PREVALENCE AND COMPARATIVE ANALYSES OF MENTAL HEALTH OUTCOMES AMONG MEDICAL AND NON-MEDICAL PRACTITIONERS DURING THE THIRD WAVE OF COVID-19 PANDEMIC IN NIGERIA

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Abstract

This study assessed the mental health state of healthcare workers during the COVID-19 pandemic in Nigeria. A cross-sectional survey using the snowballing sampling technique was utilized to select 300 medical and non-medical healthcare practitioners in the study. An online questionnaire consisting of the Generalized Anxiety Disorder scale, Impact of Event Scale-Revised, Patient Health Questionnaire, and Insomnia Severity Index was used for data collection. Both the medical and the non-medical practitioners reported minimal to severe symptoms of insomnia, generalized anxiety, depression, and posttraumatic stress. However, a significant difference was found in symptoms of insomnia ($\chi^2=16.98$, df = 3, p<.01), such that non-medical practitioners exhibited clinical insomnia symptoms (13.8%) than the medical practitioners (11.5%). Further, a significant difference was found in symptoms of depression ($\chi^2=9.93$, df = 4, p<.05), such that medical practitioners exhibited more severe depressive symptoms (07.3%) than the non-medical practitioners (06.4%). A significant number of healthcare workers reported mental health challenges during the third wave of the COVID-19 pandemic emergence in Nigeria. Therefore, it is recommended that healthcare workers should be exposed to appropriate and regular psychosocial interventions to keep them healthy and functioning optimally.

Keywords

anxiety, depression, health workers, insomnia, COVID-19

Introduction

The mental health of healthcare workers is often affected by emerging diseases and the severity of disease outbreaks, whether or not the outbreak develops into a public health emergency of international concern (Ho et al., 2020; Li et al., 2020; World Health Organization (WHO), 2020a). Healthcare workers are expected to care for and nurture the sick and infected in any disease outbreak, inclusive of pandemics such as the COVID-19; however, they are mostly exposed to self-risk and possible transmission of diseases to family members, World Health Organization buttressed this fact that the healthcare industry is hazardous and highly risky to the workers themselves (WHO, 2020b). Inclusive of the fear of contagion of the COVID-19 pandemic and working in isolation wards and units with infected patients, healthcare workers are further burdened with the expectation to work extra hours, under stress
and in unfamiliar personal protective equipment that may not be comfortable, and thus, may affect their emotional, psychological and social well-being, that is, mental health. This study enumerates the incidence of mental distress consequences among healthcare personnel in Nigeria during the emergence of the COVID-19 pandemic.

The global burden of mental health disorders has earlier been projected to increase up to 15% by the year 2020 (WHO, 2020c). Recently, a multinational study revealed that there was a higher increase in anxiety compared to depressive conditions in people who experienced COVID-19 emergency (Okoloba et al., 2020). Evidence from previous findings has established an increase in mental illness experienced by healthcare workers during a disease outbreak. For instance, Ji et al. (2017), found paranoid ideation, obsession-compulsion, anxiety, phobic anxiety, and hostility as common outcomes of psychological well-being among personnel in the health system and survivors of the Ebola outbreak in Sierra Leone. Chen et al. (2005) also identified that healthcare personnel working in intensive care units experienced high levels of stress and 11% degrees of the traumatic stress response, such as: mood swings, depression, anxiety, hostile behavior, and somatic signs and symptoms.

In the wake of the COVID-19 outbreak, mental health distress such as depression, anxiety, and insomnia are more common effects of the huge and acute stressful situation that healthcare personnel are facing amid the COVID-19 pandemic; also, it was found that doctors experienced less mental health symptoms compare with nurses (Lai, Ma & Wang, 2020). Similarly, Wang et al. (2020) reported the mental health effects of coronavirus outbreaks among healthcare workers, showing that 20% of the respondents had moderate to severe sleeplessness, and about a two-thirds majority recorded moderate to severe anxiety. Also, a recent study and meta - analysis study summed the multiple prevalence of poor sleep hygiene among health workers to be about 40% (Wang et al., 2020), and the commonest of them all are sleep deprivation, insomnia, and circadian rhythm disorders (Levin, 2019). During the COVID-19 outbreak lockdown, there is a likelihood that the degree of mental health challenges such as: depression, anxiety, insomnia, and posttraumatic stress disorders might have dramatically shot up and may remain after the lockdown because several factors that could trigger these disorders are currently present.

