

The Effects of the COVID 19 Pandemic on Healthcare Workers' Mental Health

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And Lazar, B. worked with Jones, A. in the development and needed changes in the review. Lazar, B encouraged student Jones, A., to investigate the research topic and Lazar B. supervised the review and the findings of the work. Jones, A. carried out the initial analysis, and Lazar B. verified the analysis. Jones, A. drafted the initial manuscript; and Lazar B. reviewed, presented changes needed, and approved the final manuscript as submitted.

Abstract: *Healthcare workers are more prone to health problems such as burnout, post-traumatic stress, and anxiety associated with their occupation. When COVID 19 began to spread rapidly; several researchers thought it might increase mental health issues among workers. However, there was a lack of comprehensive reliable studies on the impacts of the pandemic on the healthcare worker's mental health. This systematic literature review aimed to explore the mental health effects of COVID-19 on healthcare workers. A meticulous interrogation and review of literature transpired using electronic academic databases, CINAHL and MEDLINE based on the Preferred Reporting Items for Systematic Review and Meta-Analyses (PRISMA) guidelines. Data from 21 articles germane that the topic was thematically analyzed through a screening process based on the research question. Three themes related to the topic emerged from the literature review. The themes generated included psychological impacts of the pandemic discussed in 61.90% of the articles, psychosocial effects of COVID 19 explored in 28.57% of the articles, and coping mechanisms used by healthcare workers noted in 23.81% of the studies considered. The findings indicated that a high percentage of health workers have suffered from psychological impacts such as depression, post-traumatic stress disorder, insomnia, anxiety, exhaustion during the pandemic. The results also showed an increase in psychosocial problems due to the pandemic. The findings also revealed that commonly used organizational coping mechanisms included the removal of job-related barriers, provision of quality resting areas, and access to peer-to-peer support, and individual factors such as embracing relaxation techniques and work-life balance. The implications of these findings provide healthcare leaders and health workers an opportunity to understand the mental health impacts of COVID-19 and to promote mental health by implementing strategies such as providing quality relaxing areas, offering flexible schedules, and providing peer-to-peer support systems.*

Keywords: Healthcare workers; Health Problems; COVID-19 Pandemic; Psychological problems

Introduction

Since December 2019, many countries have experienced the Coronavirus (COVID-19) pandemic that has overwhelmed the healthcare system and, more so, the frontline health workers. Research indicates that healthcare workers are at a higher risk of being infected and experiencing negative physical health outcomes (Muller et al, 2020). Healthcare workers are at a higher risk of being infected and experiencing negative physical health outcomes. Commonly-reported symptoms among them include burnout, post-traumatic stress, and anxiety (Muller et al, 2020). Recent data indicate a rise of mental health problems among healthcare workers during the current pandemic. By May 2020, more than one health worker in every five experienced anxiety or depression, while nearly two in every five reported insomnia (Muller et al, 2020). Further, health workers reported more depression, anxiety, and sleep problems than the general population. These findings indicate that healthcare workers who are dealing with Covid-19 experience psychological pressure due to challenges associated with the pandemic, adversely impacting their mental health.

While the general public is at risk of experiencing psychological distress, healthcare workers are at a higher risk of the problems due to their nature of work (Muller et al, 2020). The pressure to work successfully and timely under limited resources also increases their chances of experiencing mental health issues (Tsamakis et al, 2020). Many factors can lead to an increased level of stress, and heavy workloads are a significant issue for workers mental health. The general problem is that some healthcare leaders are unable to effectively manage employee workloads during the COVID-19 pandemic, which negatively impacts workers' mental health (Tsamakis et al, 2020). It is unknown how the situation impacts the healthcare workers' mental health. The purpose of this study is to determine how the current pandemic (COVID19) has affected the mental health of healthcare workers.

