

Support network for nurses during the COVID-19 pandemic: a scoping review

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Abstract

Introduction

The COVID-19 pandemic, which emerged at the end of 2019, had profound impacts on health, the economy, society, and culture worldwide. Healthcare professionals, especially nurses, were on the front lines, facing high risks of infection and work overload. This scenario led to stigmatization and social isolation, exacerbating physical and mental exhaustion due to inadequate support and conflicting workplace relationships.

Objective

To map the scientific literature on nurses' support networks during the COVID-19 pandemic.

Methods

We conducted an exploratory scoping review following the Joanna Briggs Institute guidelines. The study search was performed using specific descriptors and the mnemonic combination of population, concept, and context (PCC), defining the population as nurses, the concept as support networks, and the context as the pandemic. The consulted databases included the Virtual Health Library, which comprises the Latin American and Caribbean Health Sciences Literature, the Spanish Bibliographic Index of Health Sciences, the Nursing Database, and the Cumulative Index to Nursing and Allied Health Literature. Additionally, we consulted the following virtual libraries: Cochrane Library, Scientific Electronic Library Online, PubMed, and Web of Science. Two researchers selected studies with the assistance of Rayyan[®] software. The data were analyzed and presented descriptively.

Results

Nineteen articles met the inclusion criteria, most of them quantitative, totaling 9,221 participating nurses, published between 2020 and 2023 in various countries. All studies measured perceived social support, with the Multidimensional Scale of Perceived Social Support being the most frequently used instrument. We categorized the studies into four dimensions: 1) support for mental health, 2) support for workload and stress, 3) support for resilience, and 4) support regarding nurses' perceptions of workplace social networks.

Conclusion

There is no single effective social support model for all nurses; personalized adaptations are necessary. Investing in support networks will strengthen the healthcare system and promote healthier and more resilient nursing practices. This study recommends the promotion of diverse support networks, the strengthening of peer and leadership support, and the implementation of public policies to improve nurses' mental health.

Keywords

Nurses; Social Support; COVID-19.

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Introduction

The COVID-19 pandemic, which emerged in late 2019, produced impacts that extend beyond the epidemiological sphere, also affecting the economic, social, cultural, and political domains on a global scale.

It is important to highlight that authors such as Horton¹ present solid and significant arguments when defining COVID-19 as a *syndemic*. This term describes the interaction between two or more epidemic-origin pathologies directly related to biopsychosocial conditions, which are exacerbated by preexisting conditions and their direct consequences for the population. However, in this context, the term *pandemic* was chosen to refer to COVID-19.

In the fight against a new virus, for which there was no known therapy at the time and, consequently, with vulnerable institutional protocols, multiprofessional healthcare teams were largely composed of nursing professionals on the front lines of care.² Moreover, these professionals experienced the COVID-19 pandemic firsthand, along with all the vulnerabilities it brought, such as high infection risk, workload overload, lack of protective equipment, discrimination and social stigma due to the possibility of spreading the disease, and isolation from their families and loved ones.³⁻⁸

The pandemic disrupted daily life and, in many cases, family structures on a global scale, making it essential to address mental health issues during the pandemic period, given the uncertainties imposed by the new reality.⁹ One example is data from a study on the psychological distress faced by healthcare workers, which showed that most nursing professionals experienced high levels of anxiety (51.44%) and insomnia (33.17%).¹⁰

Another study on the same topic, conducted with nursing professionals in Brazil, also revealed the presence of other psychological disorders among participants, such as appetite and sleep disturbances, fatigue, guilt, depression, sadness, distress, stress, vulnerability, and irritability, reaffirming the impact of COVID-19 on this workforce.¹¹ Furthermore, previous reviews have predominantly focused on mental health issues among nursing professionals related to the COVID-19 pandemic.¹²

Vedovato et al.¹³ argue that working conditions in the healthcare sector are intrinsically linked to workers' health and emotions. However, regardless of their specific field, healthcare professionals consider caregiving a fundamental aspect of their profession, contributing to the well-being and health of the broader population. Unfortunately, they remain vulnerable to workplace challenges and systemic shortcomings, which directly affect their physical and mental health.

Since there is a direct relationship between family support networks, workers' health, and COVID-19, it is crucial to better understand the influence of family support on health during the pandemic. This is because nursing professionals exhibited high levels of burnout, and the absence of an adequate support network, coupled with conflicting work relationships and disruptions in their personal lives due to

social distancing, led to significant illness among many of them.¹⁵

Given this, we believe that understanding and analyzing who provided support to these professionals and how this support was delivered, given the current healthcare landscape, may have various impacts on the health of nursing professionals who, like myself, leave their loved ones behind every day to care for others.

Although previous reviews have explored topics related to mental health during the pandemic¹², there remains a gap in the systematic analysis of the support networks available to these professionals. This highlights the need to conduct a scoping review of the available national and international scientific literature to identify gaps concerning nurses' support networks during the COVID-19 pandemic, as well as the determining factors behind these circumstances. Considering the need to deepen studies on this still underexplored topic, the findings may serve as a basis for implementing health actions aimed at analyzing social support networks specifically for nurses. Additionally, they may help identify factors associated with the lack of such support for professionals who worked during the COVID-19 pandemic. Ultimately, this research contributes to strengthening support networks for nursing teams in future catastrophic and pandemic situations.

Based on the above, we established the following guiding question: How was the support network for nurses structured during the COVID-19 pandemic? Thus, this study aimed to map the scientific literature on nurses' support networks during the COVID-19 pandemic.

Methods

To formulate the guiding question for this study—How was the support network for nurses structured during the COVID-19 pandemic?—we adopted a structured sequence based on the PCC mnemonic strategy (Population, Concept, Context): Population: nurses; Concept: support network; Context: pandemic. This approach aimed to achieve the proposed objective of mapping the scientific literature on nurses' support networks during the COVID-19 pandemic. It is important to highlight that using the PCC framework enhances data quality and clarity, providing a more precise orientation for formulating the research question.¹⁶

We selected descriptors based on the Health Sciences Descriptors (DeCS) and Medical Subject Headings (MeSH), along with their alternative terms in English, following the PCC acronym and research question. Additionally, uncontrolled descriptors were included to increase search specificity, as demonstrated in Table 1.

