

A Glance at the Barriers and Enablers of the Nursing Role in Pandemics: An Integrative Review

✉ **Juan Domingo Reyes-Luna**

<https://orcid.org/0000-0002-4862-9700>
Universidad de Concepción, Chile.
jreyesl@udec.cl

Patricia del Tránsito Jara-Concha

<https://orcid.org/0000-0003-1580-3976>
Universidad de Concepción, Chile.
pjara@udec.cl

Received: 19/10/2020

Sent to peers: 16/12/2020

Approved by peers: 27/09/2021

Accepted: 30/09/2021

DOI: 10.5294/aqui.2022.22.1.4

Para citar este artículo / To reference this article / Para citar este artigo

Reyes-Luna JD, Jara-Concha P. A glance at the barriers and enablers of the nursing role in pandemics: an integrative review. *Aquichan*. 2022;22(1):e2214. DOI: <https://doi.org/10.5294/aqui.2022.22.1.4>

Subject: evidence-based practice.

Contribution to the subject: it is relevant in that it identifies specific phenomena and more general aspects of nursing practice during pandemics, which can be transformed into research opportunities using diverse theoretical references. Among the specific phenomena are nurses' fear of contagion and death in their personal and family environments; among the general aspects are the barriers, enablers, and ethical dilemmas that these professionals have faced in carrying out their role during the pandemic that is currently challenging humanity. The information in this article is a contribution to be contemplated by nursing professionals to address the development of their role in an emergency situation in a proactive, immediate, collaborative and multidisciplinary way.

Abstract

Objective: to analyze the enablers and barriers to nurses' professional role fulfillment during pandemics and disasters. **Materials and methods:** this was an integrative review based on the SALSA analytical method, carried out in eight databases, namely: Medline, Proquest, CINAHL, Web of Science, BVS, SpringerLink, Scopus, and Pubmed. The descriptors used were the following: 'nurse's role' AND 'pandemic' AND 'patient' AND 'coronavirus infection', in English, Spanish and Portuguese. Filters along with inclusion and exclusion criteria were applied to the 11,031 articles found, after which the final sample consisted of a total of 32 articles. **Results:** considering the objectives set and the results obtained, it is noted that all actions focused on three main instances, namely: a) training and updating for role performance; b) predictors, enablers, and barriers for exercising the role in the face of a pandemic; and c) evidence of the role in the face of pandemics. **Conclusion:** this study allowed understanding both the barriers and the enablers that allow the fulfillment of nurses' professional role in the face of pandemics or catastrophes. It also clarified that emerging infectious diseases must be addressed in an immediate, collaborative, and multidisciplinary way. Nurses' experience, leadership, and professional training are key attributes that these professionals possess to enable their role to be more proactive during an emergency situation.

Keywords (Source: DeCS)

Nurse's role; pandemics; community health nursing; nurse clinicians; coronavirus infections.

4 Una mirada a las barreras y los factores facilitadores del rol de la enfermería en las pandemias: revisión integrativa

Resumen

Objetivo: analizar los factores facilitadores y las barreras para el cumplimiento del rol profesional de las enfermeras y enfermeros en tiempos de pandemia y desastres. **Material y método:** revisión integrativa según método analítico SALSA, realizada en ocho bases de datos: Medline, Proquest, CINAHL, Web of Science, BVS, SpringerLink, Scopus y Pubmed. Los descriptores utilizados fueron: 'rol de la enfermera' AND 'pandemia' AND 'paciente' AND 'infección por coronavirus', en idiomas inglés, español y portugués. A los 11.031 artículos encontrados se aplicaron filtros y criterios de inclusión y exclusión; después de ello un total de 32 artículos conformaron la muestra final. **Resultados:** considerando los objetivos planteados y los resultados obtenidos, se advierte que todas las acciones se enfocaban en tres instancias principales: a) formación y actualización para el desempeño del rol; b) factores predictores, facilitadores y barreras para ejercer el rol frente a una pandemia; y c) evidencia el rol frente a pandemias. **Conclusión:** este estudio hizo posible conocer, tanto las barreras, como los aspectos facilitadores que permiten el cumplimiento del rol profesional de enfermería frente a pandemias o catástrofes. Además, dejó claro que las enfermedades infecciosas emergentes deben abordarse en forma inmediata, colaborativa y multidisciplinaria. La experiencia, el liderazgo y la formación profesional de enfermeras y enfermeros son atributos claves que estos profesionales poseen, para permitir que su rol sea más proactivo durante una situación de emergencia.