Methods

A google scholar search transpired to narrow down the research topic. The research question that follows the PICO format reads; how does the COVID 19 pandemic affect healthcare workers' mental health? Further Key search words related to the research question were used to search two academic databases CINAHL and Medline, as per the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) guidelines (BMJ, 2009).

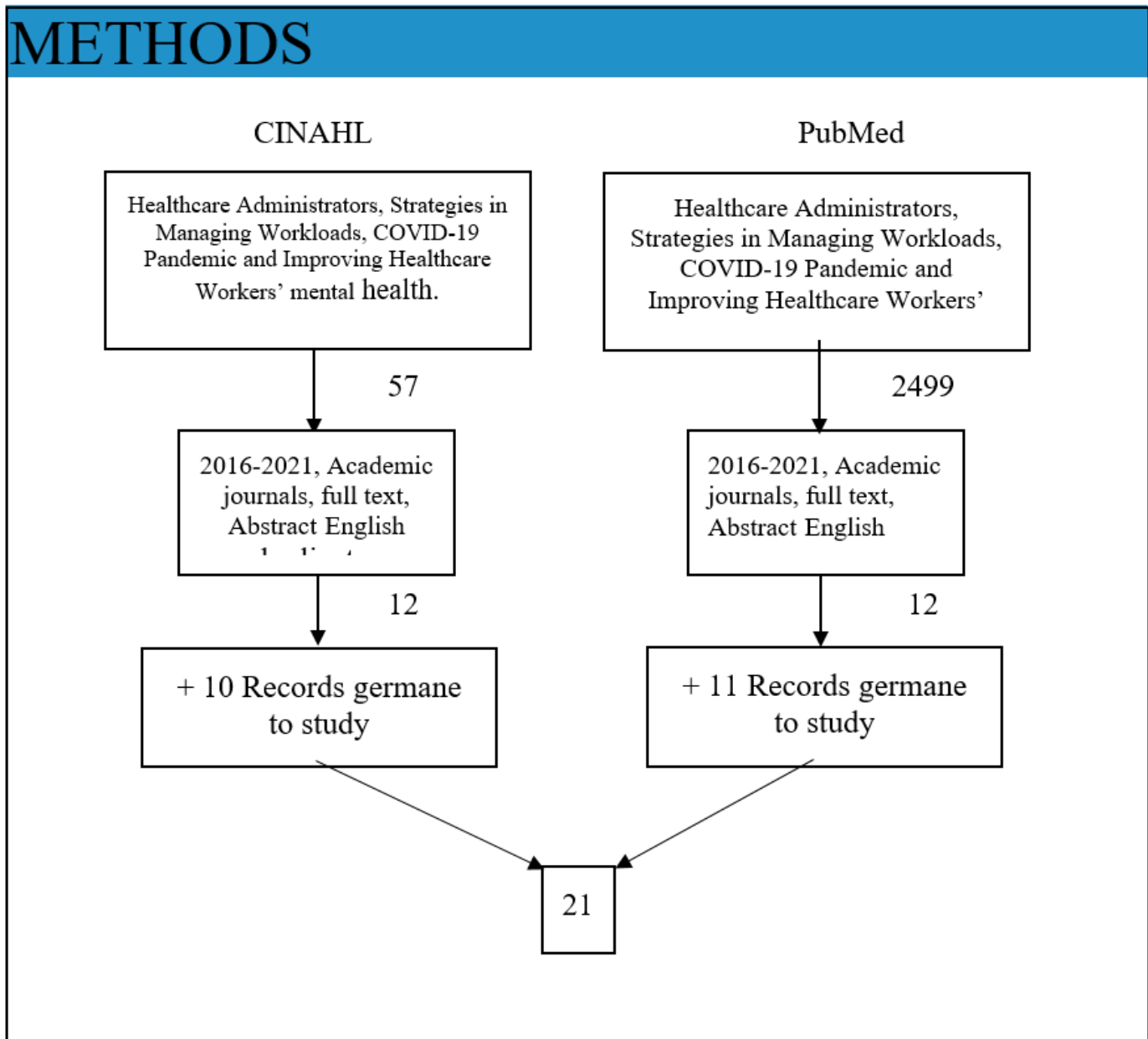
Using these guidelines a search occurred for relevant articles, screen for inclusion and exclusion, and perform data extraction using the screening criteria (Liberati et al., 2009). Likewise, the researcher should determine the key terms used to retrieve specific articles for the literature. The key terms used to retrieve articles included the COVID 19 pandemic, mental health, and healthcare workers.