According to Levin (2019), health workers’ burden is complicated by the high and persistent risk they are exposed to, such as the threat of contracting the disease, long separation from their family, watching traumatic scenes of the patients who are dying gradually, the surging conditions of the disease and the death of patient being treated and the imposed or prolonged work shifts could be distressing and predisposed health workers to mental health challenges. Also, Ballessio et al. (2020) asserted that all hospital workers who are either employed in the intensive unit or working in the healthcare settings during the course of the COVID-19 pandemic have a higher tendency to be mentally distressed.

Literature review

Globally, the deterioration in the mental well-being and psychological functioning observed among different populations since the beginning of the Covid-19 pandemic has been of great public health concern. More distressing, studies have shown a greater proportion of individuals in the medical profession report higher rates of psychiatric symptoms than their counterparts in other fields. This section of our paper presents a brief overview of the literature on the mental health outcome of medical and non-medical practitioners during the Covid-19 pandemic.

One of the studies that sampled a large representation of healthcare workers on the impact of Covid-19 was conducted by Fournier et al (2022) where they examined the impact of the Covid-19 pandemic on the mental health of professionals across 77 hospitals in France. A
total of 4370 healthcare professionals responded to an online survey assessing the psychological distress and coping mechanisms during the Covid-19 pandemic among the target population. It was shown from the findings that more than half (57%) of the participants experienced significant psychological distress during the pandemic. Significant symptoms of potential post-traumatic stress disorder were also reported by the participants. The study concluded that the Covid-19 pandemic has a far-reaching negative impact on the members of the healthcare profession.

Maciaszek et al. (2020) surveyed 2,039 sample representing different categories of healthcare workers to investigate the mental health of medical and non-medical professionals during the peak of the Covid-19 pandemic in Poland. The authors found that a higher rate of psychopathological symptoms such as anxiety, insomnia and somatic symptoms were reported by the medical professionals compared to their non-medical counterparts. The authors suggested that the individuals in the medical profession responded in a more maladjusted manner to the Covid-19 pandemic. Also, it was argued that the provision of medical services during an emergency or pandemic puts service providers at risk of psychopathology, calling for an intervention targeting the medical practitioners for improved well-being.

In another study, Chen et al. (2020) examined the psychological impacts of the Covid-19 outbreak on medical staff and the general population. In their findings, it was observed that the outbreak had more significant impact on the medical staff who reported a higher level of stress, anxiety, depression and sleep problem than the general population. The study also established the need for psychological intervention among the medical staff during the Covid-19 pandemic as more than half of the medical population requested in interviews during the study data collection that they need psychological counselling to help them deal with mental health problems they are experiencing.

Evidence also shows increased symptoms of mental health conditions among the non-medical personnel, especially those involved in frontline service delivery during the Covid-19 pandemic. According to the findings of Fang et al. (2020) who investigated depressive symptoms among frontline non-medical workers during the Covid-19 pandemic, more than half of the sample reported significant symptoms of clinical depression. The study argued for the inclusion of non-medical workers in psychological intervention programmes to help them adjust to the mental health challenges faced during the pandemic.

Contrary to the popular findings showing higher levels of mental health distress among the medical than the non-medical personnel, a study on the psychological impact of the Covid-19 among medical and non-medical students conducted by Xie et al. (2020) showed that although all the students reported higher rate of depression and anxiety during the pandemic, the non-medical students showed worse psychological reaction to the pandemic by scoring significantly higher on the measure of the impact of event scale-revised compared to their medical students’ counterparts.

