

Mental Health and Coping Strategies Used by Nurses During the COVID-19 Pandemic: Scoping Review

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Abstract

To map the literature about the impact of the COVID-19 pandemic on nurses' mental health; to identify the coping strategies used by nurses during the COVID-19 pandemic. A scoping review was used as recommended by the Joanna Briggs Institute (JBI) and PRISMA-SCRA extension. The search was conducted at the databases LILACS; CINAHL; Schiele; PubMed Central; Medline; Google Scholar, between March and April 2021. The increased workload, the shortage of personal protective equipment (PPE) and human resources, as well as the fear of getting infected and infecting family members, the stigma associated with COVID-19 workers; dealing with large-scale death and negative feelings. The most used strategies in mental health promotion were Telemedicine/telehealth, planned empathic listening, empathic understanding, and hotline. Adaptive mental health strategies must be reinforced to minimize the adverse effects of the pandemic.

Keywords: Nurses, mental health, COVID-19, pandemic, psychological adaptation

INTRODUCTION

In China, in December 2019, a new Coronavirus (CoV-2) emerged, causing an outbreak of SARS-CoV-2, and the COVID-19 disease. COVID-19 rapidly spread across several countries and forced the World Health Organization (WHO) to declare the COVID-19 outbreak a public health emergency of international concern on January 30, 2020 (Cucinotta & Vanelli, 2020). Subsequently on March 11, 2020, WHO classified the COVID-19 outbreak as a pandemic (Duarte et al., 2021). COVID-19, in the most severe cases, COVID-19 causes acute respiratory failure, which requires admission to intensive care and mechanical ventilation (Chowdhury et al., 2021). The high number of serious patients with COVID-19, and the fear caused by the total lack of knowledge about the disease, along with the scarce safe treatment options available, caused the collapse of health systems in several countries (Chowdhury et al., 2021; Sampaio et al., 2021).

The consequences of the SARS-CoV-2 pandemic were overwhelming, forcing health services and professionals to adopt preventive measures and protocols not only to mitigate the spread of the virus but also to increase the capacity of institutions. Namely opening new services and field hospitals, restructuring and prioritizing emergency care units, exhausting shifts (12 or more hours of mirror work), and quarantining and/or the social distancing of professionals. However, these measures, although vital to prevent the spread of the virus and the contamination of health professionals, had negative consequences on their well-being and mental health (Chowdhury et al., 2021; Prado et al., 2020).

The high transmissibility of COVID-19, associated with the shortage of personal protective equipment (PPE), meant that many "front-line" nurses were contaminated (Lai et al., 2020; Prado et al., 2020). Although nurses' skills, training and preparation to manage emotions (theirs and others), and to respond efficiently in emergencies in suffering and hostile contexts (physical and mental exhaustion), the COVID-19 context increasingly reduced their resilience. Mainly due to the deteriorated nurses' psycho-emotional state caused by the pain of losing patients and colleagues, and the separation of family members (Chowdhury et al., 2021). During the pandemic, nurses experienced daily negative events such as fear, anguish, anxiety, fear of being contaminated, of transmitting the virus, physical exhaustion, insomnia, helplessness, isolation, and loneliness (Barros et al., 2020; Lai et al., 2020).

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In these negative experiences and circumstances, individuals' vulnerability to stress, burnout, burnout and depression increases. To manage the overload, stress and negative states some nurses resort to coping strategies, such as a healthy diet, rest, physical exercise, and interacting with family and loved ones. However, resorting to these strategies is a challenge, as it requires high levels of personal discipline, free time, and a clear mental state (Chowdhury et al., 2021; Tobase et al., 2021). Thus, the lack of existing data on the impact of COVID-19 on nurses, along with the need to empower them, justifies the need and relevance of investigating this topic. In this sense, we consider it pertinent to know about the impact of COVID-19 on the mental health of nurses. To answer these questions, we defined the following objectives: Map the literature on the impact of the COVID-19 pandemic on nurses' mental health; identify the coping strategies used by nurses during the COVID-19 pandemic.

