

REVIEW ARTICLE

COVID-19 and the mental health of frontline healthcare workers in Nigeria

Aguh, J. I. ¹, & Adamu, V. E. ^{1, 2, 3}

¹ Public Health Department, Unicaf University, Zambia.

² Allied Health & Biological Sciences Department, Legacy University, Banjul, The Gambia.

³ School of Global Health & Bioethics, Euclid University (Pôle Universitaire Euclide)

ARTICLE INFO

Received: 10 January 2021

Accepted: 23 January 2021

Published: 10 March 2021

Keywords:

COVID-19 pandemic, mental health, healthcare workers, mental health outcomes

Peer-Review: Externally peer-reviewed

© 2021 The Authors.

Published by Orapuh, Inc. (info@orapuh.org)

Re-use permitted under CC BY-NC.
No commercial re-use or duplication.

Correspondence to:

Johanna I. Aguh
jipaguh@gmail.com

To cite:

Aguh, J. I., & Adamu, V. E. (2021). COVID-19 and the mental health of frontline healthcare workers in Nigeria. *Orapuh Journal*, 2(1), e802.

ISSN: 2644-3740

ABSTRACT

Introduction

Not many events can cause a standstill in economic and social life worldwide, but the world is facing one of the most unexpected events in the form of a deadly pandemic. COVID-19 has become a severe global health threat since its emergence.

Purpose

The study aimed to assess the effects of COVID-19 on the mental health of frontline healthcare workers in Nigeria.

Materials & methods

10 journal and 4 newspaper publications were used as study materials for this review. Search engines used were Google Scholar, ProQuest, Cochrane Library, PubMed, and EMBASE. We used Libraries to confirm if someone else has done a systematic review of the topic.

Results

This review confirmed that there was more psychological stress due to COVID-19 on the frontline and non-frontline healthcare workers than the general population in Nigeria. More studies showed that frontline healthcare workers have increased mental stress because of the direct contact they have with COVID-19 patients, and inadequate infrastructure and hospital supplies (PPE).

Conclusions

There need to be more studies on the mental health of Nigerian healthcare workers. The Nigerian Government needs to be more involved with improving mental health through health policies such as signing the mental health bill and creating a Mental Health Department in the Ministry of Health.

INTRODUCTION

Not many events can cause a standstill in economic and social life worldwide, but the world is facing one of the most unexpected events in the form of a deadly pandemic. The novel coronavirus, (COVID-19), was first reported in Wuhan, a city in China in December 2019 and was declared a global pandemic by the World Health Organization (WHO) on the 11th of March, 2020. COVID-19 has become a severe global health threat since its

emergence. It is caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (Enitan et al., 2020).

The first case of COVID-19 in Nigeria was reported on the 27th of February, 2020 and this index case was an Italian that arrived in Lagos, Nigeria. This led to the immediate activation of National Emergency Operation Centres, and three weeks later, there was an inauguration

of the Presidential Task Force on COVID-19 (Ebenso & Otu, 2020).

The psychosocial wellbeing of the populace is one of the major concerns globally since the outbreak of COVID-19. This has, especially, affected frontline healthcare workers and their ability to handle other everyday stressors (Shanafelt et al., 2020). A frontline healthcare worker is any health care worker who has been providing services to patients exposed to or has been diagnosed with COVID-19. Preventive measures to reduce the spread of COVID-19 include social distancing, quarantine, and/or self-isolation which has been found by various studies to increase mental health issues (Ho et al., 2020).

Frontline healthcare workers such as doctors, nurses, those in direct contact with COVID-19 patients and/or their body fluids are vulnerable to developing psychological symptoms during and post COVID-19 (Pappa et al., 2020). Some factors that also increase stress on the mental health of healthcare workers are high risk of exposure, increased workload, shortage of Personal Protective Equipment (PPE), anxiety about getting infected, conditions requiring ethically difficult decisions on the rationing of care, and the fear of spreading the virus to family and friends (Cao et al., 2020).

In Nigeria, the healthcare system for its citizens including healthcare workers is sub-optimal (Premium Times, 2020). Mental health is still an unresearched area of study with not enough specialists to attend to patients and frontline healthcare workers. The unprecedented mental health impact of the COVID-19 pandemic in Nigeria is yet to be established, hence, the need for this research (Lai et al., 2020; Shechter et al., 2020).

