

Nurses' performance in COVID-19 pandemic: Integrative review

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Abstract

Introduction: Coronavirus disease 2019 (COVID-19) was first reported in Wuhan (China) in late December 2019. It has rapidly spread worldwide since then and it has become a global pandemic affecting more than 200 countries and territories. **Objective:** To evaluate the scientific evidence on nurses' role in health care for COVID-19 patients. **Methods:** Integrative review carried out in BEDENE, LILACS and MEDLINE databases of articles available between December 2019 and June 2020 by adopting PICO strategy. **Results:** The sample consisted of ten articles addressing nursing experience during COVID-19 pandemic, bringing an analysis of the impact of nursing activities worldwide during the pandemic. **Conclusion:** The studies addressed nurses' importance in this pandemic moment; however, it shows various difficulties that these professionals face on a daily basis to keep professional ethics while ensuring the best care. This review realizes the need for new research to call attention to nurses' role in tackling COVID-19 pandemic.

Keywords: Coronavirus infection; Nursing; Role of the nursing professional; Review; Nursing care.

Introduction

Coronavirus disease 2019 (COVID-19) was first reported in Wuhan (China) in late December 2019.¹⁻³ COVID-19 has rapidly spread worldwide since then and it has become a global pandemic affecting more than 200 countries and territories, with an unprecedented effect not only on public health but also on social-economic activities. The exponential increase in the number of COVID-19 patients in the last 6 months has burdened health systems in several countries around the world. At present, COVID-19 vaccines, prophylactic therapies and/or treatment are not available to universal population because they are not a consensus yet in the international scientific community together with a lack of studies on efficacy and safety.^{4,5}

As COVID-19 spread to all continents, World Health Organization (WHO) declared it pandemic on March 11 2020. By July 2020, there were already more than 18 million infected people worldwide. Until July 31 2020 in Brazil, the number had already surpassed 2 million cases and, at the moment, specific vaccines (aimed at preventing the disease) are under campaign while some treatments are under tests in Brazil.⁶

COVID-19 is caused by severe acute respiratory

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syndrome coronavirus 2 (SARS-CoV-2), which is a member of *Betacoronavirus* genus as two other coronaviruses that have triggered previous pandemic diseases, namely severe acute respiratory syndrome coronavirus (SARS-CoV) and Middle East respiratory syndrome coronavirus (MERS-CoV).¹⁻⁴ Likewise SARS-CoV and MERS-CoV, SARS-CoV-2 causes a respiratory infection leading to viral pneumonia and acute respiratory distress syndrome (ARDS) in some patients.¹

However, besides respiratory symptoms, uncontrolled SARS-CoV-2 infection can trigger a cytokine storm largely producing pro-inflammatory cytokines and chemokines by the immune system (e.g. tumor necrosis factor α , IL-1 β and IL-6), damaging various organs.⁵ COVID-19 manifestations range from asymptomatic forms to symptoms such as fever, cough, myalgia and/or fatigue, with dyspnea as worrying symptom incident in more than half of the cases, as well as less common symptoms such as sputum, anosmia, ageusia, headache, hemoptysis, and/or diarrhea.¹

While specialists point to COVID-19 as one of the

greatest pandemics of all times,⁶ it has generated great demand and considerably high number of people seeking care to receive treatment and health care, thus significantly increasing the demand of health professionals, mainly in nursing area.⁷ In "State of the world's nursing 2020" report,⁸ WHO informs that global health workforce is 27.9 million, of which 19.3 million (approximately 69%) are professional nurses, thus confirming that nursing is the largest occupational group in the health sector.