After selecting the descriptors and their equivalents, we initiated the literature search. The search was conducted in April 2024 across the following databases: the Virtual Health Library, which includes the Latin American and Caribbean Health Sciences Literature (LILACS), the Spanish Bibliographic Index of Health Sciences (IBECs), the Nursing Database (BDENF), and the Cumulative Index to Nursing and Allied Health Literature (CINAHL). In addition, we consulted the virtual libraries Cochrane Library, Scientific Electronic Library Online (SciELO), and

the National Library of Medicine (PubMed and Web of Science). Reference lists of relevant literature were also examined.

During the bibliographic searches, we used Boolean operators AND and OR to combine descriptors and alternative terms in English. The search strategy was adjusted for each database's specific domain in collaboration with a health sciences librarian; however, descriptor combinations remained consistent, as shown in Table 2.

Table 1. Mnemonic Combination (PCC Acronym), Research Question, and Descriptor Selection

Acronym	Question	Descriptors	Search strategy
P	Nurses	"Nurses"*	(Enfermeiras OR enfermeiros OR Nurses OR "trabalhadores de enfermagem" OR Profissionais de enfermagem")
C	Support network	Social support Caregivers	("Apoio Social OR "Redes de apoio social" OR Social Support" OR "Support, social") ("Cuidadores OR Caregivers") ("Família OR Family") ("Relações Familiares OR Family Relations") ("Características da Família OR Family Characteristics")
C	Pandemics COVID-19	Pandemics COVID-19	("Pandemias OR Pandemics") ("COVID-19 OR COVID-19")

* "Nursing workers" is not a DeCS term, but we used it considering the broader concept of the nursing workforce.

Table 2. Search strategy and number of articles identified in different databases

Database	Search strategy	Total
PubMed	(Nurses OR nurse) AND ("Social Support" OR "Support, Social" OR Caregivers OR Family OR "Family Relations") AND (COVID-19 OR "COVID 19" OR "2019-nCoV Infection" OR "SARS-CoV-2Infection" OR "SARS Coronavirus2" OR "COVID-19 Pandemic" OR "COVID19 Pandemic" OR "Pandemic,COVID-19" OR "COVID-19 Pandemics")	266
Web of science	(Nurses OR nurse) AND ("Social Support" OR "Support, Social") AND (COVID-19 OR "COVID19" OR "2019-nCoV Infection" OR "SARS-CoV-2 Infection" OR "SARS Coronavirus2" OR COVID-19 Pandemic" OR "COVID 19 Pandemic" OR "Pandemic, COVID-19" OR "COVID-19 Pandemics")	361
SciELO	(Enfermeiras OR enfermeiros OR Nurses OR "trabalhadores de enfermagem" OR "Profissionais de enfermagem" OR "Enfermeras y Enfermeros") AND ("Apoio Social" OR "Redes de apoio social" OR "Social Support" OR "Apoyo Social") AND (COVID-19 OR COVID 19 OR "Infecção pelo SARS-CoV-2" OR "Infecção por SARS-CoV-2" OR "Infecção por Vírus COVID-19" OR "Pandemia COVID-19" OR "Pandemia por COVID-19" OR "COVID19" OR "2019-nCoV Infection" OR "SARS-CoV-2 Infection" OR "SARS Coronavirus 2" OR "COVID-19 Pandemic" OR "COVID 19 Pandemic" OR "COVID-19 Pandemics")	18
BVS LILACS BDENF IBECS	(Enfermeiras OR enfermeiros OR Nurses OR "trabalhadores de enfermagem" OR "Profissionais de enfermagem" OR "Enfermeras y Enfermeros") AND ("Apoio Social" OR "Redes de apoio social" OR "Social Support" OR "Apoyo Social") AND (COVID-19 OR COVID19 OR "Infecção pelo SARS-CoV-2" OR "Infecção por	LILACS = 18 BDENF = 13 IBECS = 6

	SARS-CoV-2” OR “Infecção por Vírus COVID-19” OR “Pandemia COVID-19” OR “Pandemia por COVID-19” OR “COVID 19” OR “2019-nCoV Infection” OR “SARS-CoV-2 Infection” OR “SARS Coronavirus 2” OR “COVID-19 Pandemic” OR “COVID 19 Pandemic” OR “COVID-19 Pandemics”)	
CINAHL	(Nurses OR nurse) AND (“Social Support” OR “Support, Social”) AND (COVID-19 OR “COVID19” OR “2019-nCoV Infection” OR “SARS-CoV-2 Infection” OR “SARS Coronavirus2” OR “COVID-19 Pandemic” OR “COVID 19 Pandemic” OR “Pandemic,COVID-19” OR “COVID-19 Pandemics”)	124

The inclusion criteria encompassed original articles, experience reports, theoretical and reflective studies, and gray literature (preprints, theses, dissertations, manuals, books, and conference proceedings) published in Portuguese, Spanish, or English that addressed the research question. We excluded review articles. No time limit was established. Two researchers, beginning with a review of titles and abstracts, conducted article selection independently. In cases of disagreement between the two researchers, a third researcher was consulted to determine inclusion or exclusion. Subsequently, full-text articles were reviewed for data extraction and analysis. The retrieved studies were organized using the Rayyan[®] software,¹⁷ configured to remove duplicate records. The preliminary version is publicly available on the Open Science Framework platform and can be accessed via the following link: <https://osf.io/9jsmw/>.

Data analysis

We defined the final sample through the retrieval and full-text review of the selected studies. The results were analyzed descriptively and comparatively, taking into account other studies on the topic, after being entered into an Excel[®] spreadsheet. Data extraction and analysis were based on the following indicators: authors, year and country of publication, study type, objective, population, results, and recommendations related to the support network for nurses during the COVID-19 pandemic.

Data aggregation, synthesis, and presentation

During data analysis, we compiled and reported results to provide an overview of the entire body of material. The findings were presented descriptively and organized into tables and graphs that we designed to address the research objective and guiding question.

Results

The search strategies employed in this scoping review led to identifying 806 studies. After removing duplicates and excluding studies that did not meet the inclusion criteria, 19 studies were included.¹⁸⁻³⁶ In our review, we did not identify additional studies from the references of the selected articles that could be included. Figure 1 illustrates this process using a PRISMA flow diagram.