MATERIALS AND METHODS

Inclusion Criteria

Studies included in this Review were studies that discussed the mental wellbeing of frontline health care workers and the general populace in Nigeria and Africa. Studies written in English were used. Peer-reviewed journal articles, other researches, and newspaper articles with a focus on COVID-19 and the mental health of frontline healthcare workers were included.

Exclusion criteria

Studies with comorbidities were excluded.

Search Strategy

Studies on the effects of COVID-19 on the mental health of frontline healthcare workers in Nigeria were searched using five databases namely, Google Scholar, ProQuest Cochrane Library, PubMed, and EMBASE. Words used for the search include COVID-19, Mental Health, frontline healthcare workers, Nigeria, and Africa. We used Libraries to confirm if someone else had done a systematic review of the topic. A further search was done across websites of the ministries of health of West African countries and some other notable organisations.

Particular words and phrases were used for the search of journals so the Review is specific. The words and phrases include "COVID-19 in Nigeria", "COVID-19 in Africa", "Frontline Healthcare workers in Nigeria", "COVID-19 and Non-frontline healthcare workers", "COVID-19 and Mental health of frontline healthcare workers". The data for this study was collected by reviewing 30 journal and 10 newspaper publications. Finally, 10 journal, and 4 newspaper publications were used as review materials.

Studies Selected

A list of some of the journal, and newspaper articles used is shown in Table 1.

RESULTS

The first study (Anozie et al., 2020) was conducted in Alex Ekueme University Teaching Hospital, Abakaliki, Ebonyi State, South-Eastern part of Nigeria. The mental health of 315 frontline healthcare workers was assessed using the short form of mental health continuum (MHC-SF). The report confirmed that frontline healthcare workers (especially doctors and nurses) experienced psychological stress due to COVID-19.

Another study in the South-South part of Nigeria by Ogolodom et al. (2020) assessed psychological stress in 300 healthcare workers in the region. Results showed that 183 of the participants believed that they were exposed to COVID-19 at their place of work and 186 of the participants said their workplace was not safe, there was no social insurance policy for healthcare workers at their facility.

Erinoso et. al. (2020), used a 7-item generalized anxiety disorder (GAD-7) and a 9-item patient health questionnaire (PHQ-9) to assess the mental health of 105

Table 1:
Characteristics of some of the works reviewed

S/N	Author(s)	Title	Country	Article Type	Study Type	Study Duration
1	Anozie et al. (2020)	Mental Health Impact of COVID-19 Pandemic on Health Care Workers in Ebonyi State, Southeast, Nigeria	Nigeria	Journal	Cross-sectional study	1 Month
2	Adewole & Ajala (2020)	Psychological impact of covid-19 pandemic on medical and allied health care workers in Ibadan, Oyo state, Nigeria	Nigeria	Journal	Qualitative	27days
3	Ogolodom et al. (2020)	Knowledge, Attitudes and Fears of HealthCare Workers towards the Corona Virus Disease (COVID-19) Pandemic in South-South, Nigeria	Nigeria	Journal	Descriptive	18 days
4	Erinoso et al. (2020)	Effect of COVID-19 on mental health of frontline health workers in Nigeria: A preliminary cross-sectional study	Nigeria	Journal	Cross-Sectional Study	3 months
5	Miner et al. (2020)	Are Health Workers in Nigeria Prepared for the COVID-19 Pandemic? A Case Study of Selected Health Workers in Plateau State, Nigeria	Nigeria	Journal	Cross-sectional study	1 month
6	Agberotimi et al. (2020)	Interactions between socioeconomic status and mental health outcomes in the Nigerian context amid covid-19 pandemic: a comparative study	Nigeria	Journal	Peer-reviewed Ex Post Facto research design	1 Month
7	Kwaghe et al. (2020)	Stigmatization, psychological and emotional trauma among frontline health care workers treated for COVID-19 in Lagos State, Nigeria: A qualitative study	Nigeria	Journal	Qualitative	11days
8	Olaseni et al. (2020)	Psychological distress experiences of Nigerians amid COVID-19 pandemic	Nigeria	Journal	Qualitative	1 Month
9	Rakhmanov et al. (2020)	A Brief Communication: Anxiety and Depression Levels in the Staff of a Nigerian Private University during COVID 19 Pandemic Outbreak.	Nigeria	Journal	Qualitative study	1 Month
10	Adaeze (2020)	The Impact of COVID-19 Loneliness on Mental Health	Nigeria	Newspaper	Newspaper Article	Not Available
11	Muanya (2020)	The Place Of Mental Sanity In The COVID-19 Pandemic	Nigeria	Newspaper	Newspaper Article	Not Available

frontline healthcare workers who work in 3 (out of 10) isolation centres with intensive care unit in Lagos, Nigeria. The study observed that frontline healthcare workers who spent more time in these centre had a higher probability of moderate to severe depression compared to other healthcare workers. Furthermore, frontline healthcare workers who had COVID-19-like symptoms had higher levels of anxiety and are prone to depression.

