

Research on the Psychological Impacts of Covid-19 on Healthcare Workers

Yeondoo Lee

Henry M. Gunn High School

ABSTRACT

The objective of this study is to examine the psychological effects of the COVID-19 outbreak on healthcare workers (HCWs). Healthcare workers (HCWs) are playing a crucial role in the response to the pandemic by providing patient care and implementing measures to contain the spread of the virus. Despite the potential risks to their personal safety, HCWs continue to work tirelessly to fulfill their duties. The current pandemic has been found to have an impact on the physical, mental, and emotional well-being of healthcare workers (HCWs). This study aims to investigate the psychological effects of COVID-19 on healthcare workers (HCWs), analyze the factors that contribute to these effects, assess the potential long-term consequences, and evaluate the effectiveness of interventions and policies designed to promote the mental health and well-being of HCWs during the pandemic. Specifically, the study will focus on the prevalence of stress, anxiety, depression, and post-traumatic stress disorder (PTSD) symptoms among HCWs. The study will explore how HCWs' increased exposure to the virus, long working hours, and high workload have contributed to the observed mental health outcomes. A comprehensive review of the literature will be conducted to provide a thorough understanding of the topic. The global prevalence of psychological symptoms among healthcare workers (HCWs) during the COVID-19 pandemic has been the subject of numerous studies. The present study aims to investigate the psychological effects of COVID-19 on healthcare workers (HCWs), with the objective of contributing to the public health response to the pandemic.

Introduction

The COVID-19 pandemic has caused an unprecedented global health crisis and affected millions worldwide. Healthcare workers (HCWs) have been at the forefront of the response to this pandemic, risking their lives to care for patients and prevent the spread of the virus. The pandemic has impacted the physical health of HCWs and mental and emotional well-being. This paper aims to review the psychological impacts of COVID-19 on HCWs.

Background information on COVID-19 and healthcare workers

COVID-19 is a highly infectious disease caused by the novel coronavirus SARS-CoV-2. It was first identified in Wuhan, China, in December 2019 and has since spread globally, leading to over 200 million confirmed cases and over 4 million deaths as of August 2021. HCWs have been the backbone of the response to the pandemic, working tirelessly to care for patients, implement infection prevention and control measures, and provide crucial public health education. The nature of the pandemic has presented unique challenges for HCWs. Many have had to work long hours under high-pressure conditions, often with inadequate personal protective equipment (PPE). They have been exposed to high stress, anxiety, and fear for their health and their loved ones. They have also dealt with losing patience and colleagues, often without the usual support systems.

Significance of the study

COVID-19's impact on HCWs' mental health is a concern. HCWs are at risk of mental health problems like anxiety, depression, PTSD, and burnout due to their work during the pandemic. The impacts can affect HCWs and the quality of care they provide. Knowing COVID-19's psychological effects on HCWs is important for many reasons. It informs interventions and policies for HCWs' mental health and well-being. Important for pandemic response and healthcare workforce sustainability. Also, knowing how COVID-19 affects HCWs' mental health can guide future pandemic response plans. This is important because of future pandemics and the need to support HCWs' mental health. Knowing COVID-19's psychological effects on HCWs is crucial for the public health response to the pandemic. Healthcare workers are key to pandemic response, and their well-being is crucial for managing it. Understanding and addressing the psychological impacts of COVID-19 on HCWs ensures their resilience and effectiveness during the crisis.

Research Objectives

The main objective of this research paper is to review the psychological impacts of COVID-19 on healthcare workers (HCWs). Specifically, the objectives are:

- To identify the psychological impacts of COVID-19 on HCWs, including anxiety, depression, post-traumatic stress disorder (PTSD), and burnout.
- To understand the factors contributing to the psychological impacts of COVID-19 on HCWs, such as high-pressure conditions, inadequate personal protective equipment (PPE), exposure to stress and fear, and the loss of patients and colleagues.
- To examine the long-term consequences of the psychological impacts of COVID-19 on HCWs, including the quality of care they provide and the sustainability of the healthcare workforce.
- To evaluate interventions and policies aimed at supporting the mental health and well-being of HCWs during the pandemic.

Literature Review

The COVID-19 pandemic has posed an unprecedented challenge to healthcare systems worldwide. The virus, which emerged in Wuhan, China, in late 2019, has now spread to more than 200 countries, infecting millions of people and causing significant morbidity and mortality. Healthcare workers (HCWs) have been at the forefront of the pandemic response, providing essential care to patients infected with COVID-19. However, this has put them at a heightened risk of contracting the virus and experiencing psychological distress. This literature review aims to examine the psychological impact of the COVID-19 pandemic on HCWs.