Palabras clave (Fuente: DeCS)

Rol de la enfermera; pandemias; enfermería en salud comunitaria; enfermeras clínicas; infecciones por coronavirus.

Uma visão às barreiras e aos fatores facilitadores do papel da enfermagem nas pandemias: revisão integrativa

Resumo

Objetivo: analisar os fatores facilitadores e as barreiras para o cumprimento do papel profissional de enfermeiros e enfermeiras em tempos de pandemia e desastres. **Materiais e método:** revisão integrativa segundo método analítico SALSA, realizada em oito bases de dados: Medline, Proquest, CINAHL, Web of Science, BVS, SpringerLink, Scopus e PubMed. Os descritores utilizados foram: “papel da enfermeira” AND “pandemia” AND “paciente” AND “infecção por coronavírus”, em inglês, espanhol e português. Aos 11 031 artigos encontrados, foram aplicados filtros e critérios de inclusão e exclusão. Depois disso, 32 artigos conformaram a amostra final. **Resultados:** considerando os objetivos propostos e os resultados, constata-se que todas as ações se enfocavam em três instâncias principais: a) formação e atualização para o desempenho do papel; b) fatores preditores, facilitadores e barreiras para exercer o papel ante uma pandemia e c) evidência do papel profissional ante pandemias. **Conclusões:** este estudo torna possível conhecer tanto as barreiras quanto os aspectos facilitadores que permitem o cumprimento do papel do profissional de enfermagem ante pandemias e catástrofes. Além disso, deixa claro que as doenças infecciosas emergentes devem ser abordadas de forma imediata, colaborativa e multidisciplinar. A experiência, a liderança e a formação profissional de enfermeiras e enfermeiros são atributos-chave desses profissionais para permitir que seu papel seja mais proativo durante uma emergência.

Palavras-chave (Fonte: DeCS)

Papel do profissional de enfermagem; pandemias; enfermagem em saúde comunitária; enfermeiras clínicas; infecções por coronavirus.

Introduction

Global Health Issues (GHI) demand interinstitutional and interprofessional work and collaboration for adequate planning, prevention, and care to address health equity issues among nations (1).

Emerging infectious diseases, such as epidemics, are GHI problems as they cross country boundaries in a matter of hours or days. In this context, the deficit of healthcare resources, as well as healthcare providers and infrastructure, will negatively impact the prevention of emerging GHI in the population (1), which raises a major issue of social justice, an essential concept for the nursing field (2).

In human history three deadly epidemics have affected the population: the yellow fever of 1853 in New Orleans, cholera in 1832, and the Spanish flu (1918-1920) (3); the latter caused a mortality rate ranging from 60 % to 70 % (4), with more than 40 million deaths worldwide (5). Later, the Asian influenza (1957-1958) and the Hong Kong influenza (1968-1968) were less catastrophic, although they caused deaths along with economic and social issues (6). Currently, humanity is facing a pandemic as declared by the WHO (7); it is a respiratory disease named COVID-19, with characteristics similar to influenza in mild cases, which is transmitted from person to person and in severe cases can cause death (8), spreading to more than 200 countries and causing 5,087,688 deaths so far (November 11, 2021) (9). One of the main concerns regarding emerging infectious diseases is the prevention of the spread of these agents within healthcare settings (10).

There is no doubt that, throughout history, only a few pandemics have struck the world and —despite the fact that experience along with oral and written traditions are lost in time—, evidence has demonstrated that nursing professionals have been paramount in the recognition and response to emerging disease threats (1), given that they occupy and assume vital positions and roles in care due to their expertise and unique professional roles with patients.

