

Psychological Impact of Covid-19 on Frontline Health Workers

AUTHOR(S): OJEYINKA, Bolanle, Elizabeth (RN, RPN, RPHN, BNSc.),
OHAERI, Beatrice (RN, Ph.D), OJO, Iyanuoluwa O. (RN, Ph.D),
BABARIMISA, Oluwatoyin (RN, M.Sc.)

Abstract

Coronavirus also known as COVID-19 belongs to the same family of viruses responsible for severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome for and zoonotic and person- to-person is its mode of transmission. The emergence of this pandemic has been a massive test for health-care systems in terms of their capabilities and weaknesses. A crucial effect of this pandemic has been its' impact on staff mental health Evidence that Covid-19 pandemic impacts significantly on psychological well-being of Health Care Workers (HCWs) exists. The psychological effect ranges from, loneliness, competency concerns when redeployed without adequate training, inadequate and cumbersome personal protective equipment (PPE), personal fear and anxiety can result in further dissonance and moral distress, prolonged separation from family and other support systems if quarantined, frequent exposure to patients suffering and dying among others. It is therefore recommended that adequate infection control training, better welfare package and more support from colleagues and other support systems to ensure there is no deviation to the illness side of the mental continuum.

Keywords: COVID-19, Frontline, Health workers, Psychological,

E.G.C.S.J

Accepted 15 October 2022
Published 31 October 2022
DOI:10.5281/zenodo.7551732

**ABOUT
AUTHOR**

Author(s):

OJEYINKA, Bolanle, Elizabeth (RN, RPN, RPHN, BNSc.)

Department of Nursing,
University of Ibadan, Ibadan, Nigeria

OHAERI, Beatrice (RN, Ph.D)

Department of Nursing,
University of Ibadan, Ibadan, Nigeria

OJO, Iyanuoluwa O. (RN, Ph.D)

Department of Nursing,
University of Ibadan, Ibadan, Nigeria
and

BABARIMISA, Oluwatoyin (RN, M.Sc.)

Department of Nursing,
University of Ibadan, Ibadan, Nigeria

Introduction

The novelty of Coronavirus infection makes it a scourge that is sweeping across continent increasing frequency of zoonotic spillovers leading to human infections and transmission. Coronavirus also known as COVID-19 belongs to the same family of viruses responsible for severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome for which zoonotic and person- to-person transmission have been confirmed (WHO, 2020).

Evidence that Covid-19 pandemic impacts significantly on psychological well-being of Health Care Workers (HCWs) exists. Frontline Health care workers often must respond to demanding and unforeseen medical emergencies, worry about contracting and spreading the disease, competency concerns when redeployed without adequate training, inadequate and cumbersome personal protective equipment (PPE), and frequent exposure to patients' suffering and dying. Additionally, quarantine may result in prolonged separation from family and other support systems. Many frontline health care workers feel conflicted between their sense of duty and their willingness to work during a pandemic and trying to strike a balance between professional responsibility and altruism and personal fear and anxiety can result in further dissonance and moral distress (Adams & Walls, 2020).

Covid-19 has had severe economic, social, political and cultural consequences on human life and these consequences will be experienced well into the future. The emergence of this pandemic has been a massive test for health-care systems in terms of their capabilities and weaknesses. A crucial effect of this pandemic has been its' impact on staff mental health (Chen, et al., 2020). The high mortality rate, high disease transmission capacity, and the shortcomings of health systems have had a significant impact on the mental health and psychological well-being of employees (Greenberg, et al, 2020).

Concept of Covid-19 Pandemic

Corona viruses are single stranded RNA viruses and several subtypes affecting humans have been identified. They mostly cause respiratory tract infections that can range from mild to lethal coronaviruses include those responsible for Severe Acute Respiratory Syndrome (SARS-COV-1). In 2019, a new coronavirus was identified as the cause of a disease outbreak that originated in China. The virus is now known as the severe acute respiratory syndrome Coronavirus 2 (SARS-COV-2), the disease it causes is called coronavirus disease 2019 (COVID-19). In March 2020, the World Health Organization (WHO) declared the COVID-19 outbreak a pandemic.