Inclusion and Exclusion Criteria

The articles selected were only those that met the inclusion criteria within the two databases. For articles to be included in the study they needed to be recent, written in English, qualify to be peer-reviewed journal articles, and have a full text and the abstract. Lastly, these articles were required to be directly related to the research question to offer significant information on the topic under discussion. After being subjected to the exclusion criteria, the CINAHL database had an initial search of 57 articles which later reduced to 10 articles once the inclusion filters occurred. On the other hand, the Medline database had an initial search of 2499 articles which translated to 11 articles once the inclusion filters were applied. As indicated in the diagram below, 24 articles passed the exclusion criteria, which means they will be used to analyze the topic and help answer the research question.

Figure 1

Flow Diagram



Results

The results presented in this section are based on the research question, which was on the effects of the current pandemic COVID 19 on the mental health of healthcare workers. An intense interrogation and literature review transpired using electronic academic databases CINAHL and Medline to address this research question. The PRISMA approach was an evidence-based criterion for literature review, data selection, and data analysis (BMJ, 2009). Most of the studies focused on the psychological impacts of the COVID 19 pandemic on health workers. At the same time, other articles discussed psychosocial effects and coping mechanisms used to mitigate mental health impacts. From data from 2522 articles, 21 articles were selected as relevant to the research question. These articles were then compared and summarized as presented in Table 1 against the article titles.

Table 1

Summarized findings of the literature

Title	Findings
Psychological impact and psychosocial consequences of the COVID 19 pandemic Resilience, mental wellbeing, and the coronavirus pandemic [1].	90% of the participants in this survey reported negative impacts of the COVID 19 pandemic on their mental health dignity. The effects were worse for individuals who self-reported mental health diagnoses. Among those with a mental health diagnoses, the pandemic increased fears of relapse due to isolation from their support system and reduced access to care providers.
Balancing the psychological impacts of COVID-19 [2].	This article reports that many people in Australia have suffered from psychological and behavioral challenges due to the pandemic and the resulting quarantine and physical distance restrictions. The authors recommend prosocial behaviors and meditation as evidence-based interventions that health practitioners can embrace to cope with uncertainty resulting from the post-quarantine period.
The global mental health burden of COVID-19 on critical care staff [3].	This study focuses on the mental health impacts on critical care health workers globally through surveys conducted in France, Italy, the UK, China, Taiwan, Belgium, and Italy. The authors establish that between 16 and 49% of the respondents screened positive for depression, 60-86% for insomnia, and 17-35% for post-traumatic stress disorder.
Investigating the burden of mental distress among nurses at a provincial COVID-19 referral hospital in Indonesia: a cross-sectional study [4].	This article evaluates the physical, mental, and psychological health impacts of the COVID 19 pandemic on Indonesian health workers. The scholars established an 8.5%, 20.6%, and 6.3% incidence of moderate to extremely severe depression, anxiety, and stress, respectively, among the participating health workers. Those with temporary contracts and those with financial problems were more stressed. Those with financial struggles reported mental health symptoms at higher rates at 10.5%, 23.5%, and 8.1% for depression, anxiety, and stress in the same order.
Psychosocial, emotional, and professional challenges faced by female healthcare professionals during the COVID-19 outbreak in Lahore, Pakistan: a qualitative study [5].	This study was intended to establish the psychosocial, emotional, and professional impacts of the covid 19 Pandemic on female health workers in Pakistan. Interviews with the participants presented themes such as apprehension in treating patients, feelings towards COVID 19 patients, challenges for female healthcare professionals attending to COVID 19 patients. The authors report female frontline workers to have experienced psychosocial impacts ranging from unsupportive families, unwelcoming working environment, and insensitive hospital leadership. Public lack of confidence in the workers increased anxiety and stress among the healthcare professionals.
Impacts of Coping Mechanisms on Nursing Students'	This study involving nursing students studying in Southern California reported that self-reported stress, depression, and anxiety levels increased during the lockdown compared to the pre-lockdown period. Close to 25% of the participants reported higher stress, and more than half reported moderate