Efforts to document the impact of the Covid-19 pandemic on the mental health of healthcare practitioners in Nigeria have also been made in the related study to the present one. For instance, Badru et al. (2021) conducted an online cross-sectional survey to investigate the prevalence and correlate of psychological distress among healthcare workers during the Covid-19 pandemic. In their study, a concern for poor mental health outcomes among the population was raised by the authors. Also, factors such as contact with patients positive with Covid-19, being female and poor knowledge of Covid-19 were identified as significant risks for poor mental health functioning among the medical practitioners.

Prioritising the mental health of healthcare personnel, especially in a situation such as the present COVID-19 pandemic cannot be overemphasized. It is, therefore, imperative to investigate the mental health status of healthcare workers if effective care for the professionals
is to be provided. The aforementioned notwithstanding, there is scanty (or no) empirical study addressing the mental health outcome of healthcare personnel amid the COVID-19 pandemic in Nigeria. In response to the gaps identified, this research is considered highly necessary and timely. Hence, this study aims to investigate the prevalence of mental health outcomes among personnel working in hospitals during the emergence of the third wave of the COVID-19 pandemic in Nigeria. The following research hypotheses were tested in this study:

1. There will be a significant difference in the sleep problems among medical and non-medical personnel.
2. There will be a significant difference in the generalized anxiety among medical and non-medical personnel.
3. Medical practitioners will significantly differ on depressive symptoms compared to the non-medical practitioner participants.
4. Medical practitioners will significantly differ on posttraumatic stress symptoms compared to the non-medical practitioner participants.

Material and Methods

A cross-sectional survey was utilized to investigate the prevalence of mental health distress – generalized anxiety, depression, insomnia, and posttraumatic stress among selected healthcare practitioners during the emergence of the third wave of the Covid-19 pandemic in Nigeria.

A snowballing sampling technique via online social networking was employed to select three hundred healthcare practitioners that responded to the study survey. Healthcare practitioners in the categories of the medical (mainly medical doctors) and the non-medical professionals including nurses, pharmacists, dentists, psychologists, and occupational therapists other than medical doctors that are working in government hospitals were eligible for inclusion.

The healthcare workers in the study consist of both the medical and non-medical practitioners working in government hospitals. The international classification of health workers based on the International Standard Classification of Occupations (n.d) guides the classification of participants of this study into medical and non-medical practitioners. The medical practitioners are doctors across all areas of specialization of medicine that are working in government hospitals. On the other hand, the non-medical practitioners consist of healthcare professionals like nurses, pharmacists, dentists, psychologists, and occupational therapists other than medical doctors that are working in government hospitals.

Access to the target population at the time of the survey for this study was a major challenge, it was practically impossible as a result of the total restriction of free movement to the hospitals by the government to contain the spread of the Covid-19 infection (only the sick persons were strictly allowed in the hospitals during the study). As a result, prospective respondents with internet access were contacted to take part in the research. The questionnaire and consent form were uploaded on Google Forms, were disseminated to healthcare workers on the investigators’ list of contacts and they were further encouraged to share the survey with their colleagues. Only individuals who consented to participate after going through the informed consent were able to proceed to respond to the items of the questionnaire. Data collection was initiated on 20 May 2021 and closed on 19 August 2021.

Demographic Data Form

Three hundred (300) healthcare practitioners, age group between 18 and 68 years of age amounting to a mean age of 29 years (SD = 5.38) comprising 55.0% males, 44.2% females, while 1.6% who did not disclose their sex participated in the study. One hundred and ninety-
one (63.7%) of the respondents were medical practitioners, while the remaining one hundred and nine (36.3%) were non-medical practitioners. For the current study, ethical considerations were observed. It was opined that ethical clearance could be modified during the emergence of COVID-19 (De Sousa, Mohandas, & Aved, 2020). However, participants had to read and sign the informed consent by clicking on the next button before being allowed to access the online google form questionnaire. Other ethical requirements, such as confidentiality, right to withdraw, prospective benefits and risks, participants provided their written informed consent before exposure to research instruments were observed.

**Instruments**

A questionnaire was used as the instrument of data collection for this study. The questionnaire was designed to have five sections. Section A focused on data assessing the demographic attributes of the participants while the other four sections contain various scales used for the investigation.