The origin of the word pandemic lies in Greek, in which pan means "all" and demos means "people." Thus, the word pandemic originally meant all people. It now refers to an infectious disease that spreads globally and causes mortality on a significant scale. In epidemiology, endemics refer to local outbreaks, whereas epidemics refer to sudden outbreaks. There have been several outbreaks of infectious diseases that have become pandemic in the course of human history (e.g.; viral infections such as smallpox, influenza, and AIDS; bacterial infections such as the plague, syphilis, cholera, tuberculosis, and typhus; and protozoan infections such as malaria) (Liu, et al., 2020).

Pandemic disease is an epidemic that has spread over a large area; it is prevalent throughout the entire country, continent or the whole world. WHO says it is a worldwide spread of a new disease. On March 11, WHO officially declared the COVID-19 outbreak as a pandemic due to global spread and severity of the disease. Pandemic can be used for a disease that has spread across an entire country or a large land mass, continents or the entire world. Endemic is used

to describe a disease that is restricted to a particular location, region or population e. g malaria is said to be endemic in tropical regions.

Mode of Spread of COVID-19

In the scientific brief of WHO in March, mode of transmission of COVID-19 were explained; respiratory infections can be transmitted through droplets of different sizes; when the droplet particles are less than 5 micrometer in diameter, they are referred to as droplet nuclei, but when greater than 5 micrometer, they are referred to as respiratory droplets. Current evidence showed it can be transmitted through contacts and respiratory droplets (WHO 2020)

Droplets transmission occurs when a person is in close contact (within 1m) of with someone who has respiratory symptoms (e.g coughing and sneezing) and is therefore at risk of having his or her mucosae (mouth and nose) or conjunctiva (eyes) exposed potentially to respiratory droplets, also through fomites in immediate environment of the infected person (Thomas, 2020). Direct contact with infected person or indirect contact with objects used by the infected person can also be a mode of transmission. Airborne transmission of nuclei can occur in settings where procedures that support aerosols are performed like endo-tracheal intubation, tracheostomy, cardio pulmonary respiration among others.

Coronavirus is a respiratory virus known to cause illness such as common cold, headache, breathing problem and severe acute respiratory syndrome. Coronavirus can be transmitted from animal-to-human and human-to-human. The coronavirus is spread from human to human through feco-oral, droplets and direct contact with an incubation period of 2-14 days (Baud, et al., 2020). So far, no treatment or vaccine has been recommended explicitly for coronavirus. Application of the preventive measure to control coronavirus is the paramount critical intervention.

In the scientific brief of World Health Organization in March, mode of transmission of COVID-19 were explained; respiratory infections can be transmitted through droplets of different sizes; when the droplet particles are less than 5 micrometer in diameter, they are referred to as droplet nuclei, but when greater than 5 micrometer, they are referred to as respiratory droplets. Current evidence showed it can be transmitted through contacts and respiratory droplets (Wang, et al., 2020). Droplets transmission occurs when a person is in close contact (within 1m) with someone who has respiratory symptoms (e.g coughing and sneezing) and is therefore at risk of having his or her mucosae (mouth and nose) or conjunctiva (eyes) exposed potentially to respiratory droplets. It could also be through fomites in immediate environment of the infected person (Shigemura, et al., 2020).

Direct contact with infected person or indirect contact with objects used by the infected person could also cause infection. Airborne transmission of nuclei can occur in settings where procedures that support aerosols are performed like endo-tracheal intubation, tracheostomy, cardio-pulmonary respiration among others.