The International Council of Nurses (ICN) states that nurses are uniquely positioned to assist government healthcare agencies in implementing and evaluating disaster prevention and response measures internationally (11). On the other hand, the American Nurses Association (ANA) provides valuable information and digital resources related to COVID-19 for use by nurses in all settings (12).

Despite the wealth of information currently available, the review of the literature on nursing roles during pandemics is scarce up until 1968; subsequently, the number of references increases until information becomes plentiful in the current COVID-19 setting. Some studies report on the organizational aspect commenting on nursing care in typhoid fever (13), while other studies perform an evolutionary analysis of the influenza pandemic, and others focus on personal experience, providing very modest information

on feelings of fear, isolation, and resentment during public health crises (3, 14) making it evident that, in the face of infectious diseases for which no treatment or vaccine is available, the healthcare teams' rates of unwillingness to work were higher (15, 16). However, although few studies have directly demonstrated how nurses have coped with these epidemic diseases (3), since the current pandemic context of COVID-19, plenty of varied and abundant information has become available.

In this context, and in the midst of the contingency that is currently being experienced worldwide, it is essential to expose the true impact of pandemics on the role of nursing professionals. In light of this, a study was carried out with the objective of finding out what are the enablers and barriers to the fulfillment of nurses' professional role in times of pandemics and disasters.

Methodology

An integrative review was carried out aiming to obtain the best evidence and a summary of the literature that was objective, concise, and logical on the current knowledge of a particular topic (17, 18), for the specific case of this study, the COVID-19 pandemic. The information searched had no publication year limits up to 2021 in the Medline, Proquest, CINAHL, Web of Science, BVS, SpringerLink, Scopus, and Pubmed databases.

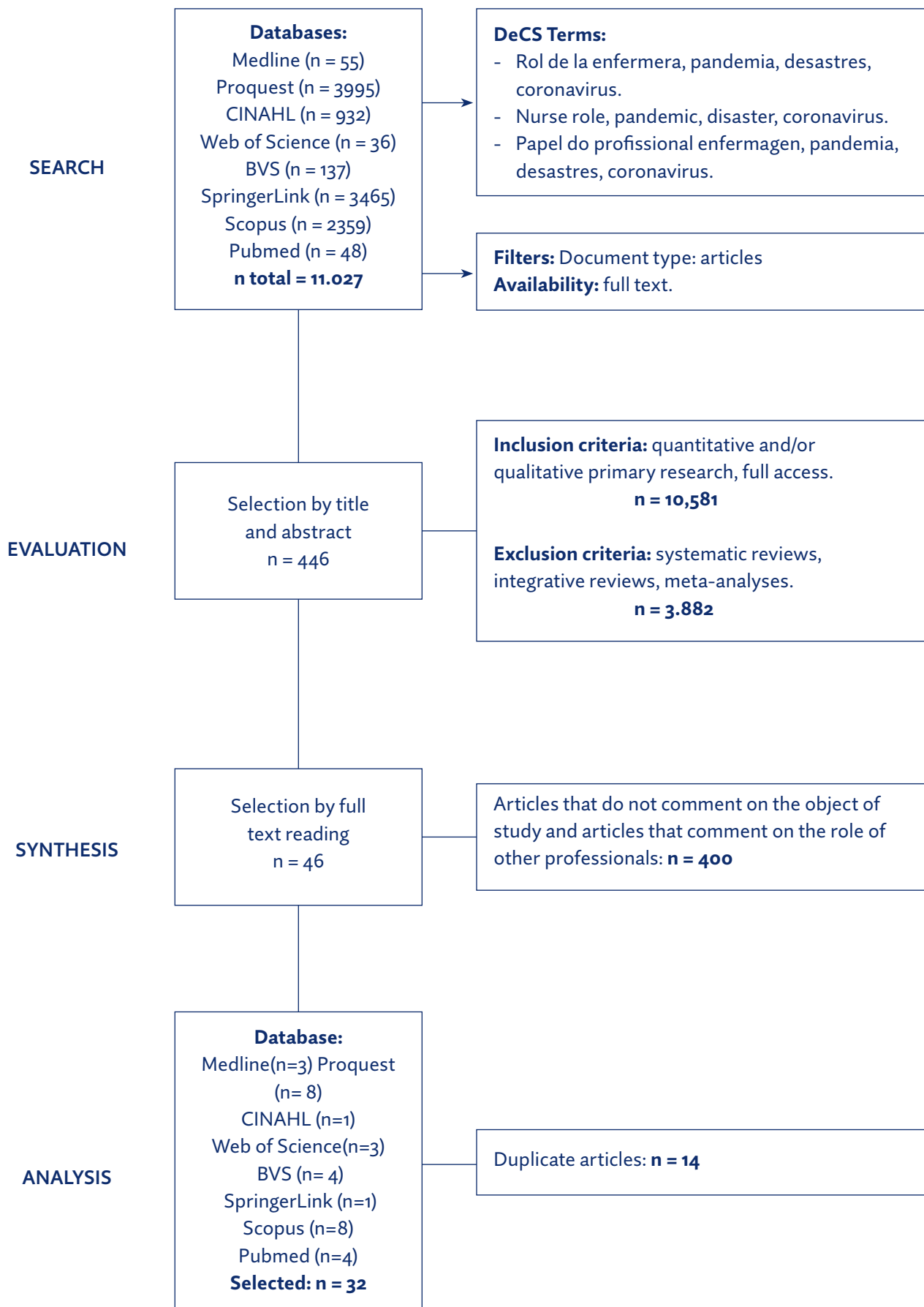
To formulate the research question, the PICO methodology (19) was used, resulting in the following question: What were the barriers and enablers for the fulfillment of the nursing role in the face of pandemics and disasters? To answer this question, the terms controlled and referenced in the thesaurus of Health Sciences Descriptors — DeCS— were used, with the simple analytical method named SALSA (Search, Appraisal, Analysis and Synthesis) for systematic reviews (20) (Figure 1) and using the following descriptors: nursing AND pandemic AND disaster AND coronavirus infection, in English, Spanish, and Portuguese. Using this method, 11,027 potential research studies were compiled for this study.