Impact of Event Scale-Revised (IES-R): the 22 items scale assesses a person's traumatic experience. The Impact of Event Scale-Revised was categorized into four classes: scores between 0 and 23 (normal), 24 and 32 (mild psychological effect), 33 and 36 (moderate psychological impact), and more than 37 (severe psychological impact). The validity and reliability of the scale were confirmed by Weiss (2007). The reliability coefficient, that is, Cronbach's alpha 0.87 was accepted for this investigation.

Generalized Anxiety Disorder (GAD–7): this 7-item measure evaluates generalized anxiety disorder. The scale has a four options response format which is represented with figures too: "not at all (0)," "a few days (1)," "over half of the days (2)," and "almost every day (3)." Respondents’ scores on the scale can range between can 0 and 21. The cut-off points are 5, 10, and 15 for mild, moderate, and severe anxiety respectively. The authors, Spitzer et al. (2006) reaffirmed the scale's validity and reliability. The reliability coefficient, that is, Cronbach's alpha 0.78 was accepted for this investigation.

Patient Health Questionnaire (PHQ–9): this 9 items measure is used to diagnose the depressive disorder symptoms and the severity of depressive symptoms (Kroenke, Spitzer, & Williams, 2001). Respondents assessed statements assessing depression symptoms as appropriate to them on a scale of 0 to 3, that is (not at all) and (almost every day) respectively. The PHQ-9 score might be anywhere between 0 to 27. The severity of depressive symptoms is graded on a scale of minimum (1 - 4), mild (5 - 9), moderate (10 - 14), fairly severe (15 - 19), and severe (20). (20-27). The reliability coefficient, that is, Cronbach's alpha 0.86 was accepted for this investigation.

Insomnia Severity Index (ISI 7 items): ISI 7-item is a self-administered scale that examines the nature of severity, and consequences of sleeplessness on individuals (Bastien, Vallières, & Morin, 2001). The response ranges from 0 to 4, with overall scores ranging between 0 and 28. The overall score is classified into four levels: absence of insomnia (0–7), sub-threshold insomnia (8–14), mild insomnia (15–21), and acute insomnia (22–28). While Cronbach's alpha recorded in this study was 0.86.

The data collected for the current study were analysed utilising the Statistical Package for Social Sciences (SPSS; version 25). The estimate prevalence analysis and the chi-square (x2) analysis were carried out on the gathered data in the present study. The choice of statistical analysis (i.e. chi-square analysis) was considered appropriate because the study dependent variables were expressed in categorical outcomes (Insomnia [no clinical symptoms, subthreshold, moderate, and clinical symptoms]; Anxiety [mild and severe Anxiety]; Depression [low, mild, moderate, moderately severe, & severe depressive symptoms]; and Posttraumatic Stress Symptoms [no clinical symptoms, mild, moderate & clinical symptoms])
across different categories of healthcare workers (i.e. Medical Practitioners and Non-medical practitioners).

Results

The prevalence rate of mental health challenges was reported among medical and non-medical health practitioners (see Table 1-4). The study hypothesis one purposed to assess the difference in the sleep problems among different categories of healthcare workers was presented in Table 1. Generally, it was found that about 65% of the sampled healthcare workers reported different levels of sleep problems ranging from subthreshold to clinical symptoms of insomnia during the emergence of the COVID-19 pandemic in Nigeria. Also, the study revealed a significant difference in the level of insomnia symptoms reported by categories of healthcare workers during pandemic emergence ($\chi^2=16.98$, df = 3, $p<.01$). It was observed that 36.1% of the medical practitioners compared to 41.3% of the non-medical practitioners reported no clinical symptoms of insomnia. A significant percentage (35.1%) of the medical practitioners compared to 17.4% of the non-medical practitioners reported a subthreshold level of insomnia. On the other hand, more (34.9%) of the non-medical practitioners than 17.3% of the medical practitioners presented with moderate clinical insomnia. Finally, 11.5% and 13.8% of the medical and non-medical practitioners respectively reported insomnia symptoms at the clinical level.