Nurses' competence comprises not only performing nursing care of greater technical complexity but also applying protocols established by Health Ministry to disseminate secure information. They should also detect and evaluate suspicious cases, cooperate with epidemiological control through notification, and ensure good physical and psychological conditions to their team so that they can provide efficient and quality care.⁹

In COVID-19 pandemic, a main adversity has been inadequate planning, preparation, organization and leadership of some governments and health systems, including failures in assuring proper stock of necessary medical supplies as well as personal protective equipment for nurses and other team members working at hospital settings. By contributing to moral issues on this global public health emergency and subsequent human rights issues, those are factors directly affecting the development of nurses' role as frontline professionals fighting and controlling COVID-19 pandemic.¹⁰

In the year when it is celebrated the bicentenary of Florence Nightingale's birth (nursing pioneer), nurses have the task of balancing and guiding professional duties while facing ethical issues, choices and decisions to be practically taken in risk situations (e.g. a pandemic) permeated by uncertainties regarding several aspects far beyond skills previously described. Those aspects include transmission mode, virus incubation time, effective treatment/prevention, safe and effective diagnosis forms, correct adequate rational use of personal protective equipment (PPE), and donning and doffing procedures.^{3,7,11} According to Brazilian Federal Nursing Council (COFEN) and International Nursing Council (ICN), in July 2020 more than 200 deaths of nursing professionals were recorded in Brazil so that about 30% deaths worldwide are from Brazilian professionals.¹²

Yet, inspiring innovating successful stories in nursing care shall emerge from pandemic darkness. This should not be surprising as nurses have been at historical center of recognition, health prevention

and promotion, education, care, and infectious diseases control, which results from the transdisciplinarity permeating this health professional and can be the key to post-pandemic nursing empowerment.¹⁰

Such a relevant context raises the following question: "What is the impact of nurses' performance in health care for COVID-19 patients?" In view of that, the present study aimed at identifying and describing the role and challenges of nursing professionals particularly coping with and tackling COVID-19 pandemic.

Objective

Evaluate the scientific evidence on nurses' role in health care for COVID-19 patients.

Method

This is an integrative literature review carried out from December 2019 to June 2020, whose stages comprised: (i) elaboration of theme and guiding question, (ii) data selection for inclusion-exclusion criteria analysis, (iii) survey of databases, (iv) critical analysis of material to be used for study and results interpretation. In order to guide the search for scientific studies while finding the best scientific evidence for integrative review, "PICO" strategy was used, which is an acronym standing for Patient (or Problem), Intervention, Comparison (or Control) and Outcomes.¹³

Accordingly, the search took place in four steps, namely: (1) problem identification, (2) formulation of relevant and specific issue, (3) search for scientific evidence, and (4) assessment of available evidence. PICO structure defining the Guiding Question for the present study was P = nurses, I = performance in COVID-19, C = COVID-19 pandemic, and O = health care quality.

This questioning was then followed by publications search and selection in line with propositions from Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA).¹⁴ Databases used in this stage were: Nursing Database (BEDENF), Latin American and Caribbean Literature in Health Sciences (LILACS), and Online Medical Literature Search and Analysis System (MEDLINE).

Indexed articles were tracked in aforementioned databases with the help of descriptors registered in Health Sciences (DeCS), namely "Coronavirus infection", "Nursing", and "Role of the nursing professional", in chosen languages. These descriptors were searched as joined by means of Boolean operators according to the following Boolean equation: ("Infecção por coronavírus" [mesh] OR "Coronavirus infection" [tiab] OR

“Infección por coronavirus”[tiab]) AND (“Enfermagem” [mesh] OR “Nursing” [tiab] OR “Enfermería” [tiab]) AND (“Papel do profissional de enfermagem” [mesh] OR “Role of the nursing professional” [tiab] OR “Rol del profesional de enfermeira”).

Inclusion criteria comprised free on-line articles with original full texts, editorials published in Portuguese and English in 2020, and studies of characters significantly approaching the deliberated subject while addressing nursing and COVID-19. Exclusion criteria included studies not addressing nurses’ performance, those with information deficiency, integrative review articles, and articles on different areas unrelated to health, nursing and/or COVID-19. Search in chosen databases was then accomplished by imposing no additional limitations on publications. In line with PRISMA strategy, Figure 1 shows the resulting search flow diagram.

