. Likewise, depression exacerbated by stress and anxiety has a much higher suicide rate than depression alone. The chance of acquiring depression is much higher when an anxiety disorder already exists. Nearly half of those with major depression also suffer from severe and persistent anxiety. People who are depressed often feel anxious and worried. One can easily trigger the other, with anxiety often preceding depression [20,43,44].

Recommendations

From the findings of this study and review of the literature, targeted psychological interventions are needed to enhance the psychological health of healthcare workers to reinforce their physical and emotional capacity of healthcare workers. In the same light, their psychosocial needs should be monitored, and adequate financial and emotional support should be ensured,

appropriate continuous medical education and training should also be provided. Nonetheless, apart from the substantial prevalence of symptoms of depression, anxiety, and stress found in the current study sample, no other sociodemographic variable apart from religion was identified as a risk factor. This variable can be helpful to formulate strategies for the early identification of mental health conditions, and focused psychological or behavioural interventions if the religious professionals can be trained to offer spiritual and psychological interventions. Further recommendations for the prevention and treatment of psychological occupational distress and dissatisfaction of healthcare workers include support from the management, and family, improvement of social well-being, sufficient rest, good nutrition, light aerobic exercise, music and dance therapy, employee-assisted programmes, psychotherapy such as cognitive behavioural therapy, relaxation training, and if need be, prescription of anxiolytics and antidepressants [45].

The limitations of this study include it being a cross-sectional one and the generalisability of the findings may be limited. Again, this study was conducted in a small population and the work environment and patient population variables could not be assessed. Nevertheless, a larger-scale study would probably lead to a more accurate measure of the prevalent mental health morbidity among healthcare providers. Nevertheless, one of the strengths of this study on the psychopathological status of healthcare workers is the determination of the nature and types of the experienced mental health conditions so that the management and public mental health policymakers can plan on the psychological interventions for the healthcare workers experiencing such disorders.

Conclusion

High levels of depression, anxiety and stress were detected among the participants. The higher degree was evident, particularly among the single, female participants. These findings support the need for psycho-social planning and interventions for the increased effective psychological well-being of medical healthcare workers. The degrees of depression, anxiety, and stress could also be due to extraordinary work pressure, and physical exhaustion. This implicates the need for mental health training. Hospital management and medical policymakers should continue to provide various types of therapies to increase the emotional resilience and coping skills of healthcare workers.

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