Study hypothesis two purposed to evaluate the prevalence and difference in generalized anxiety among various categories of healthcare workers was presented in Table 2. It showed that there was an insignificant difference in the symptoms of anxiety displayed by the selected healthcare workers during the emergence of the third wave of the pandemic ($\chi^2 = .46$, df =1, $p >.05$). However, it was revealed that the majority of both the medical (56.5%) and non-medical (60.6%) reported severe symptoms of generalized anxiety.

Hypothesis three of this study which assessed whether there is a significant difference in depressive symptoms across the categories of healthcare workers was presented in Table 3. The result showed that 34% of the participants manifest minimal depressive symptoms, while 32.3% showed mild, 19.7% reported moderate, and 7.0% showed moderately severe and severe depressive symptoms. The result further indicated significant differences in the depressive symptoms reported by the medical and non-medical healthcare workers during the Covid-19 pandemic emergence ($\chi^2 = 9.93$, df = 4, $p< .05$). It was revealed that 31.8% and 38.5% of the medical and the non-medical practitioners respectively reported minimal symptoms of depression. More (38.2%) of the medical than 22% of the non-medical practitioners reported mild symptoms of depression. While moderate symptoms of depression were manifested by 16.2% of the medical and 25.7% of the non-medical practitioners. Lastly, 7.3% of the medical practitioners and 6.4% of the non-medical practitioners reported severe symptoms of depression.

Hypothesis four which stated that there will be a significant difference in posttraumatic stress symptoms (PTSS) among the sampled classes of healthcare workers was presented in Table 4. An insignificant difference in the posttraumatic stress symptoms reported by selected healthcare workers in Nigeria during the third wave of the COVID-19 pandemic ($\chi^2 = 1.59$, df = 3, $p> .05$) was revealed. However, it was revealed that 10.5% of the medical and 13.8% of the non-medical practitioners reported no clinical symptoms of posttraumatic stress. While 37.2% of the medical and 31.2% of the non-medical practitioners reported mild symptoms of posttraumatic stress, 19.9% and 19.3% of the medical and the non-medical practitioners respectively reported moderate symptoms of posttraumatic stress. Finally, 32.5% of the medical and 35.8% of the non-medical practitioners reported clinical posttraumatic stress symptoms.
Table 1. Insomnia symptoms among healthcare workers during the third wave of COVID-19 pandemic emergence

<table>
<thead>
<tr>
<th>Health Workers</th>
<th>Insomnia Symptoms</th>
<th>No clinical</th>
<th>Subthreshold</th>
<th>Moderate</th>
<th>Clinical</th>
<th>Total</th>
<th>df</th>
<th>χ²</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical practitioner</td>
<td>%</td>
<td>36.1</td>
<td>35.1</td>
<td>17.3</td>
<td>11.5</td>
<td>100</td>
<td>3</td>
<td>16.98</td>
<td>.001</td>
</tr>
<tr>
<td>Non-medical practitioner</td>
<td>%</td>
<td>41.3</td>
<td>17.4</td>
<td>34.9</td>
<td>13.8</td>
<td>100</td>
<td>3</td>
<td>16.98</td>
<td>.001</td>
</tr>
<tr>
<td>Total</td>
<td>%</td>
<td>35.3</td>
<td>28.7</td>
<td>23.7</td>
<td>12.3</td>
<td>100</td>
<td>3</td>
<td>16.98</td>
<td>.001</td>
</tr>
</tbody>
</table>

Table 2. Anxiety symptoms among healthcare workers during COVID-19 pandemic emergence

<table>
<thead>
<tr>
<th>Health Workers</th>
<th>Generalized anxiety</th>
<th>Moderate</th>
<th>Severe</th>
<th>Total</th>
<th>Df</th>
<th>χ²</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical practitioner</td>
<td>%</td>
<td>43.5</td>
<td>56.5</td>
<td>100</td>
<td>1</td>
<td>.457</td>
<td>.544</td>
</tr>
<tr>
<td>Non-medical practitioner</td>
<td>%</td>
<td>39.4</td>
<td>60.6</td>
<td>100</td>
<td>1</td>
<td>.457</td>
<td>.544</td>
</tr>
<tr>
<td>Total</td>
<td>%</td>
<td>42.0</td>
<td>58.0</td>
<td>100</td>
<td>1</td>
<td>.457</td>
<td>.544</td>
</tr>
</tbody>
</table>