Searched articles were classified according to their research type and evidence level, namely:

- Level 1: evidence from systematic review or meta-analysis;
- Level 2: evidence from at least one well-designed randomized controlled clinical trial;
- Level 3: evidence from well-designed clinical trials without randomization;
- Level 4: evidence from well-designed cohort and case control studies;
- Level 5: evidence from systematic review of descriptive and qualitative studies;
- Level 6: evidence from a single descriptive or qualitative study;
- Level 7: evidence from authorities’ opinion and/or expert committees’ report.¹⁵

All searched studies were then compiled through Rayyan systematic review processing software¹⁶ (www.rayyan.qcri.org) for greater efficiency and impartiality during the selection process for their subsequent complete reading.

Under careful analysis, a total of 35 articles were found through Virtual Health Library (VHL) with aforesaid descriptors. After applying inclusion-exclusion as well as duplicity criteria, 12 articles were excluded and the resulting 23 articles were then screened by reading their abstracts. By completing this step, 13 articles were excluded and the ensuing 10 articles were read in full, thus comprising the final sample. The flowchart in Figure 1 sketches aforesaid procedure. For selected articles presentation and analysis in the subsequent section, the

following aspects were considered: ‘title’, ‘authorship’, ‘year’, ‘place’, and ‘journal’ (Table 1).

Results

In chosen databases, 35 articles were found, whose abstracts were then read in full. Then, 22 articles were selected whose content covered the research question. Afterwards, 12 articles were excluded because (i) articles did not address nursing in viral infection by SARS-CoV-2 in any aspect ($n = 7$), (ii) articles were integrative reviews themselves ($n = 2$), or (iii) articles were guidelines ($n = 3$). Accordingly, after analytical full reading of articles and exclusions, the sample finally consisted of 10 articles meeting all inclusion criteria, as organized in Tables 1 and 2.

Discussion

This review demonstrated that nursing professionals (particularly nursing directors or managers) play a key role in managing nursing services and provided care with quality and efficiency in view of extant contingency and/or emergency plans to tackle COVID-19 pandemic.¹⁷ When articulated in political-strategic areas, nursing or health boards increased their efficiency and quality in nursing and health managing actions

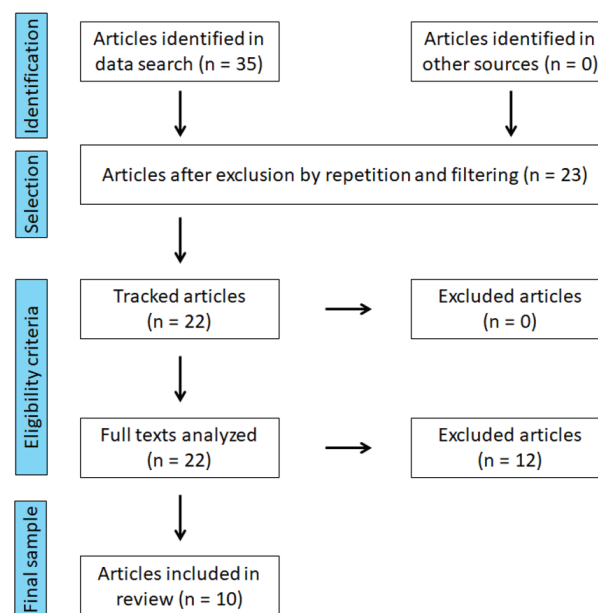


Figure 1. Flowchart sketching steps for evidence search in databases in line with PRISMA strategy, Jundiaí, SP, Brazil, 2020

Authorship: The authors (2020).