In this review, 17 of the 19 included studies (90%) adopted a cross-sectional descriptive quantitative approach.

Additionally, there were one retrospective cohort study and one qualitative study based on thematic analysis, totaling 9,221 nurses as participants. The studies were published between 2020 and 2023 and conducted in various countries, including China^{27-29,34}, Turkey^{22,25,26}, the United States^{32,33}, Greece^{23,24}, Iran^{21,36}, Jordan¹⁸, Brazil²⁰, Peru¹⁹, South Korea²⁷, Poland³⁰, and Japan³⁵, covering the period between 2020 and 2023 (Table 3).

Figure 1: Flow diagram. Identification of studies from databases and records

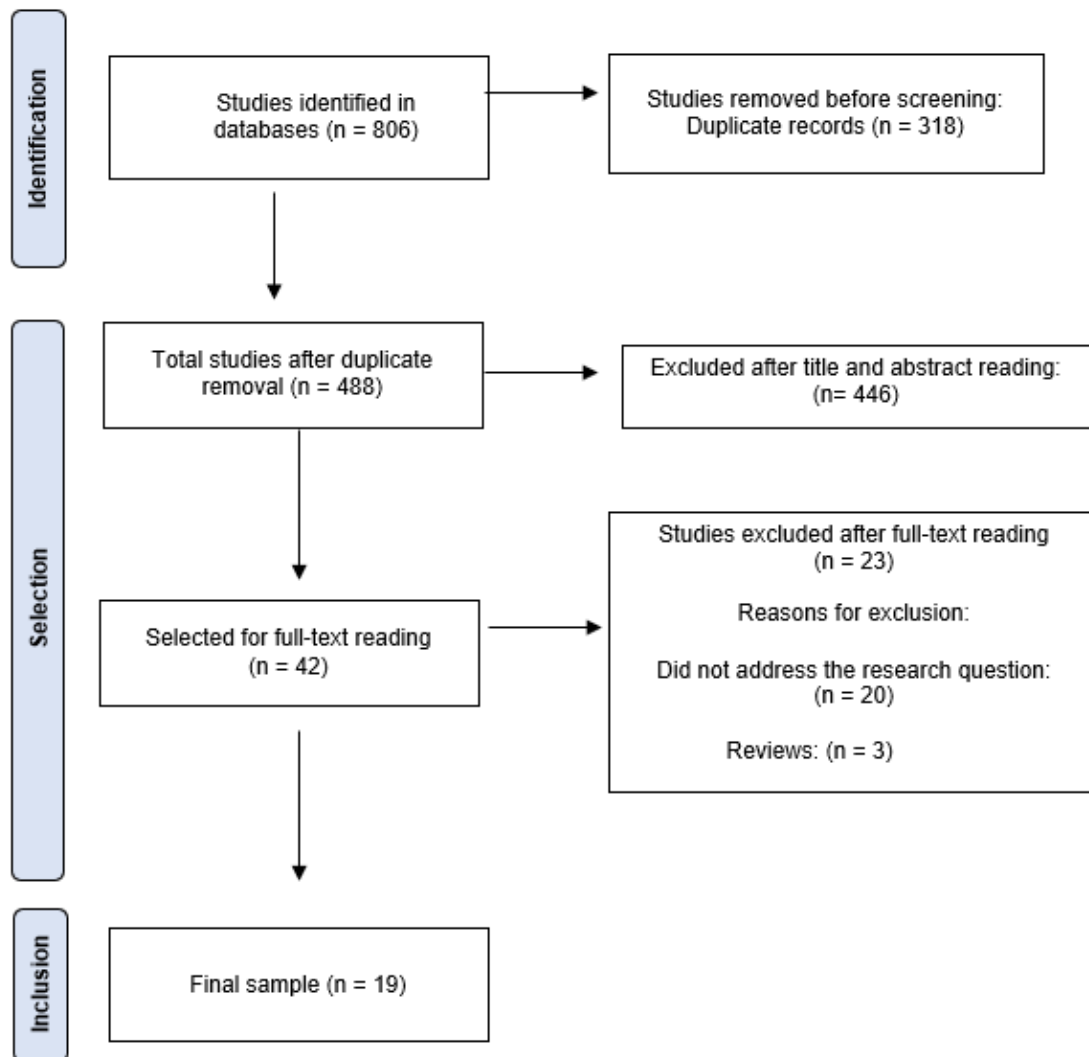


Table 3: Characteristics of the studies included in the review

Authors, year, and country	Journal	Objective	Study design	Measurement instrument	Population	Results	Recommendations
Alnazly et al. (2021), Jordânia.	<i>Plos One</i>	Assess fear, depression, anxiety, stress, social support, and associated factors among Jordanian healthcare workers during the COVID-19 pandemic.	Descriptive cross-sectional quantitative study	Multidimensional Scale of Perceived Social Support	363 healthcare workers (majority nurses)	High perception of social support received from significant individuals, family, and friends, with significant individuals being the most prominent. A positive correlation was found between perceived social support and reduced fear, depression, anxiety, and stress.	Healthcare centers should ensure support for healthcare workers and their families during the COVID-19 pandemic, including medical, financial, and psychosocial assistance. Regular meetings, peer support, and psychological assessments should be promoted.
David et al., (2023), Brasil.	<i>Plos One</i>	Map and analyze social support networks in nursing work among professionals who fell ill or were suspected of COVID-19 infection and sought emergency reference services for healthcare professionals in Rio de Janeiro and Fortaleza during the early stages of the pandemic in Brazil.	Descriptive cross-sectional quantitative study	Two ad hoc questions	95 nurses	Nurses were highlighted as the primary providers of social support, followed by physicians, laboratory assistants, and physiotherapists. They also demonstrated greater centrality than other professional categories in the studied states.	It is suggested that recognition and social support be strengthened to enhance team coordination and resilience in healthcare settings during crises such as the COVID-19 pandemic.
Ebrahimi et al. (2021), Iran.	<i>Work</i>	Investigate the effect of workload and perceived social support on the quality of life of nurses working in COVID-19 inpatient hospital units.	Descriptive cross-sectional quantitative study	Multidimensional Scale of Perceived Social Support	336 nurses in hospital inpatient units	Perceived social support had a positive effect on quality of life and was a moderating factor in the relationship between work overload and quality of life, with an emphasis on family support. A significant positive relationship was observed between nurses' mental well-being and their perception of social support, with the friends' subscale being the most prominent.	It is recommended that nurses increase social support levels to provide better psychological support for healthcare personnel during the COVID-19 pandemic era.
Ersin et al., (2021), Turquia.	<i>Perspectives in Psychiatric Care</i>	Determine the perceptions of mental well-being and social support among nurses working in a hospital dedicated to treating COVID-19 patients.	Descriptive cross-sectional quantitative study	Multidimensional Scale of Perceived Social Support	333 volunteer nurses	A significant positive relationship was observed between nurses' mental well-being and their perception of social support, with the friends' subscale being the most prominent.	It is important to provide counseling services to strengthen nurses' mental well-being and social support.
Esteban et al. (2021), Peru.	<i>Salud Uninorte</i>	Determine whether concerns about COVID-19, social support, and anxiety are predictors of depression among Peruvian nurses during the public health emergency.	Descriptive cross-sectional quantitative study	Workplace Social Support Scale	216 nurses	Perceived social support in the workplace was correlated with lower concerns about COVID-19 infection.	The need to develop intervention programs to prevent and reduce emotional distress among frontline nurses during a pandemic.