Mental Health during COVID-19 Lockdown: A Cross-Sectional Survey [6]. to severe anxiety and depression symptoms. However, a high resilience was negatively correlated to high stress and moderate-to-severe depression. High family functioning was also negatively associated with high stress, moderate-to-severe anxiety, And moderate-to-severe depression. Higher spiritual support was also inversely correlated with moderate-to-severe depression.

COVID-19: it happens to nurses to--a case study [7]. This article presents a case study of an emergency department health practitioner who suffered from COVID 19, was admitted to the intensive care unit, and suffered other health complications afterward. This study indicates that following discharge, the patient was withdrawn, experienced low mood, and was disengaged. He was also frustrated at his memory. He also reported experiencing loneliness, anxiety, night terrors, and severe fatigue, among other complications. The article emphasizes a need for the community to provide more care after the discharge of infected health workers and other individuals to speed their recovery and mitigate the mental health effects of the COVID-19 pandemic.

The Use of Psychological PPE in the Face of COVID-19 [8] This article discusses psychological PPEs, which are actions that can be implemented at an individual, unit, and organizational level to support and enhance the self-care, wellness, and mental health of healthcare workers. At an individual level, nurses can take measures such as eating healthy foods regularly, exercising and getting enough sleep, practicing mindfulness and embracing relaxation techniques, working and sharing experiences as a team, and pursuing a work-life balance. At a unit level, the author recommends engaging in mentoring and coaching programs and teambuilding activities. Organizations can undertake measures such as creating listening groups, encouraging drop boxes and email sharing, providing town hall meetings to discuss their concerns and perspectives on how to improve their welfare.

Substance use and abuse associated with the behavioral immune system during COVID-19: The special case of healthcare workers and essential workers [9]. This article established that although fears of infection can also stress and a higher substance abuse risk, healthcare workers are at an increased risk. The author notes that the pandemic can affect the active behavioral immune system whereby the professionals become vigilant in monitoring their physical sensations for possible signs of infection. The increased awareness increases the fear of infection and unique pressures, which result in a higher risk of substance abuse. The risk is further increased by economic stress, occupational stress associated with COVID stress syndrome. Xenophobia can also be a significant stressor for the group. The presence of these stressors creating a need for substance abuse interventions among health workers.

COVID-Well Study: Qualitative Evaluation of Supported Wellbeing Centers and Psychological First Aid for Healthcare Workers during the COVID-19 Pandemic [10]. This study discusses how health workers can be supported to ensure their mental health wellbeing using a case study of UK hospital trusts' wellbeing centers. The authors find that supported wellbeing facilities were critical to the wellbeing of hospital employees during the COVID 19 surge in the UK. It also notes that wellbeing initiatives for employees require managerial support and should be inclusive. Further, job-related barriers to work breaks and emotional wellbeing need to be addressed, providing high-quality rest areas and access to peer-to-peer support to benefit individuals, organizations, and teams.

Psychological Support System for Hospital Workers During the Covid-19 Outbreak: Rapid Design and Implementation of the Covid-Psy Hotline [11]. In this article, healthcare professionals called a newly established hotline for providing psychological support to healthcare workers. The commonly cited reasons for calling was anxiety symptoms (49%), worries about COVID 19 (15.44%), exhaustion (11.41%), trauma reactivation (6.11%), insomnia (6.0%), anger (5.37%), and depressive 4.02%), and psychotic symptoms (2.01%).