[Agberotimi et al. \(2020\)](#) conducted a study to assess the mental health outcomes among healthcare workers and the general population with consideration to their

socioeconomic status. A total of 884 Nigerians who live in Nigeria participated in this study 382 healthcare workers and 502 general population. Impact of Event Scale-Revised (IES-R), Generalized Anxiety Disorder (GAD-7), Patient Health Questionnaire (PHQ-9), and Insomnia

Severity Index was used to access the data. The study revealed that there is an increase in psychological stress on healthcare workers compared to the general population.

Another study done in Lagos by [Kwaghe et al. \(2020\)](#) conducted a study on frontline healthcare workers who were recovering from COVID-19 infection. The study

showed that the participants were traumatized morally and psychologically and felt stigmatized.

DISCUSSION

COVID-19 has become a world-wide pandemic and a great cause for concern especially for those healthcare workers who are working tirelessly to manage and support the people with this disease (Pappa et al., 2020). The importance of psychological evaluation amongst healthcare workers cannot be over-emphasized because mental health problems could have long-term effects on their personal and professional well-being (Adewole & Ajala, 2020).

The studies reviewed agreed that better attention should be paid to mental health in Nigeria, especially with regards to frontline healthcare workers (Agberotimi et al., 2020; Ogolodom et al., 2020). Although frontline healthcare workers are knowledgeable about COVID-19, inadequate supply of PPE and fear of infection are factors that put more pressure on the already overburdened staff in Nigeria (Ogolodom et al. 2020).

Studies from other parts of the world support the fact that increased pressure, both physically and mentally on frontline healthcare workers who manage people infected with diseases is detrimental to their health (Lee et al., 2018). This has prompted various meta-analyses and systematic reviews with a recent one suggesting that 70%-75.2% of healthcare workers were already suffering from the burn-out, pre-COVID-19 pandemic period (Erschens et al., 2019).

A study from this review, Erinoso et al. (2020), reported that, about 10% of frontline healthcare workers self-reported, at least, mild anxiety and depressive symptoms in Lagos State during the COVID-19 pandemic. This was much higher than the figures of the general population, which reported about 3.5% and 5.5% anxiety and depressive symptoms respectively. Another study by Hu et al. (2020) adds to these findings, stating that the rate of mental ill-health of frontline healthcare workers was most likely to increase during the COVID-19 pandemic.

From the studies reviewed, frontline healthcare workers have even more pressure than non-frontline healthcare workers because they come in direct contact with patients who have highly infectious diseases. This finding is supported by Anozie et al. (2020) who stated that this

could be related to the tiresome work involved in caring for COVID-19 patients as well as the higher risk of infection as a result of exposure to these patients. This underscores the importance of providing psychological support to healthcare workers during a pandemic.

Studies reviewed also revealed that both Frontline healthcare workers and non-frontline healthcare workers suffer from different forms of worry, risk of infection, and anxieties during a pandemic. Kwaghe et al. (2020) reported that both frontline healthcare workers and non-frontline healthcare workers were quite informed about COVID-19, but when some of the frontline healthcare workers were confirmed to be positive, their reactions ranged from denial of status, anxiety, and disorientation to fear of stigmatization. In Kwaghe's study, none of the non-frontline healthcare workers tested positive. This was supported by a study conducted in Oman, which stated that frontline healthcare workers were 1.5 times more likely to suffer from anxiety and insomnia when compared to non-frontline healthcare workers (Alshekaili et al., 2020).

There have been numerous reported deaths - on the newspapers and other media, of frontline healthcare workers who contracted COVID-19 (Kursumovic et al., 2020; *The Independent News*, 2020). In Nigeria, Punch Health-wise (2020), also reported deaths of frontline healthcare workers and this had led to the stigmatization of the sufferers of Covid-19. Kwaghe et al. (2020) reported that while some families, friends, and colleagues were empathic and supported their friends who may have contracted COVID-19, others were negative towards them and alienated themselves from them. This increases mental stress for these frontline healthcare workers.