METHOD

A scoping review was used, following the guidelines of the Joanna Briggs Institute (JBI) (Peters et al., 2020) and the PRISMA-ScR.9 extension, going through the five methodological stages. The starting point was the research question: What is the impact of the COVID-19 pandemic on the mental health of nurses and what coping strategies do they use? The article selection protocol began with the 1st stage: identification of a problem and formulation of a research question, using the PCC mnemonic P (Population= Nurses); C (Concept = Mental Health and coping strategies) and C (Context = COVID-19 Pandemic).

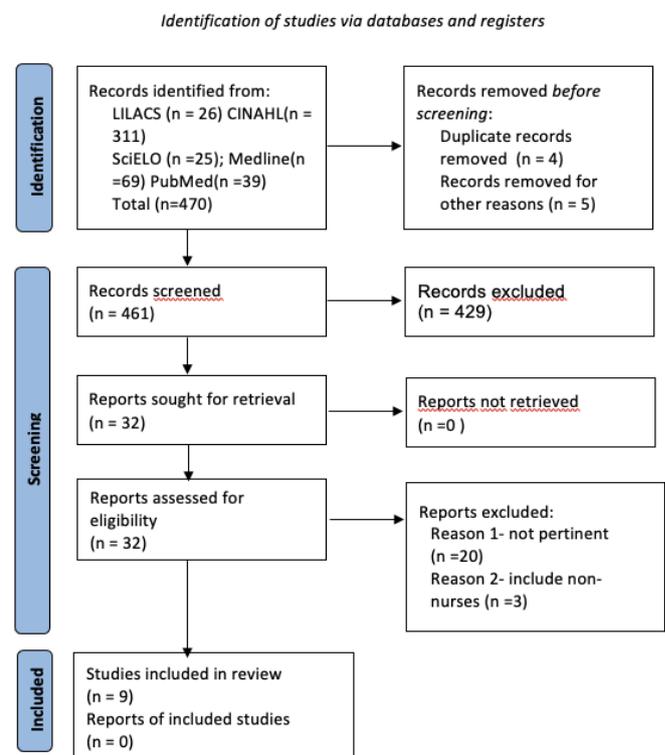
In the 2nd stage, relevant studies were mapped. The research took place between March and April 2021, in the databases: Latin American and Caribbean Literature in Health Sciences (LILACS); Cumulative Index of Nursing and Allied Health Literature (CINAHL); Scientific Electronic Library Online (SciELO); Medical Literature Analysis and Retrieval System Online (Medline). DeCS descriptors were used (Nurses D009726; Nursing Professionals D009722; Mental Health D008603; COVID-19 D0018352; Pandemic D0058873; Psychological Adaptation D000223); from the Cochrane Collaboration PMC (PubMed Central), MeSH descriptors (Nurses D009726; Nurse Practitioners D009722; Mental Health D008603; COVID-19 D000086282; Pandemic D000086382; Adaptation Psychological D000223) were used. Then the studies were selected based on the Boolean search phrase that combined Boolean descriptors and operators with the following formula: “Nurses AND mental health AND COVID-19”; “Nurse AND mental health AND COVID-19 OR pandemic”; “Nurses AND mental health AND coping strategies”; “mental health AND nursing professionals AND COVID-19”; “mental health AND COVID-19 OR pandemic AND coping strategies”; “nurses AND mental health AND COVID-19 OR pandemic”; “nurses AND COVID-19 AND mental health AND psychological adaptation”; “nurses AND COVID-19 AND psychological adaptation”. Subsequently, a search was carried out on Google Scholar using natural terms

thesaurus synonyms (impact of COVID-19 on the mental health of nurses and coping strategies they use).

In the 3rd stage, articles were selected according to the previously defined inclusion criteria: original articles, in Portuguese, English and Spanish, published from 2020 onwards, with access to full and free text, which answered the guiding question. In the 4th stage, the analysis and compilation of the information contained in the eligible articles were analyzed and duplicated articles were excluded, whose title was not suggestive of the intended theme, as well as articles that did not allow for their full reading. The selection of studies strictly followed the recommendations of the Preferred Reporting Items for Scoping Review (PRISMA-ScR) (Page et al., 2021).