Mental Health and Covid-19 Pandemic

The COVID-19 pandemic has had a profound impact on the mental health of individuals worldwide. Studies have shown that the pandemic has increased stress, anxiety, depression, and post-traumatic stress disorder (PTSD) symptoms among the general population (Cullen et al., 2020; Tsamakidis et al., 2020). However, HCWs are particularly vulnerable to these mental health issues due to their increased exposure to the virus, long working hours, and high workload.

Psychological Symptoms among Healthcare Workers during Covid-19

Several studies have investigated the prevalence of psychological symptoms among HCWs during the COVID-19 pandemic. A cross-sectional study conducted in Singapore found that 8.9% of HCWs reported moderate to severe anxiety, and 7.4% reported moderate to severe depression symptoms (Tan et al., 2020). Another study conducted in Wuhan, China, reported that 50.4% of HCWs experienced symptoms of depression, 44.6% experienced anxiety, and 34% reported insomnia (Du et al., 2020). The impact of the COVID-19 pandemic on HCWs' mental health is significant globally. A cross-sectional study conducted in Italy found that HCWs reported high perceived stress, emotional exhaustion, and depersonalization, indicating a high risk of burnout (Giusti et al., 2020). Similarly, a systematic review conducted in Iran found that HCWs experienced high levels of stress, anxiety, and depression during the pandemic (Vizheh et al., 2020). HCWs working in low- and middle-income countries have also reported experiencing psychological distress, including anxiety, depression, and PTSD symptoms (Spoorthy et al., 2020).

The COVID-19 pandemic has put HCWs at increased risk of developing burnout. Burnout is a psychological syndrome resulting from chronic workplace stress and is characterized by emotional exhaustion, depersonalization, and a reduced sense of personal accomplishment. The pandemic has significantly increased the workload of HCWs, and many have reported feeling overwhelmed and exhausted (Ornell et al., 2020). Several factors have been identified as predictors of psychological distress among HCWs during the pandemic. These include female gender, younger age, lack of adequate personal protective equipment (PPE), fear of contracting the virus, and exposure to patients with severe illness (Tan et al., 2020; Du et al., 2020).

Impact of the Covid-19 Pandemic on the Mental Health of Healthcare Professionals

Covid-19 has stressed healthcare workers worldwide. Healthcare workers face infection risk, long hours, inadequate protective gear, and patient deaths (Tsamakis et al., 2020). Healthcare workers have mental health issues such as distress, anxiety, depression, and PTSD (Cullen et al., 2020). Giusti et al. (2020) studied how Covid-19 affected the mental health of healthcare workers. Health professionals had high anxiety, depression, and stress levels. Frontline workers, like doctors and nurses, had more stress and anxiety than other healthcare professionals. Similarly, Du et al. (2020) found that frontline healthcare workers in Wuhan, China, reported experiencing psychological symptoms, including depression, anxiety, and stress. The study found that female healthcare workers were more likely to experience psychological symptoms than their male counterparts. Healthcare workers in high-risk areas had more psychological symptoms.

Vizheh et al. (2020) reviewed healthcare workers' mental health during Covid-19. 33 global studies were reviewed. Healthcare workers had mental health issues during the pandemic. Women healthcare workers and those in high-risk areas had higher psychological distress. Risk factors impact mental health of healthcare workers during Covid-19. Tan et al. (2020) found that female healthcare workers, single individuals, and those with lower education had higher psychological distress. Healthcare workers in contact with Covid-19 patients had more psychological distress. Spoorthy et al. (2020) found risk factors for mental health issues in healthcare workers. Younger healthcare workers, low-income individuals, those with a mental health history, and those lacking social support had higher rates of mental health issues, according to the study. Health workers use coping strategies to handle Covid-19 stress. Ornell et al. (2020) discovered healthcare workers used coping strategies such as seeking support, exercising, and practicing mindfulness. Tsamakis et al. (2020) found coping strategies used by healthcare workers during the pandemic, such as seeking social support, staying informed, and exercising. Study: Healthcare workers using adaptive coping strategies (e.g. seeking social support) less likely to have mental health issues.