On average it takes 5-6 days from when someone who is infected with the virus for symptoms to show. The virus is transmitted primarily through respiratory droplets and contacts with infected persons. People with underlying medical conditions like cardiovascular conditions, diabetes, chronic respiratory disease and cancer will develop serious complications if they contract COVID-19. Till date, there is no cure for COVID-19, clinical trials however is ongoing and prevention is the only available way to manage the virus (Azlan, 2020; Thomas, 2020; Baud, et al., 2020; Bhagavathula & Shehab, 2020).

The infection source of coronavirus (COVID-19) is mainly patients with SARSCoV-2 infection. Asymptomatic infected patients may also become the source of infection, mainly via aerosols from the respiratory tract, but also through direct contact. Elderly people with underlying diseases are more likely to be infected with the virus and develop severe disease and children and infants are also at risk (Thomas, 2020).

Role of Frontline Health Workers

The majority of infected or symptomatic people seek medical treatment in medical facilities, particularly hospitals, as a high number of cases, especially those in critical condition, will have an impact on hospitals (Adams & Walls, 2020). The concept of hospital resilience in disaster situations is defined as the ability to recover from the damage caused by huge disturbances quickly. The resilience of hospitals to pandemic cases depends on the preparedness of the institutions, and not all hospitals have the same resilience. A lower resilience will affect the sustainability of the health services. This also affects healthcare providers such as doctors, nurses, and allied health professionals (Adams & Walls, 2020).

Frontline health workers played a major role in the early days of the palliative care movement. They continue to be involved in the provision of palliative care, both in the community and in institutional settings. Although family and professional healthcare workers provide the majority of end-of-life care, volunteers take up several roles, for example, assisting with recreational and social programmes, visiting patients, taking them out and providing companionship and support.

These tasks are considered as core to providing quality palliative care. Previous studies show that frontline health workers can positively influence the quality of care for both the person who is dying and those close to them by reducing stress, offering practical and emotional support and providing a link to the community (Quill & Abernethy, 2013).

Volunteerism in palliative care as the time freely given by individuals, with no expectation of financial gain, within some form of organised structure other than the already existing social relations or familial ties, with a palliative approach, i.e. the intention of improving the quality of life of adults and children with terminal illnesses and those close to them (family and others). Volunteers do not have an employment contract or statutory appointment within the organisation in which they perform these tasks. Frontline health workers provide palliative direct patient care in both dedicated and generalist palliative care services. Frontline health workers are extensively used in dedicated palliative care settings and community care settings, providing care as well as more supportive tasks, and provided with a wide range of training (Baud, et al., 2020).

Frontline health workers are people who are willing to give their time to help another person, group or organisation, and a number of initiatives have been undertaken to provide respite care through the use of volunteers. From the perspective of volunteers, training programmes have been found to be a relevant factor in improving care-giving outcomes. However, in one particular volunteer care-giving study, only 58% of frontline health workers were willing to provide respite services after having received training. Volunteering is linked to the well-being of the older person providing the volunteering, becoming a protective factor for the negative effects of low self-esteem. Particularly, individuals who volunteer as respite caregivers tend to be emotionally resilient.

In recent years, there has been an increase in awareness of the role of caregivers in management of their love ones that are medically ill. Some of the roles include helping patients in taking their baths, washing their cloths, taking their prescribed drugs and feeding

patients, cleaning up patients when they soil their bed spread, cloths, or body with urine, feaces, or with vomits (Kurland, 2003). Others include helping patients to toilet, providing buckets where patients will pass out their urine or feaces (especially for patients who are unable to stand up from their bed), staying awake at night or waking up at interval at night to monitor the progress of patients, serving as a supportive aid when patients want to walk around.

Furthermore, care-giving has been linked to adverse physiological health outcome. Some of the physiological outcomes include elevated blood pressure, heightened cardiovascular reactivity, risk for coronary heart disease, elevated stress hormone levels, lower immune functioning and even increase in mortality among spousal caregivers (Lupied, 2011). In addition, these could be that some caregivers often feel unprepared to provide care, have inadequate knowledge to deliver care, and receive little guidance from the formal health care providers. Due to inadequate knowledge and skills, caregivers may be unfamiliar with the type of care they must provide or the amount of care needed for their ill love ones. Some caregivers may not know how to access and best utilize available resources. As a result, caregivers often neglect their own health care needs in order to assist patients and this may likely predispose them to psychological distress.