In the 4th stage, the analysis and compilation of the information contained in the eligible articles were analyzed and duplicated articles were excluded, whose title was not suggestive of the intended theme, as well as articles that did not allow for their full reading. The selection of studies strictly followed the recommendations of the Preferred Reporting Items for Scoping Review (PRISMA-ScR) (Page et al., 2021).

Finally, in the 5th stage, data of interest were extracted in a summarized form and the results were reported. The flowchart of identification, selection and compilation of articles is shown in Figure 1.



Note. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71. doi 10.1136/bmj.n71; For more information, visit: <http://www.prisma-statement.org/>

Figure 1. PRISMA 2020 flow diagram

RESULTS

The characterization of the articles included in the review is summarized based on the author(s), year, country of origin, title, base where it was located, study design, objective, and main results. It is summarized in Table 1.

Table 1: Characterization of the Articles Included in the Review

N°	Author /Year /Country	Title	Design/ Database	Aim	Results
1	Barros et al., 2020, Brazil	Impacts of the Covid-19 Pandemic on the Mental Health of Nursing Professionals	Integrative Review/ LILACS	To analyze the impacts of Covid-19 on the mental health of frontline nursing professionals.	Psychological support for nurses is an effective and necessary measure so that they can better deal with the high incidence of patient loss; better organization of shifts to reduce the excessive workload and prevent physical exhaustion.
2	Pereira, M. D., Torres, E., Pereira, M., Antunes, P. e Costa, C. 2020, Brazil	Emotional suffering of nurses in the hospital context in the face of the COVID-19 pandemic	Narrative review/ SciELO	Carry out a theoretical reflection on the emotional suffering of nurses in the hospital context in the face of COVID-19.	In the current pandemic scenario, greater care for the psycho-emotional health of nurses is essential, with actions and investments in better environments and working conditions.
3	Al Maqbali, M., Al Sinani, M., e Al-Lenjawi, B. 2021, Qatar	Prevalence of stress, depression, anxiety and sleep disturbance among nurses during the COVID-19 pandemic	Systematic review and Meta-analysis/ PubMed	This study aimed to verify the current impact of the COVID-19 outbreak on the prevalence of stress, anxiety, depression and sleep disorders among nurses.	Approximately one-third of nurses who worked during the COVID-19 pandemic experienced psychological symptoms; It is important to provide comprehensive support strategies to reduce the psychological impact of the COVID-19 outbreak.
4	Ramos-Toescher, A. M., Tomaschewisk-Barlem, J. G., Barlem, E. L. D., Castanheira, J. S., e Toescher, R. L. 2020, Brazil	The mental health of nursing professionals during the COVID-19 pandemic: support resources	Reflexive article/ LILACS	This study aimed to reflect on the implications of the coronavirus pandemic on the mental health of nursing professionals and the main support resources being developed.	The outbreak we are experiencing is multidimensional, with impacts on all functional dimensions, including physical, emotional, economic, social and psychological; The use of global mental health measures highlighted some important support resources for dealing with stressful situations; The use of psychotherapy in Tele assistance in the context of a pandemic; For a better understanding of the psychiatric and psychological repercussions of a pandemic, it is necessary to take into account the main implications and emotions involved before, during and after the event.
5	Sampaio, F., Sequeira, C., e Teixeira, L. 2021, Portugal	Impact of COVID-19 outbreak on Nurses' mental health: A prospective cohort study	Cohort Study/ SciELO	This study aimed to assess changes in nurses' sleep quality and symptoms of depression, anxiety and stress during the COVID-19 outbreak and to assess whether the presence of potential risk factors influenced these symptoms over time.	Nurses' sleep quality and mental health status varied positively throughout the COVID-19 outbreak. The only factors that are directly related to the outbreak and that were associated with positive variation in nurses' symptoms of depression, anxiety and stress were fear of infecting others and fear of being infected (greater fear of being infected or infecting someone else corresponded to increased symptoms of depression, anxiety and stress). Sensitizing and educating non-psychiatric medical teams for mental health assessment can be crucial to allow timely diagnosis. It is important to make colleagues and nursing leaders aware of the need to address mental health with appropriate early support measures, such as normalizing emotions, communicating clearly, and meeting basic needs.
6	Barbosa, D. J., Gomes, M. P. e Gomes, A. M. T. 2020, Brazil	Stress factors in nursing professionals in the fight against the COVID-19 pandemic: Evidence Synthesis	Literature review /LILACS	Identify the main psychological effects of COVID-19 on nursing professionals; describe the main factors capable of generating psychological stress in nurses; describe	Direct exposure to patients' physical and psychological suffering makes frontline nurses more likely to suffer from psychological problems arising from stress, thus indicating the need for a multidisciplinary team to work. Work overload triggers carelessness in nursing professionals, considering the lack of time

