

Assessing the mental health impacts of COVID-19 on Healthcare Workers in South Africa: A Systematic Review

Baloyi A.P¹, Ncube A², Raphela Tlou D.³

Abstract

This paper looks at the impact of COVID-19 on the mental health of healthcare workers (HCWs) in public health facilities in South Africa. The pandemic's massive caseload forced HCWs to work longer hours and multiple shifts without any breaks, frequently with fewer resources, and in questionable facilities. Methodology: The qualitative study used evidence-based bibliometrics to explore how the COVID-19 pandemic affected the mental health of HCWs in public health facilities in South Africa. A world-curated search was conducted on Google Scholar and Scopus to obtain a relevant sample of peer-reviewed journal articles from March 2020 to August 2022. Through content analysis, the research presented in this paper highlights the lived experiences of HCWs at the forefront of the COVID-19 pandemic. Study findings and conclusions: The study found five themes that emerged from the contents: 1) Perceptions of COVID-19. The HCWs did not have much knowledge of COVID-19, which brought about a lot of fear and anxiety. 2) Working experience during the COVID-19 pandemic, reports of HCWs from the studies analysed showed that the HCWs had to work longer hours and sometimes without the required PPE to protect them from contracting the virus. 3) Mental health support from health facilities; while mental health support services were offered, not all HCWs sought assistance for various reasons. 4) How mental health support can be improved: more support was suggested in the form of fostering a culture of health and wellness because burned-out and distressed HCWs typically do not seek help. 5) Mental health impact. This study, based on the papers analysed, concludes that COVID-19 had a negative impact on the mental health of HCWs in public health facilities in South Africa. The content analysis revealed that many HCWs developed PTSD while others developed anxiety and depression.

Keywords: COVID-19, disaster, healthcare workers, Google Scholar, Scopus, content analysis.

Introduction

Public health disasters are increasing worldwide (Moradi et al., 2021). This can be attributed to the increase in global travel and integration, environmental exploitation, land use changes, and climate change (Benson and Clay, 2003). Increased epidemiological hazards and disasters are a striking feature in the disaster management discourse. COVID-19 is one of the recent pandemics that brought the world to a standstill (Hussain, Mirza, and Hassan, 2020). The increase in the number of disasters comes with the responsibility of response, recovery, and relief activities that call for more resources, including human resources, to carry out the above activities (McEntire, 2021).

Human resources in disaster management are critical, as any successful disaster management activity needs qualified individuals to carry out the fieldwork (Tomaszewski, 2020)—a lack of resources results in an increase in fatalities and destruction of property and people's livelihoods. The response to COVID-19 in South Africa has tested all aspects of disaster management, considering that the pandemic was sudden and novel and required that the government activate health resources to respond.

When COVID-19 was declared a pandemic, HCWs were at the forefront of relief and response efforts worldwide (Sami et al., 2021). Health-related disorders have increased, and so has the role of emergency preparedness and response. During the COVID-19 outbreak, the focus was on stopping the spread of the

¹ Disaster Management Training and Education Centre for Africa, University of the Free State, 205 Nelson Mandela Dr, Park West, Bloemfontein, 9301, South Africa

² Disaster Management Training and Education Centre for Africa, University of the Free State, 205 Nelson Mandela Dr, Park West, Bloemfontein, 9301, South Africa

³ Disaster Management Training and Education Centre for Africa, University of the Free State, 205 Nelson Mandela Dr, Park West, Bloemfontein, 9301, South Africa. Corresponding Author: madeizen@gmail.com; RaphelaTD@ufs.ac.za

disease, testing, contact tracing, and critical patient care, so the psychological needs of HCWs were often neglected.

Response efforts to health-related disasters focus on saving lives, preventing further fatalities, and destroying property (Peters et al., 2019). The HCWs, the frontline and first responders during pandemics, are critical in ensuring the response and relief activities are executed to prevent or mitigate the loss of lives (Scannell and Scannell, 2021). The National Centre for Biotechnology Information (NCBI) describes a healthcare worker as anybody who helps the sick and injured, whether directly as a doctor or nurse or indirectly as an assistant, lab technician, or waste disposal specialist (Joseph and Joseph, 2016). Considering the increase in the severity of health-related disasters, the role of emergency preparedness and response in public health has increased, and so has the responsibilities of HCWs (Malilay et al., 2014).