Burnout of Healthcare Workers in Acute Care Geriatric Facilities Healthcare workers have been experiencing a heavy burden with the rising rate of Covid-19. They have to

- During the COVID-19 Crisis: An Online-Based Study. (12) Undertake drastic changes, which include the cancelation of group meetings and celebrations. Also, they have to adjust to the new norms, which require them to put extra effort into their daily activities and engage in risky activities. Healthcare workers also experience shortages of equipment and supplies, which impact their mental health. Results indicate that they experience medium levels of burnout, disengagement, and exhaustion.
- Preventing and Addressing the Stress Reactions of Health Care Workers Caring for Patients With COVID-19: Development (13) The need to help the frontline workers was noted, and various support resources and recommendations were suggested. The major recommendation was to create a website in different languages that healthcare workers can use to measure their stress levels. Resources such as self-report scales should be made available to help workers gauge their effectiveness.
- Coronavirus disease 2019 crisis in Paris: A differential psychological impact between regular intensive care unit staff (14) The research is based on a study that was conducted in Paris to understand the psychological impact of Covid- 19 on healthcare workers. Sixty-nine ICU HCWs participated in the research. 37 of the team members were from regular staff members and 32 from the reinforcement team. The prevalence of anxiety, depression, and post-traumatic stress was found to be at 19%, 9%, and 16%, respectively. However, depression symptoms were more prevalent among staff members than the reinforcement team.
- Physiological Effects of N95 FFP and Personal Protective Equipment in Healthcare Workers in COVID ICU: A Prospective (15) Concerning the impacts of PPEs on health care workers, out of 75 participants, 90% complained of headache, 70.65% tiredness, 60% difficulties in breathing, 24% mask soakage, 4% mask breach, 2.67% palpitation, and 1.33% experienced bronchospasm. When these changes combine with fears related to the pandemic, direct exposure and increased viral loads result in anxiety among healthcare workers, impacting their ability to function as expected.
- Persistent post-covid symptoms in healthcare workers (16) Out of 3759 workers who were tested for covid 19, 932 were found to be positive. 138 HCW who participated in the interview reported experiencing persistent symptoms, and 32% reported struggling to cope 3 to 4 months later after the peak of the disease. The most disabling symptoms reported included fatigue, shortness of breath, anxiety, and sleep disturbances. 16% of the patients were recorded to consult the general practitioner, and only 2% took sick leave.
- The psychological impact of COVID-19 pandemic on healthcare workers in a highly burdened area of northeast Italy. (17) A study was conducted on 2195 healthcare workers to determine the psychological effects of covid 19. 63.2% of the participants indicated to have experienced traumatic experiences in their workplace, while 53.8% had symptoms of post-traumatic distress. Further, 50.1% indicated anxiety symptoms, and symptoms of moderate depression were present among 26.6% of the participants. Research also indicated that women with pre-existing psychological problems were at a higher risk of being affected by the consequences of the pandemic.
- Prolonged COVID 19 Outbreak and Psychological Response of Nurses in Italian Healthcare System: Cross-Sectional (18) The findings drew information for predictive and protective risk and mental health issues experienced by healthcare workers who work in the front line to care for Covid 19 patients. Workers confessed to having faced various challenges caring for covid 19 patients. While the initial impacts were relevant, the prolonged exposure in similar or worse situations resulted in them using personal resources such as their personality traits to overcome the challenges, which became stressful after some time. Mental health programs aimed at helping health care workers need to be established.
- Mental Health outcome and Professional Quality of Life among Healthcare Among workers who took part in the research study, 218 were from the low-risk unit, 200, from the high-risk unit, constituting many nurses 191. The group consisted of 282 females aged 31 to 40 years, and 220 of them were married. The research indicated that nurses and doctors working in the