Psychological Impact of Covid-19 on Frontline Health Workers

COVID-19 is highly infectious, which make caregivers even more worried about their family members, subsequently making them more anxious, stressed and more inclined to adopt negative coping methods. Inadequate training in infection control, lack of knowledge and unclear specific tasks increased perceived personal risk and reduced willingness to work. Protection training can help to understand the nature of infectious diseases, standardize protection measures, enhance confidence, and improve caregivers' compliance with infection control measures, thus reducing the risk of disease transmission. Protection training is necessary, especially for the highly infectious COVID-19 (Azlan, 2020).

Several studies showed that the frontline health care workers experienced mental and psychology stress related problems and poor quality of life during crisis are linked to negative attitude and inadequate knowledge about COVID-19 infection. Some of these challenges A cross-sectional study from Iran reported that 53.0% of frontline health care workers were burned out in the pandemic COVID-19 period and this was associated with poor knowledge and negative attitude (Azlan, 2020). Another review reported higher ranges of burned out among physicians specifically for emotional exhaustion, depersonalization, and low personal accomplishment (Chevance, et al, 2020). Additionally, social isolation, particularly when staff were exposed to prolonged quarantine, and the fear of infecting their family or having an infected family member were reported as reasons for higher rates of stress related illnesses in HCWs during crisis. Moreover, staff may be worried due to feelings of uncertainties faced with critically ill patients (Chen, et al, 2020).

Healthcare workers are at the frontline defense against the coronavirus disease 2019 (COVID-19) pandemic. Inadequate knowledge and incorrect attitudes among frontline healthcare workers can directly influence practices and lead to delayed diagnosis, poor infection control practice, and spread of disease. Frontline healthcare workers' burden is associated with health problems such as compassion fatigue and poor quality of life that often force some health care workers to relinquish care roles to long-term care. Frontline health care workers are not only often exposed to high levels of stress, anxiety, and depression, but are equally exposed to sleep disturbances, frustration, hopelessness, and poorer quality of life during

their care giving roles due to fragile nature of such disease. However, little is known about the factors that predict quality of life of healthcare workers in the fight against COVID-19. In unprecedented times like the COVID-19 crisis, it has become extremely challenging for front liners because of the loneliness brought about by the confinement and isolation that exacerbates the mental wellbeing of caregivers (Baloch, et al., 2020).

Although everyone is under immense stress from trying to cope with the pandemic, frontline health care workers are faced with unique challenges ranging from protecting themselves, their families, and patients, to working longer hours, and in some cases, being forced to stretch their personal protective equipment (PPE) in very risky ways (American Nurses Association, 2020).

Bhagavathula, et al., (2020) revealed in a survey that loneliness level had increased tremendously, 40% of respondents revealed they are lonely, their relationships are not meaningful and they feel isolated. They also stated that lack of connection heightens health risks and make people more prone to alcohol and smoking. Man are social animals, daily exposure to news about Coronavirus may result in a range of reactions which may be emotional, physical, mental or behavioral. Coping with isolation has brought unprecedented challenge for daily life especially physical separation as a result of social distancing of 2 meters guidelines, no hugs and pats like before but elbow greetings. It is obvious human needs social gathering, social interaction, contacts and connection to survive, if not seen with positive perspective, social distancing may be seen as social isolation (Bhagavathula, et al., 2020; Renton & Berlinger, 2020).