In South Africa, in 2020, after the pandemic was declared a national state of disaster, HCWs were at the forefront of response and relief efforts. It was assumed they should be well-trained in emergency response and planning, as the disaster was a rapid onset (Wu, Styra, and Gold, 2020). Through the presidency, the country went into lockdown, with the highest-level being level 5, which meant the government was on a hard lockdown. When the rest of the country was under hard lockdown, HCWs had to continue working and offer health services in line with the disaster management regulations gazetted then. This put them in a precarious and vulnerable situation. They put their lives at risk of infections and death due to COVID-19. Even though preventative measures were put in place, they were still at an increased risk of contracting the virus compared to any other South African individual. HCWs put their lives at risk, and the situation affected them psychologically as the virus was new, and there were no clear-cut preventative measures to mitigate the impact on the HCWs (Khan, 2022). The mental implications and well-being of HCWs globally have become a big issue (Biber et al., 2022). However, in South Africa, literature on the mental health impact of HCWs is scanty. This could be because South Africa, as a developing country, is dealing with a series of socio-economic issues that are deemed more pressing than mental health issues. Indeed, mental health issues in developing and most African countries are neglected, frowned and stigmatised as they are believed to be a sign of weakness in the African context (Pederson et al., 2023).

This study, therefore, gathered data from the literature that reported the impact of COVID-19 on the mental health of South African healthcare workers to ascertain the issues of Mental health that could be engendered or exacerbated by disaster within the healthcare systems of South Africa. Mental Health issue literature that they are seen as a sign of mental

Research Design

The research utilized evidence-based bibliometrics of COVID-19 on the mental health of HCWs in public health facilities in South Africa. The content analysis methodology was used to fulfill the purpose of this study. Content analysis is described as the objective, systematic, quantitative analysis of the characteristics of a message (Neuendorf, 2017). It has been argued that all content analysis is qualitative. Stemler (2015) describes content analysis "as a technique for examining the content of many types of data, including verbal and visual data." Content analysis is often used in nursing research and is quickly gaining popularity in the literature on medicine and bioethics (Forman and Damschroder, 2007). Content analysis primarily studies social behavior and subjective experiences without altering them by examining visual or textual forms of human communication (Riffe et al., 2023).

Understanding meanings and experiences is the goal of qualitative research methodologies. Therefore, they have the potential to be particularly helpful in the context of mental health since they can offer fresh perspectives and information in difficult-to-understand and complex areas, such as understanding the subjective experiences of mental disorders and their treatments (Austin and Sutton, 2014). Using a content analysis methodology, the authors investigated participant behaviour and experiences without interfering. The authors looked at and assessed academic, peer-reviewed research studies that looked at the mental health of HCWs in public health facilities in South Africa.

Data Collection

Data for this study was collected through a literature review and finalised in 2022. A web search was conducted on Google Scholar and Scopus to obtain a relevant sample of peer-reviewed journal articles on the impact of COVID-19 on the mental health of HCWs in public health facilities in South Africa from March 2020 to August 2022. The initial search was for the effects of COVID-19 on the mental health of HCWs in Southern Africa, and it generated 170,000 results. A second search utilizing "COVID-19", "coronavirus," "SARS-COV-2", "mental health," "HCWs," "public hospitals," and "South Africa" as keywords, returned 568 results on Google Scholar and 33 results on Scopus. Google Scholar has mostly mini dissertations and theses that have not been published, and the study was looking for published articles. The articles were narrowed down to five on Google Scholar and six on Scopus based on the above criteria.

Furthermore, the 563 articles that were excluded from the initial Google Scholar search results and 27 from the Scopus search results were also because of the following reasons: 1) The research articles focused on the impact of COVID-19 on the mental health of the general population and not specifically of HCWs; 2) The research study did not fall within the period between March 2020 and August 2022; 3) The research study was conducted outside the borders of South Africa. ; and 4) The research study was conducted on HCWs in private health facilities (studies that were conducted on both public and private health facilities were included).

The literature scan shows, and data collected from this review highlight the negligible mental health issues in South Africa. In particular, mental health issues of HCWs amidst the COVID-19 pandemic. This study is qualitative; therefore, the sample size of 11 is enough to make inferences about South Africa, considering the novelty of the COVID-19 pandemic. Indeed, mental health issues are stigmatised in most African countries. Therefore, this study is essential to assist in destigmatising mental health issues in the country by reporting what other researchers found in different Provinces of South Africa.

While the study used data that was in the public domain and did not collect any Primary data, the study still applied for ethical clearance at the University of the Free State General Human Ethics Committee (protocol number UFS-HSD2022/1714/22) for the committee to gauge the plausibility of the data collection methods and to see if the process was reproducible.