Worker during COVID-19 pandemic: A (19)	emergency unit were at a higher risk of psychological distress. Health workers who were aged between 31 to 40 years had a higher level of resilience.
Impact of Sleep Deprivation on Emotional Regulation and the Immune System of Healthcare Workers as a Risk Factor for (20)	Healthcare workers working in the frontline and are still undertaking shift schedules experience long working hours with few or no pauses, altering their sleeping patterns. The consequences of the environment they work in result in chronic insomnia, sleep deprivation, post-traumatic stress disorder, and sleep-related disorders. More so, sleep alterations result in stress, anxiety, and depression, leading to the inability to control positive and negative emotions. These patterns also alter an individual's immune system, leaving them at a greater risk of contracting the virus.
Psychological effects of the COVID 19 pandemic on healthcare workers globally: A systematic review. (21)	Research indicated a significant difference in how healthcare workers (HCW) and non-healthcare workers (NHCW) were affected by Covid-19. A higher incidence of insomnia was reported among HCW as compared to NHCW. The group was found to suffer from various psychological issues such as distress, sleep disturbances, post-traumatic depression, and anxiety. These conditions were indicated to result from the poor working environment they are exposed to in their daily activities. For instance, they experience a shortage of PPEs and other working resources. There is also a shortage of workers, which worsened the situation as the workers were required to work for longer hours.

The data generated from the 21 scholarly articles were compared and classified according to the frequency of occurrence of key attributes derived from the research question, including psychological and psychosocial effects and stress coping mechanisms used by health workers to the pandemic. From the incidence of these key terms in the 21 articles, three main themes were derived psychological impacts of the COVID 19 pandemic on health workers, psychosocial effects of the pandemic on health workers, and coping mechanisms used to improve mental health wellbeing among health workers. These three themes were directly related to the research question on the mental health impacts of the pandemic. The frequency of occurrence and percentage of the key themes are summarized in table two below.

Table 2

Frequency of occurrence in the literature.

Benefits	Occurrences	Instances of Attributes (n)	Percentage (%)
Theme 1: Psychological impacts of COVID-19	1, 3, 4, 6, 7, 9, 11, 21, 20, 18, 17, 16, 12	13	61.90%
Theme 2: Psychosocial Impacts of COVID 19	1, 4, 5, 19, 15, 14	6	28.57%
Theme 3 Coping Mechanisms of COVID 19	2, 6, 8, 10, 13	6	23.81%

As shown in Table 2 above, 61.90% out of 21 articles mentioned the theme of psychological impacts of COVID-19 as seen in articles 1, 3, 4, 6, 7, 9, 11, 21, 20, 18, 17, 16, and 12. The results also indicate that 28.57% out of 21 articles discussed the theme of psychosocial impacts of COVID-19, which can be observed in articles 1, 4, 5, 19, 15, and 14. Further, 23.81% out of 21 articles discussed the theme of coping mechanisms of COVID-19 as viewed in articles 2, 6, 8, 10, and 13.

Discussion

The study's main aim was to understand whether COVID-19 has affected the mental health of healthcare workers. As a result, 21 articles which included peer-reviewed journals, written in English, published between 2016 and 2021, and which align with the research question, were considered in the study. The keywords used to retrieve these articles were the effects of COVID-19, mental health, and healthcare workers. As depicted in table two, various themes were retrieved from the research question,

guiding the research. One of the themes is the psychological impacts of COVID-19, which is relevant in articles 1, 3, 4, 6, 7, 9, 11, 21, 20, 18, 17, 16, and 12. The second article was psychosocial impacts of COVID-19 present in articles 1, 4, 5, 19, 15, and 14. The third theme was the coping mechanisms of COVID-19 present in articles 2, 6, 8, 10, and 13.