Authors, year, and country	Journal	Objective	Study design	Measurement instrument	Population	Results	Recommendations
Galanis et al. (2022), Grécia.	<i>Vaccines</i>	Analyze the relationship between burnout related to COVID-19 and the willingness to receive a booster vaccine among nurses, while also evaluating whether social support can mitigate this relationship.	Descriptive cross-sectional quantitative study	Multidimensional Scale of Perceived Social Support	963 nurses	Overall social support was positively correlated with willingness to get vaccinated and significantly moderated the relationship between COVID-19-related stress and vaccine acceptance.	Strengthen social support and implement awareness programs on immunization.
Galanis et al. (2023), Grécia.	<i>MedRxiv</i>	Evaluate the effect of social support on nurses' resilience and investigate the impact of demographic characteristics on their resilience.	Descriptive cross-sectional quantitative study	Multidimensional Scale of Perceived Social Support	963 nurses	Perceived social support from significant others was associated with increased resilience.	Develop policies to promote a harmonious work environment, resilience, and productivity. Strengthening collegiality is essential to improving nurses' resilience.
Izci et al. (2022), Turquia.	<i>Journal of Nursing Management</i>	Investigate the effects of workload, occupational stress, and social support on nurses' self-perceptions regarding their parenting roles during the COVID-19 pandemic, as well as the impact of sociodemographic characteristics of nurse parents on occupational stress and workload during the pandemic.	Descriptive cross-sectional quantitative study	The Swedish Demand-Control-Support Questionnaire	198 nurses	Nurse parents whose spouses also work in healthcare tend to experience lower occupational stress. Additionally, shift work factors indicate that these professionals have a significant impact on the stress levels they experience.	Nurse managers can implement strategies to mitigate occupational stress among nursing staff. Enhancing nurses' stress management skills and providing crisis training are also recommended.
Kilinç et al. (2020), Turquia.	<i>Perspectives in Psychiatric Care</i>	Determine the relationship between social support and perceived levels of psychological resilience among nurses in Turkey during the COVID-19 pandemic.	Descriptive cross-sectional quantitative study	Multidimensional Scale of Perceived Social Support	370 nurses	As nurses' perceived social support level increases, regardless of its source, their psychological resilience also improves.	Implement protective measures to safeguard nurses' mental health, enhance social support, and develop effective strategies to cope with emotional stress.
Kim et al. (2020), Coreia do Sul.	<i>Sustainability</i>	Investigate how social support affects work engagement and how nurses' intention to stay in their jobs is influenced by social support in the current COVID-19 situation.	Descriptive cross-sectional quantitative study	Three ad hoc questions	377 nurses	Perceived family social support demonstrated the highest level of job commitment. A moderate-to-high level of job commitment and a higher intention to stay were observed when social support was perceived through communication channels.	Strengthen social support for nurses, especially those facing high-stress situations such as pandemics.

Authors, year, and country	Journal	Objective	Study design	Measurement instrument	Population	Results	Recommendations
Li et al. (2022), China.	<i>Journal of psychosocial nursing</i>	Provide basic data and a scientific foundation for establishing effective psychological interventions during public health emergencies.	Descriptive cross-sectional quantitative study	Perceived Social Support Scale	248 nurses	Global perceived social support was negatively correlated with obsessive-compulsive symptoms, anxiety, and depression. No correlation was found between nurses' job-related psychological stress and perceived social support. Family was identified as the primary source of social support.	Strengthen communication. Develop clear and effective strategies for infection prevention and control, establish response and emergency plans, and provide timely training for frontline nurses. Nurses should be actively encouraged to accept support from family, friends, and colleagues.
Liao et al. (2020), China.	<i>Journal of Clinical Nursing</i>	Assess stress response levels, self-efficacy, and perceived social support among nurses working during the COVID-19 outbreak and investigate potential factors influencing their stress.	Descriptive cross-sectional quantitative study	Perceived Social Support Scale	1,092 clinical nurses	A higher level of global perceived social support was associated with lower stress levels.	Regulating self-efficacy and perceived social support among nurses proved to be a viable approach to alleviating stress.
Pergol-Metko et al. (2023), Polónia.	<i>Health care</i>	Determine nurses' perception of social support and identify the relationship between social support and compassion fatigue and burnout.	Retrospective cohort quantitative study	Multidimensional Scale of Perceived Social Support	856 nurses	A higher level of perceived social support was associated with lower compassion fatigue, greater job satisfaction, and reduced burnout risk.	Healthcare administrators should encourage self-care among nurses by promoting healthy habits and work-life balance. Governmental investments are essential to strengthening the healthcare system and meeting population needs.
Qian et al. (2022), China.	<i>International Journal of Clinical and Experimental Medicine</i>	(1) Assess the psychological state and perceived social support of nurses not involved in epidemic outbreaks during the COVID-19 pandemic, and (2) investigate the relationship between psychological state and perceived social support among these nurses.	Descriptive cross-sectional quantitative study	Perceived Social Support Scale	1,187 nurses	Social support from friends, family, and other significant individuals was significantly correlated with lower levels of depression, anxiety, obsessive-compulsive disorder, and hypochondria.	Managers should provide guidance and timely assistance when professionals experience emotional issues, ensuring team cohesion among nurses at all levels. They should also work to improve perceived social support, increase job efficiency, and better protect public health.