Data analysis

A total of 601 journal articles were obtained from Google Scholar and Scopus regarding COVID-19 and its impact on the mental health of HCWs in health facilities in South Africa. The content of each article was reviewed as part of the data analysis process to confirm that all delimitations were met. After validation, the requirements for this content analysis were only met by 11 journal articles. The study adopted Bruan and Clarke's (2006) thematic analysis process to code and analyse the data. Thematic analysis is a technique for finding, analysing, and reporting patterns (themes) in data (Braun and Clarke, 2006). A theme is a significant aspect of the data related to the research topic and denotes a level of patterning or significance within the data set (Braun and Clarke, 2006). Thematic analysis is a six-step process depicted in Figure 1 below.

Figure 1 illustrates Bruan and Clark's (2006) six-step thematic analysis process.

Key Findings

Five themes emerged from the thematic analysis and are discussed below as the key findings of this review.

Theme 1: Perceptions of COVID-19

The HCWs did not have much knowledge of COVID-19, and this brought about a lot of fear and anxiety. What they knew about the virus mainly was what they heard, which was not all official information from reliable sources. They thought that because they were in close contact with COVID-19 patients, they would

contract the virus. They were also afraid of passing the virus to their colleagues and family members, which impacted the quality of care they were providing.

Theme 2: Working experience during COVID-19 pandemic

The HCWs had difficulty providing efficient medical care to their patients during the COVID-19 pandemic because of the new conditions they had to work under. They had to work longer hours and sometimes without the required PPE to protect them from contracting the virus. Some HCWs purchased PPEs from their funds, which should have been provided by the public health facilities they work for. Even so, the HCWs adapted to their "new normal" and found alternative ways to provide efficient care. The HCWs in public health facilities have shown resilience throughout the pandemic.

Theme 3: Mental health support from health facilities

Most HCWs were offered mental health support by the public health facilities they were employed at during the COVID-19 pandemic. Although these services were offered, not all HCWs sought assistance for various reasons. For some HCWs, it was because of the fear of stigmatisation, and for some, it was because they were raised to be strong, and seeking mental health support would make them look weak. Some HCWs chose alternative methods, both healthy and unhealthy, to deal with the stress brought on by the COVID-19 pandemic. Those who decided on healthy ways confided in their family members exercised, watched their favorite television shows, and spent time with friends and family. Those who chose unhealthy ways abused substances.

Theme 4: How mental health support can be improved

Preventive measures should include making the workplace more supportive by fostering a culture of health and wellness because burned-out and distressed HCWs typically do not seek help. Priority should be given to managing mental health vulnerability and taking systemic steps to protect the mental health of HCWs. Mental health education and training are essential for HCWs to understand the importance of mental health support.

Theme 5: Mental health impact

COVID-19 had a negative impact on the mental health of HCWs in public health facilities in South Africa. The content analysis revealed that many HCWs developed PTSD while others developed anxiety and depression. People with PTSD do not usually seek help and have a two to five times higher risk of having suicidal thoughts and trying to commit suicide (Lombard, Spijkerman, and Van Rooyen, 2022). Some HCWs reported a variety of negative feelings that they could not explain. Frontline HCWs experience more stress during pandemics due to working harder and longer hours, fear of contracting the disease, and having to make life-or-death decisions for patients. The COVID-19 pandemic exposed the flaws in the world's health systems, where a lack of beds, oxygen, and COVID-19-related illness and mortality had a severe negative influence on HCWs' mental health (Yang et al., 2022).

In a country like South Africa, where the public health sector is already understaffed and under pressure from both internal and cross-border migration dynamics, the onset of COVID-19 caused so much pressure that public health facilities found it difficult to cope with the demand. Human geographic mobility is significant in South Africa because of frequent temporary and permanent relocation, primarily from rural to metropolitan areas. Such mobility may impair patient access to and use healthcare services (Ginsburg et al., 2021). In addition to internal migration, South Africa has a lot of cross-border migrants, both documented and undocumented. The COVID-19 pandemic's additional stress and trauma aggravated this problem (Chingono et al., 2022).