Table 1. Articles distribution according to title, author, year, place and journal (Jundiaí, SP, Brazil, 2020)

(N)	Title	Authors	Year	Place	Journal
(1)	The Psychological Change Process of Frontline Nurses Caring for Patient with COVID-19 during its Outbreak ³⁴	Yan Zhang, Lili Wei, Huanting Li, Yueshuai Pan, Jingyuan Wang, Qianqian Li, Qian Wu, Holly Wei	2020	China	Issues in Mental Health Nursing
(2)	Recommendations to Leverage the Palliative Nursing Role During COVID-19 and Future Public Health Crises ²³	William E. Rosa, Tamryn F. Gray, Kimberly Chow, Patricia M. Davidson, J. Nicholas Dionne-Odom, Viola Karanja, Julius D. N. Kpoe, Joseph Lusaka, Samuel T'patula, Polly Mazanec, Patricia J. Moreland, Shila Pandey, Amisha Perekh de Campos, Salimah H. Meghani	2020	USA	Journal of Hospice & Palliative Nursing
(3)	Nursing in the COVID-19 pandemic and beyond: protecting, saving, supporting and honouring nurses ²⁸	Howard Catton	2020	Switzerland	International Nursing Review
(4)	Gestión y liderazgo de los servicios de enfermería en el plan de emergencia de la pandemia COVID-19: La experiencia del hospital clínic de Barcelona ¹⁷	Gemma Martinez Estalella, Adelaida Zabalegui, Sonia Sevilla Guerra	2020	Spain	Enfermería Clínica
(5)	COVID-19 in the Year of the Nurse ²⁵	Carole Treston	2020	USA	Journal of the Association of Nurses in AIDS Care
(6)	Challenging times: ethics, nursing and the COVID-19 pandemic ¹⁰	Sue Turale, Chutima Meechamnan, Wipada Kunaviktikul	2020	Thailand	International Nursing Review
(7)	The Year of the Nurse, Florence Nightingale and COVID-19: Reflections from Social Isolation ²⁴	Diana Sherifali	2020	Canada	Canadian Journal of Diabetes
(8)	Enfermeiros: de desvalorizados a protagonistas da luta contra o coronavírus ³⁰	Elda Bussiguer	2020	Brazil	A Gazeta
(9)	Nurses: Courageous, Committed, and Fed Up ³³	Maureen Shawn Kennedy	2020	USA	American Journal of Nursing
(10)	Los valores profesionales de las enfermeras chilenas (os) en tiempos de crisis sanitaria por covid-19 ²⁹	Paz Soto Fuentes	2020	Chile	Revista Horizonte de Enfermería

Authorship: The authors (2020).

to mitigate SARS-CoV-2 virus spreading worldwide.¹⁷

By playing a fundamental role in tackling COVID-19 pandemic, nurses' actions have included the elaboration of health protocols, population education, direct assistance, and last but not least team management. However, data collected in this study showed that working conditions for nursing professionals are still far from ideal. Indeed, there is a shortage of personal protective equipment (PPE), many professionals accumulate working shifts and, as far infection is concerned

(extant and new virus strains), reliable scientific and clinical evidence has not been fully validated thus far (e.g. vaccines and/or medications).

The present study also highlights concerns on physical and mental health of nursing professionals directly working on the front line. When managing their teams, nurse managers should permanently address this issue to assure proper work environment so that these professionals can provide nursing care with quality and safety as means to serve society with excellence.

Table 2. Research outline, objective, main results and conclusion of selected articles for integrative review (Jundiaí, SP, Brazil, 2020)