				coping strategies to combat emotional stress.	and energy (exhaustion), a factor that contributes to emotional stress.
7	Humerez, D. C., Ohl, R. I. B. e da Silva, M. C. N. 2020, Brazil	Mental Health of Nursing Professionals in Brazil in the context of the COVID-19 pandemic: Action by the Federal Nursing Council	Reflexive article /PubMed	This study aimed to reflect on the mental health of Brazilian nursing professionals in the context of the COVID-19 pandemic.	Creation of a Nursing Care Project in Mental Health (via Live Chat, 24 hours a day) for nursing professionals who were at the forefront of the pandemic; The strategy used to take care of mental health was planned empathic listening, as well as empathic understanding; After the first 30 days of assistance, the most emerging feelings were: anxiety, stress, fear, ambivalence, depression, and exhaustion.
8	Chowdhury, S. et al. 2021, Bangladesh	Mental health symptoms among Bangladeshi nurses during the COVID-19 pandemic	Cross-sectional study/ Medline	To determine the effects of the COVID-19 pandemic on the mental health of Bangladeshi nurses, as well as the relationship between occupational factors and mental health symptoms.	A high prevalence of depression, anxiety, stress and psychological impact was observed in Bangladeshi nurses working in hospitals during the COVID-19 outbreak; Nurses were more likely to have a greater psychological impact and adverse mental health outcomes compared to registered nurses; Factors that have the greatest impact on mental health are not having full PPE while working and facing any emotional abuse by nurses during COVID-19; It states that nurses during the pandemic need psychological support and timely intervention.
9	Tobase, L., Cardoso, S., Rodrigues, R. e Peres, H. 2020, Brazil	Empathetic listening: a welcoming strategy for nursing professionals in coping with the coronavirus pandemic	Reflexive article/ SciELO	Reflect on the use of empathetic listening as a welcoming strategy for nursing professionals in facing challenges during Covid-19.	The nurses are exposed to the violence of different natures related to occupational stress, work overload, anguish, and silenced suffering, with health implications; Empathetic listening is a powerful strategy in the care and strengthening of nursing professionals.

The results of the synthesis of the analysis of the nine articles that make up the review sample. Table 2 summarizes the main implications of COVID-19 on the mental health of nurses. A number (1 to 9) was assigned to each article to better identify it in Tables 2 and 3.

Table 2: Main Implications of COVID-19 on Nurses' Mental Health	
Triggering factors of impact	Lack of knowledge about the disease (1)
	Increased workload (1, 5, 6)
	Prolonged exposure in critical environments (1, 4)
	The ongoing risk of infection (3, 4)
	Shortage of PPE and Human resources (2, 3, 4, 8)
	Fear of getting infected and infecting family members (3, 4, 5, 6)
	Demand to care for many people in a short period (7)
	Dealing with death on a large scale (2, 7, 9)
	Inadequate working conditions (4, 9)
	Pressure from management (9)
	Family Getaway (4)
	Negative influences caused by constant press/media news (4)
	The stigma associated with direct care of a COVID-19 patient (3, 4, 8)
Inability to express anguish and personal suffering in the exercise of the profession (9)	
Emotional reactions	Anxiety, stress, post-traumatic stress, fear, depression, suicidal thoughts, exhaustion, anger, guilt, frustration, uncertainty, hopelessness, burnout, denial, helplessness, feelings of vulnerability, irritability (1, 2, 3, 4, 5, 6, 7, 8, 9)
	Ambivalence (7)
	Appetite changes or disturbances (4)
	Drug use/abuse (4, 9)
	Sleep disorders (1, 3, 4, 5, 6, 9)
Weakened Immune System (9)	

Table 3 presents the main coping strategies used by nurses during the COVID-19 pandemic.