Authors, year, and country	Journal	Objective	Study design	Measurement instrument	Population	Results	Recommendations
Sahay et al. (2022), Estados Unidos.	<i>Sustainability</i>	Identify available sources of support for nurses during global health crises and determine the types of support nurses receive during such crises	Qualitative study	Thematic analysis using qualitative questions	24 hospital nurses	Nurses primarily sought support from their colleagues at work, while avoiding direct family support. They also received different forms of emotional, practical, and institutional support during the pandemic.	Strengthening peer support platforms, such as workplace support groups, is recommended to enhance nurses' resilience and sustainability. Additionally, policies supporting both work-life balance and institutional backing should be implemented during crises such as COVID-19.
Scherr et al. (2021), Estados Unidos.	<i>Open Nursing</i>	Analyze symptoms of depression, anxiety, and post-traumatic stress disorder (PTSD) and their impact on nurses' job performance. Additionally, determine whether resilience and social support moderate these relationships.	Descriptive cross-sectional quantitative study	Multidimensional Scale of Perceived Social Support	177 nurses	Higher levels of global perceived social support were associated with lower levels of depressive symptoms.	Promoting resilience and social support may help mitigate the effects of providing patient care during COVID-19.
Shen et al. (2021), China.	<i>Psychology, Health & Medicine</i>	Investigate the prevalence of mental health issues and social support among neonatal nurses during the COVID-19 outbreak and explore the correlation between these factors.	Descriptive cross-sectional quantitative study	Social Support Rating Scale	848 neonatal nurses	Higher levels of global social support were associated with better psychological conditions (lower anxiety, depression, and stress levels).	Nurse managers should identify key groups for targeted interventions and provide effective emergency training and psychological support for nursing teams.
Tatsuno et al. (2021), Japão.	<i>Acute Medicine & Surgery</i>	Analyze whether a high level of perceived social support has a protective effect on the mental health of intensive care nurses during the COVID-19 pandemic.	Descriptive cross-sectional quantitative study	Multidimensional Scale of Perceived Social Support	334 intensive care nurses	A low level of global perceived social support was associated with a higher probability of anxiety and depression symptoms, as well as a significant association with post-traumatic stress.	Establish a mental health support system not only for nurses directly caring for COVID-19 patients but also for those working in intensive therapy units. Promoting nurses' self-care and recognizing their work are essential measures to reduce stress and prevent the development of post-traumatic stress disorder.
Vafaei et al. (2020), Irã.	<i>Psychology Research and Behavior Management</i>	Compare perceived social support, quality of life, and depression levels among obstetric healthcare professionals caring for pregnant women diagnosed with COVID-19 (both positive and negative cases)	Descriptive cross-sectional quantitative study	Multidimensional Scale of Perceived Social Support	275 nurses	No significant associations were found between sources of support, quality of life, and the nursing profession.	Continuous mental health assessments for healthcare professionals and the implementation of adequate psychological support to address pandemic-related challenges are necessary.

Authors, year, and country	Journal	Objective	Study design	Measurement instrument	Population	Results	Recommendations
		across eight cities in Iran.					

Considering care networks and aiming to answer the central question of this scoping review (How was the support network for nursing workers structured during the COVID-19 pandemic?), the included studies were analyzed and categorized into four dimensions of support networks (Table 4).

Table 4. Categories of analysis of the studies

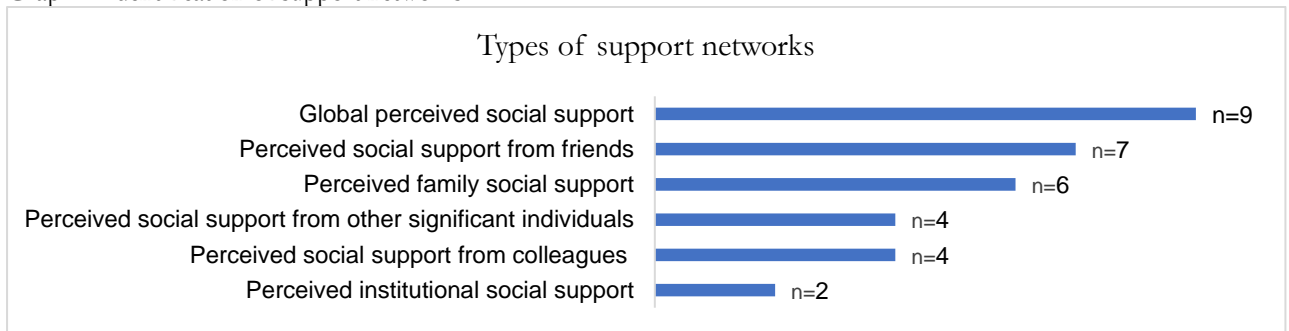
Support network dimensions for:	Articles
Mental health	Ersin et al., 2021; Esteban et al., 2021; Galanis et al., 2022; Li et al., 2022; Scherr et al., 2021; Shen et al., 2021; Tatsuno et al., 2021; Alnazly et al., 2021; Vafaei et al., 2020; Qian et al., 2022.
Workload, occupational stress, and compassion fatigue	Ebrahimi et al., 2021; Izci et al., 2022; Liao et al., 2020; Pergol-Metko et al., 2023.
Resilience and job commitment	Galanis et al., 2023; Kiliç et al., 2020; Kim et al., 2020.
Social support networks in the workplace	David et al., 2023; Sahay et al., 2022.

Regarding the type of social support, all studies measured perceived social support. The most frequently used instrument was the Multidimensional Scale of Perceived Social Support, applied in ten of the included studies, followed by the Perceived Social Support Scale, used in three studies (Table 1).

From the analysis of the reviewed studies on social support among nurses during the COVID-19 pandemic, we identified six different types of support networks.