Discussion

The content analysis revealed that: (1) HCWs initially did not know much about COVID-19, and this brought about a lot of anxiety; (2) HCWs suffered from burnout because of the caseload and the long working hours during the COVID-19 pandemic; (3) Some HCWs developed mental health illnesses such as anxiety, depression, and PTSD; (4) HCWs managed to adapt to their new working conditions and found different ways to cope; (5) HCWs were offered mental health support by the public health facilities they were employed at during the COVID-19 pandemic. However, not all of them were comfortable using the services for various reasons; (6) Some HCWs mentioned that the mental health support services offered were helpful, while some communicated how the services could be improved. Findings from the content analysis support the principle that although HCWs developed a mental illness due to the stress brought on by the COVID-19 pandemic, they can adapt and become resilient.

During the COVID-19 outbreak, the focus was on stopping the spread of the disease, testing, contact tracing, and critical patient care. The psychological needs of HCWs were often neglected. Therefore, support resources were not always available. Typically, scarce resources are not made available to control or lessen the consequences of pandemics on mental health and well-being. This may be understandable during the acute phase of an outbreak, but as health professionals concentrate on testing, containing the outbreak, and critical patient care, psychological and psychiatric needs should never be overlooked.

COVID-19 was a rapid-onset disaster; the world was not prepared for it. In the future, every nation must establish a public health emergency response system to coordinate all pandemic efforts both before and after an outbreak. Although South Africa responded early to the pandemic, the COVID-19 regulations and the hard lockdown prevented the health system from being fully prepared for the pandemic. The health system was already overburdened and understaffed, and the pressure from the pandemic made the HCWs' working environment somewhat uncomfortable. A country like South Africa needs to have a public health emergency system that will bring in more HCWs as per the needs of every health facility to assist during pandemics. The number of HCWs needed by each public health facility should be predetermined according to the size of the facility and the average number of people expected to be treated. Having enough staff in a health facility will allow HCWs to work regular hours and prevent burnout.

Preventative measures should include making the workplace more supportive by fostering a culture of health and wellness because burned-out and distressed HCWs typically do not seek help. Priority should be given to managing mental health vulnerability and taking systemic steps to protect the mental health of HCWs.

Conclusion

HCWs experienced severe occupational stressors and challenges because of the COVID-19 pandemic. This, together with vulnerabilities such as working longer hours because health facilities were understaffed, anxiety and fear of contracting the virus because of a lack of PPE, and witnessing the loss of patients, colleagues, and family members, had a negative impact on the mental health of HCWs. HCWs experience mental health disorders. The content analysis found that the majority of the HCWs experienced PTSD. The HCWs also experienced anxiety and depression; however, PTSD was a recurring feature. Although HCWs were negatively affected by the COVID-19 pandemic, they found ways to cope and adapt to their new working conditions.

The COVID-19 pandemic revealed the need for mental health support in public health facilities. The content analysis found that HCWs who were offered and made use of the mental health support provided at the health facilities found the mental health services helpful.

References

- Akin, L. and Gözel, M.G., 2020. Understanding dynamics of pandemics. *Turkish Journal of Medical Sciences*, 50(9), pp.515-519.