It is well recognized that care-giving can adversely affect psychological adjustment of the family caregiver as well as increase caregiver burden. Although the majority of caregivers adjust well, up to 30% of caregivers, particularly those caring for patients with advanced disease will have significant psychological distress (Kim, 2018; Xiang, et al., 2020). Factors that have been shown to adversely affect caregiver psychological adjustment include metastatic disease, graver prognosis, increased length of illness, increased patient distress, and increased patient symptoms. Often, the caregiver is the one most responsible for managing the side effects of treatment and symptoms of disease as the patient's condition deteriorate (Xiang, et al., 2020).

The distress that they experience not only may affect their ability to care for the patient, but also may impact their ability to provide emotional support, to support activities of daily living, and to assist with other physical aspects of care (Adams & Walls, 2020). The distress experienced by the caregiver also may be affected by the type of treatment the patient is receiving. The caregiver may, thus, experience wide swings in the amount of physical and emotional care they provide. The immediate post-hospitalization period is the most critical period for caregivers, who frequently report concerns about how they were going to manage and worrying about their own health (Liu, et al., 2020).

Thus, the degree of burden experienced by the caregiver is an important concern. It has been shown that the more time the caregiver spends doing tasks for the patient, the more the caregiver's schedule is altered and the more the caregiver experiences emotional distress and suffering. It also has been shown that providing emotional support for the patient and others is perceived to be among one of the more difficult tasks for the caregiver (Adams & Walls, 2020; Liu et al., 2020).

Empirical Studies on Psychological Impact of Covid-19 on Frontline Health Workers

Sun, et al., (2020) reported that caregivers' normal working hours and workloads have increased by approximately 1.5–2 times due to the COVID-19 outbreak (Sun et al., 2020). During the pandemic in Turkey, nurses' workplaces have been changed, and new nurses have been recruited to be able to fill out the health workforce. All nurses have been trained in the pandemic, with priority given to nurses who were recently beginning in the profession. Hospital managers have made the necessary arrangements to protect pregnant nurses or nurses with chronic disorders. However, these new arrangements may have caused the working conditions to worsen and the routines to change.

Liu, et al., (2020) report that healthcare professionals should be informed about preventing and controlling infection and that hospitals should provide safe working environments (Liu, et al., 2020). It has also been reported that the following points could contribute to bettering personal and team performance: the authorities providing information about personal protective equipment, setting maximum working hours and reasonable shift times to protect nurses from excessive workload, providing information on ethical dilemmas that may occur in connection with the outbreak and using supportive statements and effective communication techniques (Adams & Walls, 2020; Vincent & Creteur, 2020). In addition, effective communication, clear descriptions of individual and team roles, the establishment of standardised procedures and the development of a sense of belonging can help prevent conflicts caused by differences in procedures and communication while working with staff from various specialties and clinics (Karam, et al., 2018).

Another study has found that the caregivers felt fear and anxiety; their obsessions increased, and they showed depressive symptoms. These findings are supported by other studies reporting that healthcare professionals have felt negative emotions, such as anxiety and fear, in the early stages of the pandemic (Liu, et al., 2020). These psychological reactions are normal reactions to crises. However, the rapid spread of COVID-19, its treatment being unclear and healthcare workers becoming infected and dying in many countries may have triggered these reactions. Also, in this process, some participants living with their families (i.e. worrying they might infect their loved ones), being stigmatised by society or being in the process of social isolation or quarantine, may have increased their anxiety and fear.

Frontline health workers caring for COVID-19 patients have been reported to be at risk for various mental problems later in the pandemic (World Health Organization, 2020; Xiang, et al., 2020). Thus, monitoring caregivers' mental problems and implementing early intervention methods, such as professional psychological counselling and strengthened crisis support systems, are recommended (Chevance, et al., 2020; Liu, et al., 2020).