Outline	Objective	Main results	Conclusion
(1) Descriptive / qualitative study	Identify the psychological change process of nurses who worked at COVID-19 outbreak epicenter	Worse conditions in terms of stress, fatigue and work development	In COVID-19 pandemic, nurses play irreplaceable role in rescue work. They constitute a significant workforce in patient care during this challenging period. They experience noticeable psychological changes over the course of their care. While caring for others, they need to be cared for and valued. They feel ambiguity and fear. Nursing leaders can facilitate psychological adaptation of frontline nurses to changes in work environment.
(2) Descriptive study	Compile resources and recommendations on palliative care, educational support, and wellness	In COVID-19, palliative nurses further exercise their knowledge in symptom management, ethics, communication and end-of-life care (among other skills)	COVID-19 pandemic has taken several lives around the world, bringing challenges to health system and to those working in palliative care. At the same time, this crisis offers an opportunity to reimagine the full integration benefits of palliative care. In addition, there is an urgent need to raise nursing status as frontline in the pandemic worldwide.
(3) Editorial	Describe nurses' value as perceived by government officials and population in COVID-19 pandemic	Valuing nurses for their commitment in the pandemic needs to be translated as investments to ensure more well-paid nurses with a voice in the government. Nursing is fundamental to health and well-being while contributing to economic prosperity: health and wealth must be valued because population is now aware of that.	Worldwide governments must now start planning a future with enough number of nurses to provide comprehensive, quality and properly documented care through the nursing process. Therefore, the entire nursing workforce must have adequate remuneration, with better and really valued jobs in view of the vital services provided.
(4) Experience report	Describe nursing management experience at Hospital Clínico de Barcelona during COVID-19 pandemic	Team work ability, emotional management and decisions observation allowed pandemic challenges to be faced. Nursing Department can calmly and orderly lead different actions to be undertaken.	Nursing boards play a critical role in providing essential care to communities during disasters, which can lead to rapid increase in services thus overburdening the functional capacity and safety of hospitals and health system in general. Team work ability, emotional management and respect for organizational decisions become vital.
(5) Editorial	Describe nursing role in COVID-19 pandemic	By playing very important role in COVID-19 pandemic, nurses are resilient innovators and seek the best solutions for their patients but they need access to safety as well as effective personal protective equipment.	Nursing year slogan ("It is time to recognize the contribution of nurses and midwives to the health world") has been more evident than ever. However, it is time to go beyond and prepare each day to serve patients and communities in crisis.

Table 2. Research outline, objective, main results and conclusion of selected articles for integrative review (Jundiaí, SP, Brazil, 2020) (continued)

(6) World scenario assessment	Evaluate nursing in view of COVID-19 tackling	Health education should be used in the pandemic in view of nurses' role as educators within public health context, by involving professional training as well as political participation and engagement.	During COVID-19 pandemic, nurses will need strong moral courage and resilience to work at hospitals, clinics, nursing homes and communities around the world. Across borders and cultures, they must argue and engage in policies to receive solid ethic education to assist their work as well as risk managing in emergencies and disasters. They also need strong leadership, clear direction and ongoing support from each other, their employers, the public and nursing organizations so as to keep protecting communities, saving lives and preventing suffering in the present (and prospective) pandemic.
(7) Editorial	Dwell on Florence Nightingale's bicentenary in COVID-19 and social isolation context	COVID-19 pandemic recalls the importance of proper hand washing and physical distance. Both are vital strategies that Florence Nightingale has defended to reduce mortality rates. While physical distance is important, she pointed out it does not lead to limited or lack of communication.	In her time, Florence Nightingale was a social reformer in defying political and social norms. Her calling and life purpose aimed at reducing human suffering and those valuable teachings from 165 years ago should be constantly recalled as well as integrated.
(8) Editorial	Discuss the importance and appreciation towards nurses	As COVID-19 pandemic affects everyone, nurses leave their invisibility place and become major players. However, working conditions, financial recognition and guarantees remain unsatisfactory.	Proper care of nurses themselves is an important issue as they might render gaps filled up with poorly qualified professionals. Nursing professionals have been working in undersized teams while often subjected to irregular working conditions, in which minimum safety requirements are not met. Nursing fundamental rights to decent work and fair wages have been jeopardized.
(9) Editorial	Report nursing situation in view of COVID-19 pandemic	In COVID-19 pandemic, nurses gained great visibility in society. However lack of PPEs, laws and guarantees remain incompatible with such importance.	Had government leaders acted one month earlier, there could be more resources and fewer people (nurses and patients) would have died. Disappointment towards political and health leaders is inevitable as they have failed to protect health professionals.
(10) Editorial	Describe Chilean nurses' values as correlated to COVID-19 pandemic	Chilean nurses' values are correlated to coronavirus challenges exposing the professional system to threats towards the entire health system and humanity.	Due to COVID-19 pandemic, Chilean nurses are currently facing new situations and professional values. It is now possible to realize their professional values as they have strengthened themselves, thus valuing their professional identities, conduct, occupational care while protecting their moral and legal rights.