Table 3: Coping Strategies Used by Nurses During COVID-19 Pandemic

Coping Strategies	Nursing and mental health care (via Live Chat 24 hours a day) (7)
	Free online spaces for empathetic listening (provided by qualified volunteers) (9)
	Psychological teleconsultation, guided by Psychologists/Psychiatrists (4)
	Psychoeducational actions: platforms with informative guides, videos/audios, video lessons, manuals, e-books, Instagram accounts and WhatsApp (4)

Discussion

The results show that, during the pandemic, those who were on the “front line” had to manage and execute nursing care of great technical complexity. At the same time, in day-to-day decision-making, it was necessary to constantly update scientific knowledge, as well as to manage misinformation from the media, which further increased anxiety (Al Maqbali et al., 2021; Barbosa et al., 2020). Table 2 presents the main factors associated with changes in nurses' mental health, namely the fear of getting infected and infecting family members; the shortage of personal protective equipment and human resources; the increase in the workload; dealing with death on a grand scale; and the stigma associated with the risk of being a contagion vector. These results are transversal to the nine included studies. The scarce scientific evidence about the cycle of transmission of SARS-CoV-2, and protocols for putting on and removing PPE caused great pressure and anguish among professionals, mainly because this process increased the risk of contamination (Barros et al., 2020). Additionally, nurses were subjected to the social stigma and fear of being able to transmit the disease to their families, neighbors, and patients, which further exacerbated their social isolation (Barros et al., 2020; Nogueira et al., 2021).

Indeed, Humerez and colleagues (2020) concluded that anxiety about the lack of PPE, pressure from managers, alarming news, workload, high mortality, fear of the risk of self and family contamination, social ambivalence (sometimes heroes vs discriminated and avoided), depression generated by loneliness, the death of colleagues, exhaustion or emotional exhaustion were the main impacts described by the nurses (Humerez et al., 2020). Studies report similar negative feelings across countries: in Canada, 47% refer to the need for psychological support; in China, the rate of depression is 50%, anxiety at 45% and insomnia at 34%; and in Pakistan, 26% of nurses report severe psychological distress and 42% report moderate levels (Ramos Toescher et al., 2020).

Distress amplifies and feeds feelings of insecurity, incapacity, anguish, fear, insomnia, and sadness (Tobase et al., 2021), and nurses in distress are unable to provide quality nursing care. Thus, nurses struggle to find coping strategies to help them to be more resilient, but sometimes these strategies were not adaptative. On the contrary, some nurses used coping responses and strategies involving the use of alcohol, tobacco, and other drugs (Al Maqbali et al., 2021; Ramos-Toescher et al., 2020). In Portugal, Sampaio, Sequeira and Teixeira (2021), evaluated mental health variables and risk factors in nurses during the COVID-19 outbreak, and concluded that the symptoms of depression, anxiety, sleep quality and stress increased over

time; the COVID-19 outbreak had an immediate impact on the mental health of nurses, however, a three-phase phenomenon of psychological adaptation has been observed, and psychological changes occurred (Sampaio et al., 2021). The first phase - was ambivalence (professional duty vs fear of getting infected); in the intermediate state - symptoms of anxiety, depression, somatization, compulsiveness, fear and irritation appear; later phase - a psychological adaptation began to take place and associated with the feeling that their work was valuable and very significant for the health of people and the country.

Coping strategies used by Nurses in the COVID-19 Pandemic

The results show that the nurses used, as coping strategies, global measures to promote mental health, either triggered by themselves or created by organizations and institutions to offer emotional support, as shown in Table 3. In the analyzed studies, there is consensus on the importance of self-knowledge and self-awareness of the state of health and well-being (psychic, psychological, physical, and social) (Tobase et al., 2021).