It has also been reported that health personnel in the quarantine process have experienced burnout, have been unable to fulfil their professional and family roles, have experienced deteriorating job performance and have felt a high desire to resign (Brooks, et al., 2018). McRae, et al., (2009) conducted a study that linked loneliness and caregivers' psychological distress. Their sample included eighty-seven caregivers of patients with Parkinson's disease that were selected from caregivers of persons with Parkinson's disease association in the western United States. They used Revised University of California, Los Angeles loneliness Scale, Social Provisions Scale, Multi health Locus of Control Scale and Perceived self-efficacy Scale for data collection. Hierarchical regression analyses result indicate that caregivers with less education, lower perceived self-efficacy and poorer physical health experienced greater loneliness and are externally in health locus of control. Result also indicated that persons

attending caregivers support groups reported less loneliness, more perceived support and are internally in health locus of control.

Conclusion

Although there are many ways in which mental health might be adversely affected by pandemic, coronavirus epidemics were associated with a significant psychological burden in both the acute and post-illness stages. Clinicians should be aware of the possibility of depression, anxiety, fatigue, post-traumatic stress disorder, and rarer neuropsychiatric syndromes in the aftermath. In the current COVID-19 pandemic, there is already evidence of delirium acutely and clinicians should be alert to the possibility of high rates of common mental disorders in the longer term. Hence, high quality peer reviewed research into psychiatric symptoms of patients infected with SARS-CoV-2 as well as into potential mitigating factors and interventions is needed.

References

- Adams, J. G., & Walls, R. M. (2020). Supporting the health care workforce during the COVID-19 global epidemic. *Journal of the American Medical Association*, 323(15), 1439–1440. <https://doi.org/10.1001/jama.2020.3972>
- Azlan A.A (2020) Public knowledge, attitudes and practices towards COVID-19: A cross-sectional study in Malaysia. *PLoS ONE* 15(5)
- Baloch, S., Baloch M.A, Zheng, T., & Pei, X. (2020). The Coronavirus Disease 2019 (COVID-19) Pandemic. *The Tohoku journal of experimental medicine*; 250(1), 271-278.
- Baud, D., Qi, X., Nielsen-Saines, K., Musso, D., Pomar, L. & Favre, G., (2020). Real estimates of mortality following COVID-19 infection. ([https://doi.org/10.1016/S1473-3099\(20\)30195-X](https://doi.org/10.1016/S1473-3099(20)30195-X)). (Accessed 25/04/2020)
- Bhagavathula, A.S., Aldhalee, W.A., Rahmani, J., Mahabadi, M.A. & Bandari, D.K. (2020). Novel Coronavirus (COVID-19) Knowledge and Perceptions: A Survey on Healthcare workers, <https://doi.org/10.1101/2020.03.09.20033381>
- Bhagavathula, A.S. & Shehab, A. (2020). The story of mysterious pneumonia and the response to deadly novel coronavirus (2019-nCoV): So far! *Emirates Medical Journal*, 1, 7-10.
- Chen, Q., Liang, M., Li, Y., Guo, J., Fei, D., Wang, L. & Zhang, Z. (2020). Mental health care for medical staff in China during the COVID-19 outbreak. *The Lancet*. 7(4):e15–e16. [https://doi.org/10.1016/S2215-0366\(20\)30078](https://doi.org/10.1016/S2215-0366(20)30078)
- Chevance, A., Gourion, D., Hoertel, N., Llorca, P. M., Thomas, P., Bocher, R. & Masson, M. (2020). Ensuring mental health care during the SARS-CoV-2 epidemic in France: A narrative review. *L'Encephale*, 46, S3–S13. <https://doi.org/10.1016/j.encep.2020.03.001>
- Greenberg, N., Docherty, M., Gnanapragasam, S., & Wessely, S. (2020). Managing mental health challenges faced by healthcare workers during covid-19 pandemic. *The BMJ*, 368, m1211. <https://doi.org/10.1136/bmj.m1211>
- Karam, M., Brault, I., Van Durme, T., & Macq, J. (2018). Comparing inter-professional and inter-organizational collaboration in healthcare: A systematic review of the qualitative research. *International Journal of Nursing Studies*, 79, 70–83. <https://doi.org/10.1016/j.ijnurstu.2017.11.002>
- Kim, Y. (2018). Nurses' experiences of care for patients with Middle East respiratory syndrome-coronavirus in South Korea. *American Journal of Infection Control*, 46(7), 781-787.