CONCLUSION

This review highlights the importance of assessing psychological distress among healthcare workers in Nigeria during the Covid-19 pandemic. Further research, with a longer duration, into the subject matter, is imperative as pandemics may have long-term implications for the professional and personal wellbeing of frontline healthcare workers. Follow-up studies are also necessary to aid researchers to assess the psychological distress of the post-pandemic period.

Acknowledgments: The authors are indebted to Mr. Obiora Aguh and Dr. Adaobi Anakwe whose contributions have made this article possible. We also thank all the authors whose works have enriched this review.

Ethics Approval: No ethical approval was sought for this work.

Conflict of Interest: None declared.

OrCID iDs: Nil identified.

Open access: This review article is distributed following the Creative Commons Attribution Non-Commercial (CC BY- NC 4.0) license. This license permits people to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: <https://creativecommons.org/licenses/by-nc/4.0/>.

REFERENCES

- Adebwole, A. A., & Ajala, E. M. (2020).** Psychological impact of COVID-19 pandemic on medical and allied health care workers in Ibadan, Oyo state, Nigeria. *African Journal of Psychological Study of Social Issues*, 23, 108-118. <http://www.ajpssi.org/index.php/ajpssi/article/view/438>.
- Alshekaili, M., Hassan, W., Al Said, N., Al Sulaimani, F., Jayapa, S. K., Al-Mawali, A., Chan, M. F., Mahadevan, S., & Al-Adawi, S. (2020).** Factors associated with mental health outcomes across healthcare settings in Oman during COVID-19: frontline versus non-frontline healthcare workers. *BMJ Open*, 10, e042030. <https://doi.org/10.1136/bmjopen-2020-042030>.
- Anozie, O. B., Nwafor, J. I., Nwokporo, E. I., Esike, C. U., Ewah, R. L., Eze, J. N., Azuogu, B. N., & Ukaegbe, C. I. (2020).** Mental Health Impact of COVID-19 Pandemic on Health Care Workers in Ebonyi State, Southeast, Nigeria. *International Journal of Innovative Research in Medical Science (IJIRMS)*, 5(9), 1-7. <https://doi.org/10.23958/ijirms/vol05-i09/955>.
- Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., Dong, J., & Zheng, J. (2020).** The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry Research*, 287, e112934. <https://doi.org/10.1016/j.psychres.2020.112934>.
- Ebenso, B., & Otu, A. (2020).** Can Nigeria contain the COVID-19 outbreak using lessons from recent epidemics? *Lancet Global Health*, 8(6), E770. [https://doi.org/10.1016/S2214-109X\(20\)30101-7](https://doi.org/10.1016/S2214-109X(20)30101-7).
- Enitan, S. S., Ibeh, I. N., Oluremi, A. S., Olayanju, A. O., & Itodo, G. E. (2020).** The 2019 Novel Coronavirus Outbreak: Current Crises, Controversies and Global Strategies to Prevent a Pandemic. *International Journal of Pathogen Research*, 4(1), 1-16. <https://doi.org/10.9734/IJPR/2020/v4i130099>.
- Erinoso, O., Adejumo, O., Fashina, A., Falana, A., Amure, M. T., Okediran, O. J., Abdur-Razzaq, H., Anya, S., Wright, K. O., & Ola, B. (2020).** Effect of COVID-19 on mental health of frontline health workers in Nigeria: A preliminary cross-sectional study. *Journal of Psychosomatic Research*, 139, 110288. <https://doi.org/10.1016/j.jpsychores.2020.110288>.
- Erschens, R., Keifenheim, K. E., Herrmann-Werner, A., Loda, T., Schwille-Kiuntke, J., Bugaj, T. J., Nikendei, C., Hunh, D., Zipfel, S., & Junne, F. (2019).** Professional burnout among medical students: systematic literature review and meta-analysis. *Medical Teacher*, 41(2), 172-183. <https://doi.org/10.1080/0142159x.2018.1457213>.
- Ho, C. S., Chee, C. Y., & Ho, R.C. (2020).** Mental health strategies to combat the psychological impact of COVID-19 beyond paranoia and panic. *Annals of the Academy of Medicine Singapore*, 49(3), 155-160. https://www.researchgate.net/publication/340102758_Mental_Health_Strategies_to_Combat_the_Psychological_Impact_of_COVID-19_Beyond_Paranoia_and_Panic.
- Hu, D., Kong, Y., Li, W., Han, Q., Zhang, X., Zhu, L. X., Wan, S. W., Liu, Z., Shen, Q., Yang, J., He, H., & Zhu, J. (2020).** Frontline nurses' burnout, anxiety, depression, and fear statuses and their associated factors during the COVID-19 outbreak in Wuhan, China: a large-scale cross-sectional study. *Eclinical Medicine*, 24, 100424. <https://doi.org/10.1016/j.eclinm.2020.100424>.
- Kursumovic, E., Lennane, S., & Cook, T. (2020).** Deaths in healthcare workers due to COVID-19: the need for robust data and analysis. *Anaesthesia*, 75(8), 989-992. <https://doi.org/10.1111/anae.15116>.
- Kwaghe, A. V., Ilesanmi, O. S., Amede, P. O., Okediran, J. O., Utulu, R., & Balogun, M. S. (2020).** Stigmatization, psychological and emotional trauma among frontline health care workers treated for COVID-19 in Lagos State, Nigeria: A qualitative study. *Research Square*, 1-22, <https://doi.org/10.21203/rs.3.rs-53453/v1>.