- Austin, Z. and Sutton, J., 2014. Qualitative research: Getting started. *The Canadian Journal of Hospital Pharmacy*, 67(6), p.436.
- Benson, C. and Clay, E.J., 2003. Disasters, vulnerability, and the global economy. *Building safer cities: The future of disaster risk*, 3, pp.3-32.
- Biber, J., Ranesh, B., Lawrence, S., Malpani, V., Trinh, T.T., Cyders, A., English, S., Staub, C.L., McCausland, K.L., Kosinski, M. and Baranwal, N., 2022. Mental health impact on healthcare workers due to the COVID-19 pandemic: A US cross-sectional survey study. *Journal of patient-reported outcomes*, 6(1), p.63.
- Braun, V. and Clarke, V., 2006. Using thematic analysis in psychology. *Qualitative research in*
- Chingono, R.M., Nzvere, F.P., Marambire, E.T., Makwembere, M., Mhembere, N., Herbert, T., Maunganidze, A.J., Pasi, C., Chiwanga, M., Chonzi, P. and Ndhlovu, C.E., 2022. Psychological distress among healthcare workers accessing occupational health services during the COVID-19 pandemic in Zimbabwe. *Comprehensive Psychiatry*, 116, p.152321.
- Forman, J. and Damschroder, L., 2007. Qualitative content analysis. In *Empirical methods for bioethics: A primer* (pp. 39-62). Emerald Group Publishing Limited.
- Ginsburg, C., Collinson, M.A., Gómez-Olivé, F.X., Gross, M., Harawa, S., Lurie, M.N., Mukondwa, K., Pheiffer, C.F., Tollman, S., Wang, R. and White, M.J., 2021. Internal migration and health in South Africa: determinants of healthcare utilisation in a young adult cohort. *BMC Public Health*, 21, pp.1-15.
- Graneheim, U.H. and Lundman, B., 2004. Qualitative content analysis in nursing research: concepts, procedures, and measures to achieve trustworthiness. *Nurse Education Today*, 24(2), pp.105-112.
- Hussain, M.W., Mirza, T. and Hassan, M.M., 2020. Impact of COVID-19 pandemic on human behavior. *International Journal of Education and Management Engineering*, 10(8), pp.35-61.
- Joseph, B. and Joseph, M., 2016. The health of the healthcare workers. *Indian Journal of Occupational and Environmental Medicine*, 20(2), pp.71-72.
- Khan, Z., 2022. Psychological Trauma in Frontline Workers During Covid-19: A Review of Its Implications. *Frontline Workers and Women as Warriors in the Covid-19 Pandemic*, pp.133-147.
- Li, J., Ghosh, R. and Nachmias, S., 2020. In a time of COVID-19 pandemic, stay healthy, connected, productive, and learning: words from the editorial team of HRDI. *Human Resource Development International*, 23(3), pp.199-207.
- Madhav, N., Oppenheim, B., Gallivan, M., Mulembakani, P., Rubin, E. and Wolfe, N., 2018. Pandemics: risks, impacts, and mitigation.
- Malilay, J., Heumann, M., Perrotta, D., Wolkin, A.F., Schnall, A.H., Podgornik, M.N., Cruz, M.A., Horney, J.A., Zane, D., Roisman, R. and Greenspan, J.R., 2014. The role of applied epidemiology methods in the disaster management cycle. *American Journal of Public Health*, 104(11), pp.2092-2102.
- McEntire, D.A., 2021. Disaster response and recovery: strategies and tactics for resilience. John Wiley & Sons.
- Moradi, S.M., Nekoei-Moghadam, M., Abbasnejad, A. and Hasheminejad, N., 2021. Risk analysis and safety assessment of hospitals against disasters: A systematic review. *Journal of education and health promotion*, 10.
- Neuendorf, K.A., 2017. The content analysis guidebook. Sage. *Psychology*, 3(2), pp.77-101.
- Pederson, A.B., Konadu Fokuo, J., Thornicroft, G., Bamgbose, O., Ogunnubi, O.P., Oguniola, K. and Oshodi, Y.O., 2023. Perspectives of university health care students on mental health stigma in Nigeria: Qualitative analysis. *Transcultural psychiatry*, 60(2), pp.272-285.
- Pederson, A.B., Konadu Fokuo, J., Thornicroft, G., Bamgbose, O., Ogunnubi, O.P., Oguniola, K. and Oshodi, Y.O., 2023. Perspectives of university health care students on mental health stigma in Nigeria: Qualitative analysis. *Transcultural psychiatry*, 60(2), pp.272-285.
- Peters, D.H., Hanssen, O., Gutierrez, J., Abrahams, J. and Nyenswah, T., 2019. Financing common goods for health: core government functions in health emergency and disaster risk management. *Health Systems & Reform*, 5(4), pp.307-321.
- Riffe, D., Lacy, S., Watson, B.R. and Lovejoy, J., 2023. Analyzing media messages: Using quantitative content analysis in research. Routledge.
- Sami, S.A., Marma, K.K.S., Chakraborty, A., Singha, T., Rakib, A., Uddin, M.G., Hossain, M.K. and Uddin, S.N., 2021. A comprehensive review on global contributions and recognition of pharmacy professionals amidst COVID-19 pandemic: moving from present to future. *Future Journal of Pharmaceutical Sciences*, 7(1), p.119.
- Scannell, O. and Scannell, O., 2021. Learning from COVID-19 First Responders' Experience in a Medical Humanitarian Emergency Response Organisation. A contribution to the conception of training environments for emergency preparedness and response in conditions of resource scarcity.
- Stemler, S.E., 2015. Content analysis. *Emerging trends in the social and behavioral sciences: An Interdisciplinary, Searchable, and Linkable Resource*, pp.1-14.
- Tomaszewski, B., 2020. Geographic information systems (GIS) for disaster management. Routledge.
- Wu, P.E., Styra, R. and Gold, W.L., 2020. Mitigating the psychological effects of COVID-19 on healthcare workers. *Cmaj*, 192(17), pp.E459-E460.
- Yang, Y., Shang, W. and Rao, X., 2020. Facing the COVID-19 outbreak: What should we know and what could we do? *Journal of medical virology*.