Authorship: The authors (2020).

In what follows, most relevant points observed in the present review are discussed with respect to COVID-19 pandemic. With its first report in Wuhan (Hubei province, China) by the end of 2019, such infectious disease has already contaminated and killed an unprecedented number of people.¹⁸

Nurses' role in COVID-19 pandemic

Nursing is a science whose main objective is care process. Hence, from both prevention and health promotion viewpoints, nurses' main task is to guide and perform care practices to provide better health

conditions to population. In Brazil, COFEN (Federal Nursing Council) regulates professional nursing practice,¹⁹ which also brings norms and conducts such as planning, organizing, directing, coordinating, evaluating, and performing consultancy, thus issuing reporting nursing services in view of social and economic factors while always aiming at humans. Besides normative documents of COFEN, different dimensions of nurses' work (e.g. care, management and education) have been equally reinforced in recent publications.^{20,21}

Inasmuch as pandemic advanced, importance of nurses' actions became evidenced in the media, as a professional with activities in all care dimensions in health services tackling COVID-19.²² In Brazil, COFEN carried out actions to confront COVID-19 by issuing technical notes, resolutions, and instructional documents while opening a channel to provide counseling as well as mental health support to professionals.²³

Nurses are directly involved in both planning and implementing strategies to combat COVID-19 pandemic by either drawing up guidelines or tracking and educating people on essential measures to control this infection disease. These professionals are also responsible for offering treatments and symptom relief, conducting data collection in clinical trials, protecting patient safety, monitoring vital functions, and performing intensive nursing care to critically ill clients, besides providing company, affection and comfort in the near death.²³⁻²⁵

While the scientific community recommends social distancing as prevention strategy, nurses have provided close care to those in need and they have been carrying out this mission notwithstanding difficulties encountered. By highlighting care needs and demands from people, families and communities, nurses have provided dedicated, human and highly technical service while keeping their privacy and confidentiality, by taking 24-hour shifts and isolating themselves from their own families in order to care for the sick and their respective families.²³⁻²⁵

Nursing challenges in tackling COVID-19

Nursing professionals are highly exposed to risks as they spend more time than any other health professional in direct care for patients.²⁶ In Brazil, health professionals (many nurses) had already entailed several people infected with COVID-19 virus (e.g. by September 2020 this number added up to 38,533 nursing professionals contaminated with 395 confirmed deaths) as reported at Nursing Observatory²⁷ (site implemented

by COFEN to measure coronavirus infection progress).

Infection possibility is especially worrisome among nurses with comorbidities (e.g. diabetes and hypertension) and/or older than 55 years. Those are professionals more vulnerable to COVID-19 infection and serious complications *a posteriori*. There is indeed a high deficit in providing nursing professionals with personal protective equipment (PPE), particularly PFF-2 masks, long-sleeved gowns, goggles and gloves, which significantly increases not only nurses' personal infection risk but also cross-infection risks to patients.^{28,29}

Around the world, governments had great difficulty in planning, preparing, organizing and leading actions to tackle COVID-19 pandemic, which directly reflected in reported failure and lack of PPE for nurses and other health professionals.^{28,29} WHO's delay to declare COVID-19 as pandemic had serious injuries to health professionals, e.g. on April 14, Centers for Disease Control and Prevention (CDC) reported²⁷ that 9,282 health professionals were infected with COVID-19.