Table 3. Depressive symptoms among healthcare workers during the third wave of COVID-19 pandemic emergence

<table>
<thead>
<tr>
<th>Health Workers</th>
<th>Depression</th>
<th>Minimal</th>
<th>Mild</th>
<th>Moderate</th>
<th>Moderately severe</th>
<th>Severe</th>
<th>Total</th>
<th>Df</th>
<th>χ²</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical practitioner</td>
<td>%</td>
<td>31.4</td>
<td>38.2</td>
<td>16.2</td>
<td>6.8</td>
<td>7.3</td>
<td>100</td>
<td>4</td>
<td>9.93</td>
<td>.042</td>
</tr>
<tr>
<td>Non-medical practitioner</td>
<td>%</td>
<td>38.5</td>
<td>22.0</td>
<td>25.7</td>
<td>7.3</td>
<td>6.4</td>
<td>100</td>
<td>4</td>
<td>9.93</td>
<td>.042</td>
</tr>
<tr>
<td>Total</td>
<td>%</td>
<td>34.0</td>
<td>32.3</td>
<td>19.7</td>
<td>7.0</td>
<td>7.0</td>
<td>100</td>
<td>4</td>
<td>9.93</td>
<td>.042</td>
</tr>
</tbody>
</table>

Table 4. Posttraumatic stress symptoms among healthcare workers during COVID-19 pandemic emergence

<table>
<thead>
<tr>
<th>Health Workers</th>
<th>Posttraumatic stress</th>
<th>No clinical</th>
<th>Mild</th>
<th>Moderate</th>
<th>Clinical</th>
<th>Total</th>
<th>df</th>
<th>χ²</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical practitioner</td>
<td>%</td>
<td>10.5</td>
<td>37.2</td>
<td>19.9</td>
<td>32.5</td>
<td>100</td>
<td>3</td>
<td>1.59</td>
<td>.661</td>
</tr>
<tr>
<td>Non-medical practitioner</td>
<td>%</td>
<td>13.8</td>
<td>31.2</td>
<td>19.3</td>
<td>35.8</td>
<td>100</td>
<td>3</td>
<td>1.59</td>
<td>.661</td>
</tr>
<tr>
<td>Total</td>
<td>%</td>
<td>11.7</td>
<td>35.0</td>
<td>19.7</td>
<td>33.7</td>
<td>100</td>
<td>3</td>
<td>1.59</td>
<td>.661</td>
</tr>
</tbody>
</table>
Discussion

The present study investigated the prevailing mental health situations among healthcare professionals during the third wave of the COVID-19 pandemic in Nigeria. Our findings show that sleep problems and depressive symptoms were prominent among the sampled healthcare workers at the time of the study. It was found that a significant proportion of the participants experienced symptoms of insomnia ranging from subthreshold to clinical in severity. Furthermore, a significant association was found between categories of healthcare workers and classifications of insomnia symptoms. In this vein, although more medical practitioners compared to the non-medical practitioners reported subthreshold levels of insomnia symptoms, more non-medical practitioners than the medical practitioners manifest moderate and clinical symptoms of insomnia at the emergence of the COVID-19 pandemic in Nigeria. Our finding is supported by previous studies showing that sleep problems in the form of different levels of insomnia are highly prevalent among healthcare workers in a time of a disease or infection outbreak such as the COVID-19 pandemic. For instance, a study found that more than one-third of medical staff in China reported insomnia symptoms during the outbreak of the COVID-19 pandemic in the first quarter of 2020 (Zhang et al., 2020). Similarly, another recent study reported that one-third of healthcare workers engaged in direct diagnosis and treatment of the COVID-19 in their study reported that they experienced insomnia (Fournier et al., 2022). In addition, a finding had also earlier reported insomnia problems among nurses in SARS caring unit during the 2003 SARS outbreak (Su et al., 2020).