- Kurland, L. (2003). A qualitative analysis of sibling loss by sudden death during adolescence. *Dissertation Abstracts International: Section B: The Sciences and Engineering*, 64, 23-29.
- Liu, S., Yang, L., Zhang, C., et al., (2020). Online mental health services in China during the COVID-19 outbreak. *Lancet Psychiatry*, 7: e17-18
- McRae, C., Fazio, E., Hartsock, G., Kelley, L., Urbanski, S., & Russell, D.(2009). Predictors of loneliness in caregivers of persons with Parkinson's disease. *Parkinsonism Related Disorder*, 15(8), 554-570.
- Quill, T.E. & Abernethy, A.P. (2013). Generalist plus specialist palliative care – creating a more sustainable model. *N Engl JMed*; 368(1), 1173-1175
- Renton, O. and Berlinger, A. (2020). The latest on coronavirus pandemic, CNN, Aug 17, 2020
- Shigemura, J., Ursano, R. J., Morganstein, J. C., Kurosawa, M., and Benedek, D. M. (2020). Public responses to the novel 2019 coronavirus (2019-nCoV) in Japan: Mental health consequences and target populations. *Psychiatry Clinical Neuroscience*, 74, 281-282. doi: 10.1111/pcn.12988
- Sun, N., Shi, S., Jiao, D., Song, R., Ma, L., Wang, H., & Wang, H. (2020). A qualitative study on the psychological experience of caregivers of COVID-19 patients. *American Journal of Infection Control*, 48, 592-598. <https://doi.org/10.1016/j.ajic.2020.03.018>
- Thomas, Z. (2020) Misinformation on coronavirus causing 'infodemic'. <https://www.bbc.com/news/technology-51497800> (Accessed 23/04/2020)
- Vincent, J. L., & Creteur, J. (2020). Ethical aspects of the COVID-19 crisis: How to deal with an overwhelming shortage of acute beds. *European Heart Journal: Acute Cardiovascular Care*, 9, 248-252. <https://doi.org/10.1177/2048872620922788>
- Wang, C., Pan, R., Wan, X., et al. (2020). Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. *International Journal of Environ. Res. Public Health*, 17(1), 1729. doi: 10.3390/ijerph17051729.
- World Health Organisation (WHO) (2020a). Pneumonia of Unknown Cause – China. URL <https://www.who.int/csr/don/05-january-2020-pneumonia-of-unknown-cause-china/en/> (Accessed 27/09/2020).
- Xiang, Y. T., Yang, Y., Li, W., Zhang, L., Zhang, Q., Cheung, T., & Ng, C. H. (2020). Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed. *The Lancet Psychiatry*, 7(3), 228-229. [http://doi.org/10.1016/S2215-0366\(20\)30046-8](http://doi.org/10.1016/S2215-0366(20)30046-8)

Cite this article:

Author(s), OJEYINKA, Bolanle, Elizabeth (RN, RPN, RPHN, BNSc.), OHAERI, Beatrice (RN, Ph.D), OJO, Iyanuoluwa O. (RN, Ph.D), BABARIMISA, Oluwatoyin (RN, M.Sc.) , (2022). "Psychological Impact of Covid-19 on Frontline Health Workers". **Name of the**

Journal: Euro Global Contemporary Studies Journal, (EGCSJ.COM), P, 1- 11. **DOI:** <http://doi.org/10.5281/zenodo.7551732> , Issue: 5, Vol.: 2, Article: 1, Month: October, Year: 2022. Retrieved from <https://www.ijarbas.com/all-issues/>

Published by



AND

ThoughtWares Consulting & Multi Services International (TWCMSI)