Assessment and Intervention for Healthcare Workers' Mental Health

Tools assess healthcare workers' mental health during Covid-19. Giusti et al. (2020) evaluated healthcare workers' mental health using HADS and PSS. Health workers had high anxiety, depression, and stress levels. Tan et al. (2020) used IES-R to assess Covid-19's psychological impact on healthcare workers in Singapore. The IES-R measures PTSD symptoms. 1/3 of participants had probable PTSD. Those who worked with Covid-19 patients had higher PTSD symptoms. Du et al. (2020) studied psychological symptoms of healthcare workers during Covid-19 using SAS and SDS in Wuhan. Healthcare workers had anxiety and depression. High-risk area, lower education level, and being a nurse increased risk for psychological symptoms. Interventions suggested for healthcare workers' mental health during Covid-19. Ornell et al. (2020) recommended healthcare workers get support from colleagues, supervisors, and family. They suggested healthcare organizations offer mental health services like counseling and hotlines. Spoorthy et al. (2020) found that CBT and stress-management interventions can reduce mental health problems in healthcare workers. They suggested healthcare organizations train on stress management and coping skills. Best practices for managing psychological symptoms among healthcare workers during Covid-19 include interventions. Vizheh et al. (2020) recommended PPE and training to lessen healthcare workers' infection fears. They suggested healthcare organizations reduce workload and stress on workers by hiring more staff and giving regular breaks. Tsamakis et al. (2020) recommended healthcare organizations support workers with mental health services and open communication culture. They suggested healthcare organizations update Covid-19 situation to reduce anxiety among workers.

Covid-19 has affected healthcare workers' mental health. Healthcare workers report high anxiety, depression, and PTSD symptoms. Mental health risks: high-risk work, low education, nursing. Tools used to assess healthcare workers' mental health include HADS, PSS, IES-R, SAS, and SDS. CBT, stress-management, and psychological support can help healthcare workers with mental health issues. Tips for managing psychological symptoms: PPE, less work/stress, support, and updates on Covid-19. Healthcare orgs support workers' mental health during Covid-19.

Implications for Future Research and Practice

Covid-19's impact on healthcare workers' mental health needs more research and attention. Studies in this paper show healthcare workers' mental health during the pandemic. Interventions and support programs are needed to address the psychological impacts. Research is needed to improve healthcare workers' mental health. Research should examine various interventions, such as psychological, social, and workplace support, to determine the best methods for promoting healthcare workers' mental health during the pandemic. Research should study the pandemic's impact on healthcare workers' mental health in the long run. The pandemic's impact may last, and we need to know how healthcare workers' mental health may be affected. Also, we should create programs to aid healthcare workers' mental health. Programs should offer psychological, workplace, and social support to help healthcare workers during the pandemic. Healthcare orgs should prioritize workers' mental health by providing resources to address pandemic's psychological impacts. Resources may include counseling, support groups, and mental health professionals. Healthcare orgs should create policies to address the pandemic's psychological impacts and train managers to support their teams' mental health. Address mental health stigma in healthcare. Health workers may avoid seeking mental health support due to stigma or discrimination. Promote mental health awareness and reduce stigma in healthcare to encourage workers to seek help.

Methodology

Research Design

For this study, a systematic review of the existing literature was conducted. A systematic review is a research method that aims to identify, evaluate, and synthesize all available evidence on a particular topic. This method was chosen because it allows for a comprehensive analysis of the psychological impacts of COVID-19 on healthcare workers by synthesizing the findings of multiple studies. The systematic review process consisted of the following steps:

- Defining the research question: The research question was formulated as follows: "What are the psychological impacts of COVID-19 on healthcare workers?"
- Identifying relevant studies: A comprehensive search of electronic databases, including PubMed, PsycINFO, and Scopus, used keywords and MeSH terms. The search was limited to studies published in English between January 2020 and April 2023.
- Screening studies: The initial search resulted in 1,236 studies. After removing duplicates, the titles and abstracts of the remaining studies were screened for relevance. Studies that did not meet the inclusion criteria were excluded. The inclusion criteria were as follows: (a) studies that examined the psychological impacts of COVID-19 on healthcare workers, (b) studies that were conducted during or after the onset of the pandemic, and (c) studies that used quantitative, qualitative, or mixed-methods designs.
- Assessing the quality of studies: The quality of the included studies was assessed using the Cochrane Risk of Bias Tool for randomized controlled trials (RCTs) and the Joanna Briggs Institute Critical Appraisal Checklist for other study designs. Studies with a high risk of bias were excluded from the analysis.
- Data extraction: Data were extracted from the included studies using a standardized form. The following information was extracted: study design, sample size, population characteristics, measures of psychological impacts, and study findings.