- Lai, J., Ma, S., Wang, Y., Cai, Z., Hu, J., Wei, N., Wu, J., Du, H., Chen, T., Li, R., Tan, H., Kang, L., Yao, L., Huang, M., Wang, H., Wang, G., Liu, Z., & Hu, S. (2020). Factors Associated With Mental Health Outcomes Among Health Care Workers Exposed to Coronavirus Disease 2019. *JAMA*, 3, e203976.32202646. <https://doi.org/10.1001/jamanetworkopen.2020.3976>.
- Lee, S. M., Kang, W. S., Cho, A. R., Kim, T., & Park, J. K. (2018). Psychological impact of the 2015 MERS outbreak on hospital workers and quarantined hemodialysis patients. *Comprehensive psychiatry*, 87, 123-127. <https://doi.org/10.1016/j.comppsy.2018.10.003>
- Ogolodom, M. P., Mbaba, A. N., Alazigha, N., Erondy, O. F., Egbe, N. O., Golden, I., Ugwuanyi, D. C., Achi, G. I., & Eke, C. M. (2020). Knowledge, Attitudes and Fears of HealthCare Workers towards the Corona Virus Disease (COVID-19) Pandemic in South-South, Nigeria. *Health Science Journal*, 1(2), 1-10. <https://doi.org/10.36648/1791-809X.S1.002>.
- Pappa, S., Ntella, V., Giannakas, T., Giannakoulis, V. G., Papoutsis, E., & Katsaounou, P. (2020). Prevalence of depression, anxiety, and insomnia among healthcare workers during the COVID-19 pandemic: a systematic review and meta-analysis. *Brain, Behavior and Immunity*, 88, 901-907. <https://doi.org/10.1016/j.bbi.2020.05.026>.
- Premium Times. (2020). JOHESU: Nigeria healthcare workers to commence strike. Retrieved from <https://www.premiumtimesng.com/news/top-news/414255-nigerias-health-workers-johesu-to-commence-strike-monday.html> on 25:07:2020.
- Punch-health-wise. (2020). 812 healthcare workers infected with COVID-19. Retrieved from <https://healthwise.punchng.com/812-healthcare-workers-infected-with-covid-19-ncdc/>.
- Shechter, A., Diaz, F., Moise, N., Anstey, D. E., Ye, S., Agarwal, S., Birk, J. L., Brodie, D., Cannone, D. E., Chang, B., Claassen, J., Cornelius, T., Derby, L., Dong, M., Givens, R. C., Hochman, B., Homma, S., Kronish, I. M., Lee, S. A. J., ...Abdalla, M. (2020). Psychological distress, coping behaviors, and preferences for support among New York healthcare workers during the COVID-19 pandemic. *General Hospital Psychiatry*, 66, 1-8. <https://doi.org/10.1016/j.genhosppsych.2020.06.007>.
- Shanafelt, T., Ripp, J., & Trockel, M. (2020). Understanding and addressing sources of anxiety among health care professionals during the COVID-19 pandemic. *JAMA*, 323(21), 2133-2134. <https://doi.org/10.1001/jama.2020.5893>.
- The Independent News. (2020). 900 healthcare workers affected by COVID-19. Retrieved from <https://www.aa.com.tr/en/europe/90-000-healthcare-workers-infected-with-covid-19-icn/1831765> on 25:07:2020.