Importantly, theme one provided more information on the psychological impacts of COVID-19 on healthcare workers. Psychological impacts of COVID-19 was presented by 61.90% of the available articles in the literature (1, 3, 4, 6, 7, 9, 11, 21, 20, 18, 17, 16, and 12). Based on the findings, most researchers found out that COVID-19 has negatively impacted healthcare workers mental health suffering from depression, insomnia, post-traumatic stress disorder, and anxiety, as indicated in articles 1, 3, 4, 6, 7, 21, 20, 17, 16, and 12). Also, research indicated that the pandemic had increased fear of relapse among healthcare workers who have been diagnosed with mental health problems due to lack of support system and reduced access to care providers (1, 3, 4, 6, 7, 21, 20, 17, 16, 12). On the other hand, other researchers argue that exposure to worse situations has resulted in healthcare workers using their traits, which becomes exhausting after some time, causing stress (9, 11, and 18). COVID-19 has also been associated with anger, exhaustion, and psychotic symptoms, which has made it difficult for healthcare workers to be productive. This group of authors also notes that the pandemic has also activated a behavioral immune system whereby the professionals become vigilant in monitoring their physical health and possible symptoms of infection, which leads to increased fear. Therefore, a unique pressure is created on the team, which exposes them to a higher risk of substance abuse to cope with situations, as indicated in articles (9, 11, and 18). However, the overall results indicate a negative impact of COVID-19 on health workers' mental health, making it hard for workers to engage in their daily routines.

The second theme focused on the psychosocial impacts of COVID-19 on healthcare workers. The psychosocial impacts were presented in 28.57% of the articles used in the literature review (1, 4, 5, 19, 15, and 14). As indicated in articles 5 and 15, frontline workers have experienced psychosocial impacts ranging from; unsupportive families, insensitive leadership workers, and repellent working environment. From the studies, you can find healthcare workers also complained of tiredness, headaches, difficulties in breathing, and mask breach, which minimized their ability to act as expected. Other researchers indicate that healthcare workers are exposed to long working hours, which led to sleep deprivation, chronic insomnia, and other sleep-related disorders 1, 4, 19, and 14. These patterns alter the immune system of an individual, which leaves them in a greater chance of contracting the virus. Fear of contracting the virus has also been associated with the inability to function as expected, which harms the relationship between health workers and their employers, as indicated in articles 1, 4, 19, and 14. Overall, the results indicated a high possibility of psychosocial impacts on healthcare workers resulting from the changing work environment caused by the pandemic.

The third theme provides data on the coping mechanisms used by healthcare workers to minimize the effects of COVID-19. These coping measures were discussed in 23.81% of the articles 2, 6, 8, 10, and 13. One group of researchers suggested that an effective coping mechanism would be to remove job-related barriers and provide quality resting areas and access to peers to ensure that healthcare workers, especially those working in the frontline, are safe and in the right state of mind. Spiritual support was also discussed as a significant intervention and meditation as evidence-based intervention, as indicated in articles 2, 6, and 10. On the other hand, other researchers argue that coping mechanisms can be implemented at an individual, unit, and organizational level to ensure healthcare workers' wellness and mental health. Researchers asserted that measures such as eating healthy food, embracing relaxing techniques, sharing experiences as a team, and pursuing a work-life balance would reduce the tension (8, 13). Overall, research indicated that coping mechanisms should be established at an individual and organizational level. At the organizational level, leaders should ensure a safe and comfortable working environment by providing right protection equipment and an effective support system. At an individual level, healthcare workers should have a spiritual support system and practice the right behaviors.

Despite the success, the study experienced various potential limitations, including time constraints, the strategy used to find articles, and the exclusion of certain articles written in English and published before 2016. The main reason why time is a major limitation is that the research was conducted within twelve weeks. Considering the amount of research needed to come up with this study, twelve weeks was a limited amount of time to retrieve and analyze the required articles. Likewise, non-English language articles and those published before 2016 were excluded from the research, which might have resulted in the exclusion of crucial articles. The use of key terms to search for articles was also a limiting factor since someone would have missed quality articles that used different terminologies. Further, the study used two databases CINAHL and MEDLINE. This process excluded other databases which might have qualified articles to be used in the research.