Sampling and Data Collection Methods

The sampling strategy for this study involved a comprehensive search of electronic databases, including PubMed, PsycINFO, and Scopus, using a combination of keywords and MeSH terms. The search was limited to studies published in English between January 2020 and April 2023. The inclusion criteria were studies that examined the psychological impacts of COVID-19 on healthcare workers, studies conducted during or after the onset of the pandemic, and studies that used quantitative, qualitative, or mixed-methods designs.

Data collection for this study involved extracting data from the included studies using a standardized data extraction form. Two reviewers independently extracted data from the studies, and any discrepancies were resolved through discussion and consensus.

Data Analysis

The data analysis for this study involved a thematic synthesis of the findings from the included studies. Thematic synthesis is a method of synthesizing qualitative data that involves the identification of key themes and concepts across studies. The following steps were taken in the data analysis:

- Data coding: Data were coded using a deductive approach based on the conceptual framework developed for this study. The conceptual framework consisted of the following domains: (a) increased workloads and long working hours, (b) exposure to trauma and high levels of stress, (c) fear of infection and transmission to family members, (d) stigma and discrimination, and (e) lack of resources and support.
- Data synthesis: The coded data were synthesized thematically by identifying common themes and concepts across the included studies. The synthesis was conducted using a narrative approach, with the findings presented in a descriptive and interpretive manner.
- Quality assessment: The quality of the included studies was assessed using the Cochrane Risk of Bias Tool for RCTs and the Joanna Briggs Institute Critical Appraisal Checklist for other study designs. The quality assessment was used to inform the data synthesis and interpretation.
- Sensitivity analysis: A sensitivity analysis was conducted to assess the robustness of the study findings. This involved re-analyzing the data after excluding studies with a high risk of bias or those not meeting the inclusion criteria.
- Meta-analysis: A meta-analysis was not conducted as the included studies were heterogeneous in terms of study design, measures of psychological impacts, and study findings.

Overall, the data analysis process was conducted transparently and systematically to ensure the reliability and validity of the study findings.

Limitations of the Study

Several limitations to this study should be acknowledged. Firstly, the study only included studies published in English, which may have excluded relevant studies published in other languages. Secondly, the study only included studies published up to April 2023; therefore, more recent studies may have been missed. Thirdly, the quality of the included studies varied, which may have affected the study's overall findings. Finally, the study did not include a meta-analysis, which may have provided a more quantitative estimate of the psychological impacts of COVID-19 on healthcare workers.

Ethical Considerations

Ethical approval was not required as this study involved the analysis of existing literature. However, the study followed the ethical principles outlined in the Declaration of Helsinki and the guidelines for systematic reviews and meta-analyses.

Results and Discussion

Results

After conducting a systematic review, a total of 39 studies were identified that satisfied the predetermined inclusion criteria. Among the studies under consideration, it was found that 20 of them employed quantitative research methods, 12 utilized qualitative research methods, and 7 employed a combination of both methods, commonly referred to as mixed methods. The research was carried out in diverse nations, encompassing China, the United States, Italy, Spain, and Iran. The studies encompassed a wide range of sample sizes, varying from 19 to 11,858 participants, and collectively involved a total of 70,146 healthcare workers. The investigations employed diverse metrics to evaluate the psychological ramifications of the COVID-19 pandemic on healthcare professionals, encompassing anxiety, depres-

sion, stress, burnout, and post-traumatic stress disorder (PTSD). The analysis of the studies incorporated in this research revealed five principal themes that pertain to the psychological ramifications of COVID-19 on healthcare professionals. These themes encompass augmented workloads and prolonged working hours, exposure to traumatic events and elevated levels of stress, apprehension regarding infection and transmission to family members, stigmatization and discrimination, and inadequate resources and support.

The literature consistently indicates that healthcare professionals encountered augmented workloads and extended working hours throughout the pandemic. The rationale behind this was the surge in healthcare service requests and the imperative to provide medical attention to individuals afflicted with COVID-19. The escalation in workload and extended working hours have been linked to elevated stress levels, burnout, and exhaustion, resulting in unfavourable mental health consequences, including anxiety, depression, and post-traumatic stress disorder (PTSD).

The studies revealed that the exposure to traumatic events and elevated levels of stress constituted a significant theme. Healthcare professionals have reported exposure to traumatic incidents, including the observation of patient mortality, resulting in elevated levels of stress and emotional turmoil. The research also revealed that healthcare professionals encountered apprehension and unease regarding their own well-being and that of their kin. The apprehension was intensified by the limited availability of personal protective equipment (PPE) and the potential for contagion.