Among them, the most prominent were global social support, family, friends, colleagues, other significant individuals, and institutional support. Figure 1 below illustrates the frequency with which each type of social support was mentioned in the reviewed articles, highlighting the variety and significance of these networks in ensuring nurses' well-being and performance in crisis contexts.

Graph 1. Identification of support networks



* The total number of support networks differs from the total number of included articles because some studies measured both global support and specific subscales.

Support networks for mental health

A total of ten studies addressed the topic of support networks and their relationship with nurses' mental health. Shen et al.³⁴ concluded that higher levels of perceived global social support were associated with better psychological conditions among nurses, showing significant negative correlations with anxiety ($r = -0.153$), depression ($r = -0.243$), and stress ($r = -0.128$).

Ersin et al.²² observed a positive and significant relationship between nurses' mental well-being and their perception of social support from the family subscale ($r = 0.301$; $p < 0.05$), friends ($r = 0.369$; $p < 0.05$), and other significant individuals ($r = 0.296$; $p < 0.05$).

Galanis et al.²³ found that COVID-19-related burnout had a negative correlation with perceived global social support ($r = -0.183$, $p < 0.001$). Conversely, global social support was positively correlated with the willingness to get vaccinated ($r = 0.136$, $p < 0.001$). Moreover, global social support played a significant mediating role in this dynamic, bridging the relationship between COVID-19-related burnout and vaccination willingness ($\beta = 0.0437$).

Li et al.²⁸ concluded that perceived global social support was negatively correlated with negative emotional states, including depression ($r = -0.206$; $p < 0.05$), obsessive-compulsive disorder ($r = -0.185$; $p < 0.05$), and hypochondria ($r = -0.234$; $p < 0.05$).

Scherr et al.³ found that perceived global social support moderated the relationship between treating COVID-19 patients and mental health symptoms among nurses. Hierarchical regression analyses showed that social support was inversely correlated with depressive symptoms ($p < 0.001$). Additionally, a significant interaction was identified between treating COVID-19 patients and social support, indicating that the association between social support and depressive symptoms was stronger among nurses who treated COVID-19 patients than those who did not.

Tatsuno et al.³⁵ reported that lower levels of perceived global social support were associated with a higher probability of experiencing anxiety symptoms (OR = 0.979, 95% CI 0.96–0.99) and depressive symptoms (OR = 0.953, 95% CI 0.93–0.97).

Alnazly et al.¹⁸ concluded that Jordanian healthcare workers during the COVID-19 pandemic perceived high levels of emotional, instrumental, and informational support from their social networks. This support was most evident in the significant others subscale, followed by family and friends. Furthermore, global social support showed a significant positive correlation with fear, depression, anxiety, and stress ($r = 0.20$).

Qian et al.³¹ found significant negative correlations between perceived social support and depression ($r = -0.291$), neurasthenia ($r = -0.317$), fear ($r = -0.170$), obsessive-

compulsive disorder ($r = -0.241$), and hypochondria ($r = -0.131$), with all p -values < 0.001 . These results indicate that higher levels of social support from all sources (friends, family, and other significant individuals) are associated with better mental health outcomes.

Esteban et al.¹⁹ reported that perceived workplace social support was correlated with a lower level of concern regarding COVID-19 infection.

The findings from the ten studies on support networks and nurses' mental health highlighted that a high level of global social support was associated with better psychological well-being, including reduced anxiety, depression, and stress. Furthermore, perceived social support played a significant mediating role, positively influencing vaccination willingness and mitigating the impact of COVID-19-related burnout. Finally, the results also demonstrated that social support moderated mental health symptoms, particularly among nurses directly involved in treating COVID-19 patients.

Support networks for workload, occupational stress, and compassion fatigue

The review of four studies identified different aspects related to social support, workload, occupational stress, and compassion fatigue among nurses during the COVID-19 pandemic.

Izci et al.²⁵ found that nurses with spouses working in the healthcare sector experienced lower levels of occupational stress, suggesting a possible benefit of specific family support. Workload varied significantly depending on shift type and work unit, with nurses in pandemic-designated units facing higher levels of stress ($p < 0.05$).

Hossein et al. observed that perceived global social support had a significant direct positive effect ($r = 0.574$, $p < 0.05$) on quality of life. Additionally, perceived social support also acted as a moderator ($r = 0.164$, $p < 0.05$), reducing the negative impact of workload on nurses' quality of life.

Liao et al.²⁹ found significant negative correlations between stress response and perceived global social support ($r = -0.211$, $p < 0.001$). Social support from friends was identified as a key factor in reducing acute stress response (Beta = -1.401, $p < 0.001$).

Pergol-Metko et al.³⁰ investigated compassion fatigue among nurses in Poland and found significant correlations between perceived global social support and compassion fatigue ($r = -0.35$, $p < 0.001$). Higher levels of perceived social support from partners ($r = -0.29$, $p < 0.001$), family ($r = -0.30$, $p < 0.001$), and friends ($r = -0.33$, $p < 0.001$) were associated with lower compassion fatigue and greater job satisfaction.

The findings from the four reviewed studies indicate that nurses with spouses working in the healthcare sector

experienced lower levels of occupational stress. Perceived global social support had a positive effect on quality of life and moderated the negative impact of workload. Support from friends played a crucial role in reducing acute stress response. Additionally, higher levels of perceived social support from partners, family, and friends were associated with lower compassion fatigue and greater job satisfaction among nurses.

It is important to clarify that compassion fatigue refers to the emotional and physical exhaustion healthcare professionals may experience when caring for patients facing intense suffering. This phenomenon occurs when continuous exposure to others' suffering leads to exhaustion, reducing empathy and resulting in emotional detachment and lower job satisfaction.

Support networks for resilience and job commitment

Three studies explored the topic of the relationship between support networks, resilience, and nurses' job commitment. The study by Galanis et al.²⁴ revealed that perceived support from other significant individuals ($b = 0.106$, $p < 0.001$) and friends ($b = 0.047$, $p = 0.02$) was positively correlated with resilience. The research highlighted the importance of a strong support network, as it identified that the average level of support from significant individuals, family, and friends was higher among those with a greater perception of resilience.