However, following the PRISMA-based systematic review guidelines and protocols, the limitations mentioned above were minimized. Also, exclusion and inclusion criteria is used whereby the information collected was filtered to ensure that the remaining articles address the topic. Initially, the CINAHL database had 57 articles, and the MEDLINE database had 2499 articles that were later filtered down to 21 articles based on their year of publication, language, and their applicability to the topic. Readers ensured to review each article to ensure they align with the research question, which minimized the challenge of losing important articles. However, despite these challenges, the findings displayed how COVID-19 has affected healthcare workers' mental health. The study indicates that front workers are experiencing mental issues such as post-traumatic stress, anxiety, depression, insomnia, and other sleep-related disorders. Notably, these conditions are caused by schedules that do not allow healthcare workers to rest, fear contracting the virus, lack of required equipment, and lack of support system. As a result, healthcare workers cannot meet their set goals, a problem that should be addressed.

The results of this study should be used by future researchers as a stepping stone to gain insight on the topic and to understand areas that need more research. Researchers should focus more on finding out the impacts of mental health issues among healthcare workers on their work. Reasons why more attention should be focused on protecting the frontline workers. Also, insight into ensuring that healthcare workers are safe in their workplace and remain motivated can be crucial in future research. Health care leaders and administrators should implement strategies aimed at protecting healthcare workers, for instance, by providing quality relaxing areas, offering flexible schedules, issuing quality protective equipment, and providing a support system. Healthcare workers should also be encouraged to work as a team to share experiences and knowledge to handle different situations.

Conclusion

Recent research studies have established an increase in the incidence of mental health conditions among Americans due to COVID-19 related stress, healthcare workers are feared to have suffered an even greater burden due to work-related stressors as the health system became overwhelmed. The purpose of this systematic literature review was to explore the mental health effects of COVID-19 on healthcare workers. Three themes emerged from the literature review regarding mental health impacts of the pandemic on healthcare workers. The main themes included the psychological impacts of COVID 19 on health workers, the psychosocial effects of the pandemic on health professionals, and coping mechanisms used by healthcare workers in response to the pandemic. The review established that a high percentage of health professionals suffer from depression, anxiety, post-traumatic stress disorders, fear of relapse, anger, exhaustion, and psychotic symptoms, and the results indicate that the pandemic had resulted in substantial psychological impacts among health workers. The results displayed that many health workers suffer from unsupportive families, insensitive leadership and coworkers, unwelcoming working environments, tiredness, headache, breathing difficulties, mask-breach, sleep deprivation, chronic insomnia, and the fear of infection. These findings indicated an increase in psychosocial impacts due to the pandemic affecting health workers' ability to function as expected.

Moreover, findings noted that commonly used coping mechanisms included removal of job-related barriers, provision of quality resting areas, and access to peer-to-peer support, spiritual support, embracing relaxation techniques, teamwork, pursuing work-life balance. The findings show that several successful measures were being addressed at the individual and organizational levels to address the mental health problems among health workers. Further research can include the impacts of the mental health status of healthcare workers on their work to provide more insight on the research topic. The implications of this literature review offer healthcare administrators valuable information on the effects of the pandemic on health workers' mental health and interventions for mitigating the adverse effects. It provides the leaders an opportunity to ensure that healthcare leaders are safe in their workplace and remain motivated by implementing strategies such as providing quality relaxing areas, offering flexible schedules, issuing quality protective equipment, and providing a peer-to-peer support system. Furthermore, healthcare workers can embrace the findings to safeguard their mental health amid the pandemic by exercising individual interventions such as proper nutrition, relaxation, and pursuing work-life balance.

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