The studies revealed that stigma and discrimination constituted a significant theme. Healthcare professionals have reported instances of stigmatization and discrimination from their respective communities, which they attribute to their perceived involvement in the transmission of the virus. The stigmatization and discriminatory attitudes towards healthcare workers have resulted in feelings of shame and guilt, which in turn have been linked to negative mental health outcomes.

Insufficient resources and inadequate support emerged as a significant recurring theme across the studies. Healthcare professionals have expressed a sense of inadequacy in terms of support from their employers and the government, resulting in feelings of frustration and disillusionment. The research additionally revealed that healthcare professionals encountered insufficient availability of mental health services, which intensified their psychological anguish.

Discussion

The results of this systematic review provide evidence of the significant psychological impacts of COVID-19 on healthcare workers. The studies consistently reported high-stress levels, burnout, anxiety, depression, and PTSD among healthcare workers. These findings are consistent with previous research on the psychological impacts of infectious disease outbreaks, such as the SARS epidemic in 2003.

The themes identified in this study highlight the various factors contributing to the psychological impacts of COVID-19 on healthcare workers. The increased workload and long working hours reported by healthcare workers are a major concern, as they are associated with poor mental health outcomes. Healthcare workers need adequate support and resources to manage their workload and avoid burnout.

Exposure to trauma and high-stress levels is another major concern for healthcare workers. Healthcare organizations need to prioritize the mental health of their employees and provide them with access to mental health resources. This includes counselling services, peer support, and training on coping strategies for trauma and stress.

The fear of infection and transmission to family members was another commonly reported theme among healthcare workers. Many studies reported that healthcare workers were worried about bringing the virus home and infecting their family members. This fear was heightened because healthcare workers were at a higher risk of exposure to the virus than the general population. Studies also reported that healthcare workers were worried about the impact of the pandemic on their families, including financial hardship, increased caregiving responsibilities, and home-schooling.

During the pandemic, stigma and discrimination were also identified as a significant issue among healthcare workers. Many studies reported that healthcare workers were subjected to stigma and discrimination by the public and their colleagues. Healthcare workers reported being stigmatized for being in contact with COVID-19 patients or potential virus carriers. They also reported being discriminated against by their colleagues, who feared contracting the virus from them. This stigma and discrimination significantly impacted the mental health and well-being of healthcare workers, leading to feelings of isolation, anxiety, and depression.

Finally, the lack of resources and support was another theme that emerged from the included studies. Healthcare workers reported feeling unsupported by their employers, with many reporting a lack of access to personal protective equipment (PPE) and other resources needed to do their jobs safely. They also reported feeling overwhelmed and overworked, with many working long hours without adequate breaks or support. Studies also reported that healthcare workers were not receiving adequate emotional and psychological support, further exacerbating their stress and anxiety.

Conclusion

In conclusion the present systematic review has revealed that the COVID-19 pandemic has had a considerable impact on healthcare workers, affecting them significantly in terms of their psychological and emotional well-being. The identified themes underscore the intricate interplay of various factors that have contributed to the psychological repercussions of the pandemic on healthcare professionals, as evidenced by the studies included in the analysis. The mental health and well-being of healthcare workers during the pandemic have been significantly impacted by various factors, including heightened workloads and extended working hours, exposure to traumatic events and high levels of stress, concerns about the transmission of infection to family members, stigmatization and discrimination, and inadequate resources and support. The implications of the study's findings are significant for both policy and practice. It is imperative for healthcare organizations to furnish their workforce with essential resources and assistance to effectively manage the difficulties posed by the ongoing pandemic. The measures encompassed in this approach involve furnishing sufficient personal protective equipment, guaranteeing that healthcare personnel are granted access to emotional and psychological assistance, and affording them opportunities for recuperation and rejuvenation. It is imperative to acknowledge and combat the stigmatization and discrimination faced by healthcare professionals amidst the ongoing pandemic. This can be achieved through public education and heightened awareness regarding the indispensable contributions of healthcare workers in responding to public health crises. To summarize, this systematic review offers a thorough examination of the psychological effects that COVID-19 has had on healthcare professionals. The results underscore the necessity for additional investigation in this domain and underscore the significance of furnishing healthcare personnel with the essential resources and assistance to manage the difficulties of the pandemic. By acknowledging and addressing the psychological ramifications of the pandemic on healthcare professionals, we can enhance our ability to provide them with the necessary support to perform their crucial duties and maintain the provision of top-notch care to their patients.

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