Corroborating the results of the analyzed studies, the WHO released guidelines for health professionals and the general population. WHO published a guide with 17 strategies for promoting mental health during the pandemic, which includes: reducing the workload; increasing rest periods; increasing the number of elements/shift; performing meditation and other pleasurable activities; information provided by reliable sources; using spirituality/religiosity; meet fundamental human needs; avoid harmful habits/addictions; express feelings of distress with peers, friends and/or family using social media; seek professional help if necessary (World Health Organization, 2020). Effectively, these recommendations are in line with the strategies mentioned by Ramos-Toescher and colleagues, who identified teleconsultation (psychology and psychiatry), psychoeducational actions, promoted by volunteer professionals, who provided informative guides on platforms and social networks (Instagram and WhatsApp), videos /audio, video lessons, manuals, e-books (Ramos-Toescher et al., 2020). Psychotherapy in teleservice stood out as an innovation, like other telehealth services, which proved to be an important resource to support mental health (Barbosa et al., 2020) (Pereira et al., 2020).

In Brazil, the Federal Council of Nursing asked the National Commission of Mental Health Nursing to create an uninterrupted online chat – the Nursing Care in Mental Health, focusing on putting nurses in contact with patients with COVID-19. The main strategy used, by these specialist nurses, was planned empathic listening, empathetic understanding

(Humerez et al., 2020) and non-violent communication or compassionate communication (use of self-awareness and self-connection) to manage conflict, distress and suffering (Tobase et al., 2021). Also, in 2020, the Portuguese Nursing Council (Ordem dos Enfermeiros) created an emotional support line (apoio.ordemenfermeiros.pt) and a broad support network (local accommodation, meals, transport, digital support, aesthetic services, digital publications). The main goals of this network work were to mitigate feelings of loneliness, fear and anguish and simultaneously maintain contact at a distance, conveying reliable information and facilitating the verbalization of negative feelings. These strategies aimed to convey reliable information, encourage and maintain social contact from a distance, and facilitate the expression of negative feelings. Later, it was also created a specialized line “Nurses with more Mental Health”, operated by telephone, video consultation or electronic contact by specialized nurses (mental health; and child and pediatric), for parental and emotional support of peers. The COVID-19 pandemic made evident: the value of mental health in people's daily lives; that nurses are essential professionals in the health system; reinforced the particular need for mental suffering early recognition; as well as the value of implementing strategies to support and promote nurses' mental health. During the COVID-19 pandemic, nurses have shown a strong sense of commitment to their work, contrasting with their self-care deficit, the lack of ability to recognize their emotional variations and the fear of asking for help (Chowdhury et al., 2021). These factors compromise the search for support or professional help to face psychological stress (Barbosa et al., 2020; Pereira et al., 2020). Effectively, overall, the results of the studies show that both nurses and health institutions must rank mental health promotion as an institutional priority, thus they must implement strategies to mitigate the negative effects of the pandemic in their strategic plans (Tobase et al., 2020). In this sense, the Portuguese Nursing Council also emphasizes the added value of offering well-being conditions to nurses in work contexts to raise the quality of care. Finally, and despite the relevance of the review to the discussion of results, some limitations must be addressed. First attributed to the scarcity of studies on this subject. Second, attributed to the insufficient two-year time interval of the analyzed studies, which biases the robustness of the results. In this sense, our conclusions, although in line with the published literature, require more studies aimed at consolidating these results. Namely, primary studies, whether of an exploratory or correlational nature and/or other systematic literature reviews. These data contributed to raising knowledge in the field of mental health.

Conclusion

The analysis of the studies included in the review showed that the main impacts mentioned by front-line nurses were the lack of scientific and technical knowledge about the disease, the lack of PPE, physical exhaustion, managing the risk of contagion, managing emotional reactions such as ambivalence, anxiety, fear, stress, sleep disturbances and depression. These factors can be positively or negatively influenced by internal and external factors such as the work environment, social support

and adaptive coping strategies. Therefore, the nurse's mental health must be considered a health priority, ensuring strategies and public policies that ensure and maintain the integrity and mental health of nurses who are fighting the pandemic.

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