Bussinguer (2020) discusses about the proper care of nurses and nursing professionals as they became infected due to exposure to irregular working conditions with PPE in inadequate quantity and quality.³⁰ This controversial speech raises a deeper question on how nursing has not yet received due recognition in view of all effort provided thus far. Developments towards recognition, better salary and work conditions are still far from being suitable for those professionals.³¹

Lack of proper equipment made nurses and other health professionals afraid of performing their work process safely as the possibility of either being contaminated or becoming virus vector is absolutely evident. Besides aforesaid issues regarding nurses' exposure, workplaces features and conditions are also influential but its in-depth discussion is beyond the scope of the present work.

Relevance of nursing leader

This category includes studies surveying nurses' role and responsibilities as team manager. Nurses are challenged to think from an expanded perspective beyond their usual performance in terms of technical assistance and managerial aspects of professional practice, towards active and articulated participation in decision-making processes within the management logic of organizational structure of health systems.³²

Making efforts to insert themselves into different management spaces allows nurses to consolidate their performance in formulating, dealing, monitoring and

evaluating policies that affect health services and care in distinct health system spheres. However, nurses' role thus far seems to be incipient in decision-making to guide and consolidate health policies.³²

As far as leadership is concerned, nurses' duties include planning, people management, decision-making, time management, conciliation, and conflict management.³³ As team managers, nurses are responsible for providing a favorable environment for team members (under their management) to act. They are professionals taking on the task of coordinating and leading the nursing team and, therefore, they should seek skills to ensure balanced management of heterogeneous teams, bringing security to decision-making.³³

In COVID-19 pandemic, nurses' leadership quality and type are of great importance due to the risk level of team's health allied to great increase in provided care. Team work ability, team emotional management, safety rules adherence are factors for successful leadership during this pandemic.¹⁸

The studies herein analyzed consider that COVID-19 will bring psychological trauma to nurses and other health workers.^{30,33,34} Hence, it is up to leadership nurses to manage and take care of nursing teams' mental health as they work under significant physical and emotional stress due to COVID-19 pandemic.

Xiang et al. (2020) understand that health professionals should timely receive mental health assessment and treatment.³⁵ In view of SARS pandemic in 2003 when health workers suffered from post-traumatic stress disorder, COVID-19 pandemic is prone to generate many disorders affecting nursing professionals' mental health. In their study,³⁴ Zhang et al. (2020) conclude that nurses' psychological changes went through three phases, namely: (i) ambivalence as initial stage, (ii) emotional exhaustion as intermediate stage, and (iii) energy renewal as the later stage.

A study carried out with 23 nurses in Wuhan (China) evidenced the importance of leading nurses to implement intervention programs as based on each nurses' psychological stage in order to promote their health.³⁴ This claim is also evidenced in articles selected in the present review,^{28,30,33,35} which understand that

leading nurses must exercise ethical solid education and assessment as means to support their team's work while managing risk during emergencies and disasters.

Study limitations

A major limitation in the present review refers to scarcity of articles answering the guiding question of the study. Nevertheless, the resulting number of articles was considered reasonable in view of both uniqueness and originality of the current situation, allied to the limited time for surveying the subject. Broad reasoning on valuing nursing professionals within COVID-19 pandemic context has been addressed elsewhere.³⁶

Contributions to Nursing, Health and/or Public Policy areas

Mainly due to current pandemic critical moment, results from the present study pointed to the need for continuous research on COVID-19 particularly with respect to nursing, which responds to the majority of health workers. Actions performed by these professionals were here stressed together with difficulties experienced in this unique moment. Information from the present review will help nursing professionals to reflect, discuss and expand their knowledge about the importance of their profession in tackling COVID-19 pandemic. Data from this review may equally advance nursing professionals while effectively improving their performance in prospective pandemics.

Conclusion

Results show that nurses' role in COVID-19 pandemic ranges from planning and implementing strategies to pandemic combat by offering treatments and symptom relief. It is very important to guarantee proper working conditions to nurses by providing PPEs in adequate quantity and quality as these professionals are more vulnerable to COVID-19 infection in view of their proximity and contact time with infected population. Finally, the need to expand scientific knowledge in this area becomes evident so that nursing professionals may rely on technical support to develop their actions while performing their role with excellence.

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