Assessing the depressive symptoms among the selected healthcare workers in this study, it was revealed that a significant number of the participants reported minimal to severe depressive symptoms. Interestingly, while more of the medical practitioners reported mild and severe levels of depressive symptoms, moderate and moderately severe depressive symptoms were reported among the non-medical than the medical practitioners. The study results are consistent with the findings; for instance, in a survey of healthcare workers giving care to patients with COVID-19 in China, where over half of the participants reported symptoms of depression (Lai et al., 2020).

Regarding the experience of anxiety and posttraumatic stress symptoms during the third wave of the Covid-19 pandemic in Nigeria, the results show an insignificant difference in the prevalence reported by both the medical and the non-medical practitioners. The results, however, revealed that almost more than half of the sampled participants reported severe symptoms of anxiety. Also, about one-third of all the categories of healthcare workers reported severe posttraumatic stress symptoms. The fact that the majority of the selected healthcare workers during the emergence of the Covid-19 pandemic indicated the experience of severe anxiety and posttraumatic stress symptoms is of great concern. This may be explained by the fact that this population is exposed to direct physical contact with patients from all spheres of life who may on their part have been exposed to the virus thereby exposing the medical practitioners in the line of duty. This unavoidable circumstance is likely to increase anxiety and stress in healthcare workers across the country. As suggested by Levin (2019), the reasons for the non-disparity among the different categories of healthcare workers on post-traumatic stress and anxiety symptoms in this study may be attributed to the burden of treatment of COVID-19 patients coupled with the fact that the virus is novel and has no vaccine yet. Also, many of the healthcare workers may be afraid of infection and ultimately transmitting the disease to their loved ones.

Similar to our finding is research carried out among nurses during the 2003 SARS outbreak (Su et al., 2020). The authors reported a high prevalence of posttraumatic stress among
the participants. Furthermore, an insignificant difference was reported when comparing the two groups of nurses who worked in the SARS unit and nurses that worked in the non-SARS unit.

**Limitation of the study**

The researchers could not have direct access to the respondents for the study due to the COVID-19 pandemic lockdown, which included both healthcare practitioners and non-healthcare practitioners, and thus the few respondents who were assessed for the study during the pandemic may not be enough to generalize the current findings. Also, the current findings change if more respondents were involved. Also, the study instruments were responded to online, which might exclude the older healthcare workers who are not internet inclined. Besides, considering the sampling procedure utilized in this study, some sub-populations may have been underrepresented which may have also contributed to the uneven proportions of the medical and the non-medical practitioners that made up the sample for this study. Finally, the issue of response bias cannot be ruled out in the study since a self-report survey was conducted. Because of the highlighted limitations, the results presented might have influenced, calling for caution in the generalization of the findings. Based on the outcomes of our study, the following are recommended:

First, necessary and adequate provisions should be made by the government and other relevant stakeholders to expose the healthcare practitioners to training aiming at protecting and improving their mental wellness during the COVID-19 emergence and future pandemic.

Second, because the COVID-19 is a contagious viral infection, the provision of adequate personal protective equipment at healthcare facilities is crucial to protecting the healthcare workers, thus reducing their stress and anxiety emanating from fear of contracting the infection.

Thirdly, there is a need for mental health experts and stakeholders in Nigeria’s health care sector to form a synergy in policy formulation and collaborate in the discharge of services so that staff in need of psychological help could access it adequately either in traditional methods or teleservices as parts of new normal ways of dealing with the impacts of the covid-19 pandemic.

Finally, creating an environment and system to enhance making social support available to the healthcare workers to buffer the psychological distress experiences they are vulnerable to is recommended.

**Conclusions**

The current study shows a prevalent mental health challenge among healthcare workers during the emergence of the COVID-19 pandemic in Nigeria. Explicitly, our study exposed the differences in experiences of symptoms of insomnia and depression among the various categories of healthcare workers and the prevalent rate of insomnia, anxiety, depression, and posttraumatic stress symptoms as experienced by the healthcare workers in Nigeria during the third wave of COVID-19 pandemic. This study highlights the rate at which the third wave of the COVID-19 pandemic is affecting the mental health of the selected healthcare workers, which can later have a consequence on their duty to care for the patients.

**REFERENCES**