Kiliç et al.²⁶ identified a positive relationship between perceived social support and nurses' psychological resilience. The correlations between resilience and the subscales of perceived social support (family, friends, and other significant individuals) were significant: family support ($r = 0.338$, $p = 0.000$), support from friends ($r = 0.372$, $p = 0.000$), and support from another significant person ($r = 0.377$, $p = 0.000$). The total perceived global social support scale also showed a strong correlation ($r = 0.424$, $p = 0.000$) with resilience, emphasizing that higher levels of perceived social support were associated with greater psychological resilience among nurses during the pandemic.

Kim et al.²⁷ concluded that family support was the most significant factor in job commitment, whereas perceived support from colleagues had the least influence. Job retention intention was highest among those who perceived social support from the government and the media.

The three studies included in this dimension showed that perceived support from significant individuals and friends is positively associated with resilience. Additionally, higher levels of perceived overall social support were significantly correlated with greater psychological resilience. Family support was identified as the most influential factor in job commitment.

Support networks related to nurses' perceptions of workplace social support

Two studies explored support networks related to nurses' perceptions of workplace social support.

David et al.²⁰ examined perceived social support and professional networks among nurses in Brazil during the COVID-19 pandemic, concluding that nurses were the primary providers of social support, followed by general practitioners, laboratory technicians, and physiotherapists. In Rio de Janeiro, in addition to nurses, the multidisciplinary training team also had a significant score in centrality measures, while in Fortaleza, the general administration and physicians from other specialties were equally important. Centrality was highest for nurses in both states, highlighting them as key mediators within support networks.

Sahay et al.³² explored nurses' perceptions in the United States regarding social support during the COVID-19 pandemic, emphasizing a preference for peer support due to the shared understanding of the challenges faced. Nurses avoided seeking support from their families to protect them from additional stress and instead relied on coworkers as surrogate family members. The types of support included haptic support, such as hugs that provided emotional comfort, emotional support through sharing difficult experiences, and practical support at work, such as covering shifts. Additionally, institutional support, including regular updates and material assistance, helped nurses feel supported by their organizations during the crisis.

The two studies included in this dimension found that nurses are central in providing social support, followed by other healthcare professionals. There was a preference for peer support due to the shared understanding of the challenges faced, while some nurses avoided seeking support from their families to protect them from additional stress.

Recommendations suggested by the studies

The findings of the analyzed studies highlight the importance of social support in promoting nurses' well-being, particularly during crises such as the COVID-19 pandemic. As shown in Table 1, the recommendations include fostering support networks among colleagues and supervisors²⁴, strengthening family support through programs that encourage family involvement and facilitate work-life balance^{18, 24}, implementing wellness and health programs that promote nurses' physical and mental well-being^{24, 28}, and adopting organizational policies that enhance work-life balance^{18, 24}. Additionally, early psychological interventions, effective communication of pandemic-related information, and clear prevention and control strategies were essential in reducing stress and supporting nurses' mental health.^{28, 35}

Discussion

In this study, we mapped the scientific literature on support networks for nurses during the COVID-19 pandemic. Understanding how nursing professionals, particularly during the pandemic, managed to cope with such intense challenges is essential. As cited in the theoretical framework of this dissertation, interpersonal and environmental interactions are fundamental to human development and help overcome daily obstacles through relationships based

on friendship, work, and affection.³⁷ In the context of nursing, social support networks play a vital role in providing emotional, instrumental, and informational support,^{38, 39} which is essential for maintaining health and managing the heavy workload and stress.

Among the 19 studies included in this review on support networks for nursing professionals during the COVID-19 pandemic, it was possible to categorize them into four main dimensions. These dimensions address the relationship between support networks and mental health, occupational stress, compassion fatigue, resilience, job commitment, and nurses' perceptions of workplace support.

Our results showed a significant relationship between perceived social support and nurses' mental health during the COVID-19 pandemic, as social support contributed to lower frequencies of anxiety, depression, and stress symptoms, improving psychological well-being.^{18, 22, 23, 27, 33-35} Additionally, it positively influenced vaccine uptake²³ and reduced infection-related concerns.

The findings in this dimension align with the theory proposed by Cohen and Wills,⁴⁰ which suggests that social support can reduce perceived stress and enhance coping abilities. This is consistent with the broader literature highlighting the importance of social support networks in promoting the mental health of healthcare professionals, particularly during crises.⁴¹ This type of support plays a key role in reducing work-related stress and strengthening mental health, emphasizing the importance of both family and social support.⁴²

This perspective is also in accordance with the social support model,⁴³ which identifies emotional, informational, and instrumental support as essential for workers' health and well-being.

In this regard, a literature review¹² on the mental health of frontline nursing professionals during the COVID-19 pandemic highlighted the initiative by COFEN to establish a support network for nursing professionals. This network focused on providing targeted psychological support and guidance on integrative and complementary health practices, aiming to reduce stress, anxiety, and the emotional and physical challenges faced by these professionals. Another aspect emphasized in the review was the regulation of psychological services, such as the "e-Psi Register," which enabled remote consultations via technology, benefiting not only healthcare professionals but also the general population in emergencies. Additionally, the review cited initiatives such as informational videos from the Ministry of Health, telehealth consultations, and support projects by Fiocruz in partnership with state agencies. These interventions underscored the importance of psychological support and integrative practices in preserving healthcare professionals' mental health in critical contexts.¹²

The relationship between epidemic events and occupational stress, workload, and compassion fatigue is not a new phenomenon for nurses during crises. In this context, during the 2003 SARS-CoV outbreak in Singapore, many healthcare professionals exhibited symptoms of stress.⁴³ Similarly, following the 2015 Middle East Respiratory Syndrome (MERS) outbreak in South Korea, nursing teams also reported symptoms of post-traumatic stress disorder.⁴³ For this reason, the findings from this scoping review highlight the importance of support networks in stressful periods.

Izci et al.²⁵ concluded that nurses with spouses working in the healthcare sector experienced lower levels of occupational stress, suggesting that family support is beneficial. Beyond family support, other forms of social support were also significant. The study by Liao et al.²⁹ found significant negative correlations between stress response and perceived social support, particularly from friends. Complementing this, Hossein et al. demonstrated that perceived global social support had a direct positive effect on quality of life and acted as a moderator, reducing the negative impact of workload.

These findings reinforce the concepts of social support, emphasizing the role of family support in managing occupational stress. This perspective aligns with the understanding that social support can mitigate the negative effects of workload on health and well-being.⁴⁴

Our findings also indicate that social support plays a fundamental role in nurses' resilience and job commitment, as evidenced in the studies by Galanis et al.²⁴ and Kiliç et al.²⁶ included in this research. These results align with a 2021 document review,⁴⁵ which also concluded that nurses' psychological resilience increases with higher levels of perceived social support in a pandemic context. According to the authors, resilience is essential in nursing due to the constant exposure to human suffering and stressful working conditions.⁴⁵ The resilience theory⁴⁶ also supports our findings by highlighting the importance of protective factors, such as social support, in the ability to recover from adversity. Therefore, evidence suggests that professionals are more likely to engage in their work when they perceive a high level of social support.

Our review also identified findings regarding perceptions of social support networks in the workplace context. David et al.²⁰ emphasized the importance of nurses within support networks, while Sahay et al.³² highlighted the significance of peer support due to a shared understanding of their difficulties. The support provided included emotional and practical measures, as well as institutional support strategies that helped nurses feel supported during the crisis. The results indicate that healthcare professionals require a strong and diverse social support network, especially in

times of high demand and pressure, such as during the COVID-19 pandemic.

Including multiple sources of support in an overall analysis of the results reveals the complexity of nurses' emotional and social needs. According to Sluzki,⁴⁷ support networks can be classified into formal and informal systems, which function complementarily. While the formal system relies on government services and social assistance, the informal system, consisting of social and civic institutions and personal relationships, provides resources that are often more individualized and immediate. Cohen and Wills⁴⁰ emphasize the importance of balancing personal needs with the nature of social support sources. The authors argue that no single form of social support universally serves as an effective mechanism for everyone. Instead, since support is adapted to each individual's circumstances and personal preferences, nurses must identify and utilize appropriate support resources that align with their specific needs and situations.

Finally, the recommendations derived from the studies suggest that establishing support networks among colleagues and supervisors, improving family support through work-life balance programs, implementing physical and mental wellness initiatives, and adopting organizational policies that promote work-life balance are fundamental strategies. This approach aligns with the principles of humanization policies in Brazil, which emphasize the empowerment of various stakeholders involved in healthcare and the reduction of barriers to access. The proposed recommendations not only benefit healthcare professionals but also enhance the quality of care provided to patients in accordance with the holistic health approach, which considers physical, mental, and social well-being as interdependent and equally important factors.

Conclusion

The findings confirm the reviewed theory that social support plays a significant role in support networks for nurses' health and well-being during crises such as the COVID-19 pandemic. Through the 19 included studies, this review demonstrated that nurses' support networks are primarily characterized by four main categories: mental health; workload, occupational stress, and compassion fatigue; resilience and job commitment; and workplace social support networks.

The analysis of nurses' support networks revealed the predominant presence of six types of support sources: global social support, family support, support from friends, support from colleagues, support from other significant individuals, and institutional support. Based on the conducted analyses, we concluded that no single social support system is universally effective for all nurses. Adaptations must be made according to individual situations and personal preferences. Thus, nurses must identify and utilize support resources tailored to their specific needs in various contexts.

Investing in the creation and strengthening of these support networks will enable a more rapid response to nurses' needs

and reinforce the healthcare system as a whole. To maintain a healthy and sustainable nursing practice, it is essential to ensure that nurses receive appropriate care. By asking, "Who cares for the caregivers?", we acknowledge the importance of establishing environments and policies that support nurses and strengthen support networks, not only fostering their physical and mental health but also recognizing their vital role in society and ensuring that they can continue providing high-quality care to their patients.

Based on the findings, we can recommend actions to strengthen healthcare support, including: 1) developing strategies that promote diverse support networks to benefit the mental health of nursing professionals; 2) promoting a supportive work environment by implementing policies that strengthen peer and leadership support within institutions; 3) creating initiatives that encourage family support, such as programs that integrate nurses' families to enhance resilience; 4) ensuring effective communication by implementing clear prevention and control strategies aimed at reducing stress and supporting nurses' mental health; and 5) implementing public policies that reinforce formal social support for nurses, particularly through the psychosocial care network.

Study limitations and implications

The scoping review conducted in this dissertation aimed to explore the field of study, identify knowledge gaps, and accurately assess the available evidence. We acknowledge that while this methodology provides a comprehensive overview of the topic, it has limitations, such as the lack of in-depth analysis of individual studies, the heterogeneity of the articles, and the absence of a systematic quality assessment of the studies. Nevertheless, this approach allowed us to identify significant themes and emerging trends, establishing a solid foundation for future research and recommending appropriate interventions in the field.

For future studies, we recommend further research on social support for nurses in the Brazilian context. Additionally, it is important to investigate ways to strengthen both formal and informal social support networks within the healthcare system. Moreover, future research should explore received social support in contrast to perceived social support, as this could provide a more comprehensive understanding of the needs and effectiveness of the available support systems.

Authorship

Poltozie AF: Conception and design of the study; Data collection; Data analysis and interpretation; Critical revision of the manuscript; Approval of the final version of the manuscript and taking responsibility for it;

Rocha CMF: Conception and design of the study; Data collection; Data analysis and interpretation; Critical revision of the manuscript; Approval of the final version of the manuscript and taking responsibility for it;

Mattioni FC: Conception and design of the study; Data collection; Data analysis and interpretation; Critical revision of the manuscript; Approval of the final version of the manuscript and taking responsibility

Souza CD: Conception and design of the study; Data collection; Data analysis and interpretation; Critical revision of the manuscript; Approval of the final version of the manuscript and taking responsibility

Riquinho DL: Conception and design of the study; Data collection; Data analysis and interpretation; Critical revision of the manuscript; Approval of the final version of the manuscript and taking responsibility

Duarte FV: Conception and design of the study; Data collection; Data analysis and interpretation; Critical revision of the manuscript; Approval of the final version of the manuscript and taking responsibility

Domingues HS: Conception and design of the study; Data collection; Data analysis and interpretation; Critical revision of the manuscript; Approval of the final version of the manuscript and taking responsibility

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