Once the studies had been selected, it was necessary to evaluate and classify the best existing evidence in the healthcare field for decision-making (21). For this purpose, a large number of proposals currently exist that rank the evidence accordingly, and one of them is the one proposed by the Agency for Healthcare Research and Quality (AHRQ) (22), which allows the levels of evidence to be classified using quantitative and qualitative approaches.

Results

The search strategy used achieved an initial retrieval of 11,031 potential articles for the study, out of which 32 articles were finally included in the final sample (Table 1).

Figure 1. Flowchart of the information selection process according to the SALSA method



Source: Own elaboration.

Table 1. Distribution of studies by title, journal, impact factor, design, level of evidence, country, and year

	Article title	Journal / Impact factor 2019 (according to SCImago Journal Rank -SJR- or Journal Citation Reports -JCR-)	Design / Evidence	Country / Year
1	Educating Nursing Students About Quality Care and Safe Practices in the AIDS Epidemic (23)	Public Health Rep / SJR 1.04	Not stated	The USA 1988
2	Community Health Nursing and the AIDS Pandemic: Case Report of One Community's Response (24)	Journal of Community Health Nursing / SJR 0.22	Case study 4	The USA 1991
3	Godzilla in the corridor: The Ontario SARS crisis in historical perspective (3)	Intensive and Critical Care Nursing / SJR 0.74	Not stated	Canada 2006
4	Pandemic containment and management (6)	Australian Nursing Journal / SJR 0.11	Not stated	Australia 2006
5	Avian Influenza: Are We Ready? (25)	Critical Care Nursing of North América / SJR 0.28	Not stated	The USA 2007
6	When the city is a great field hospital: the influenza pandemic of 1918 and the New York city nursing response (26)	Journal of Clinical Nursing / JCR 1.757	Social history framework 4	The USA 2009
7	Will the community nurse continue to function during H1N1 influenza pandemic: a cross-sectional study of Hong Kong community nurses (14)	BMC Infectious Diseases / JCR 2.565	Cross-sectional study 4	Honk Kong 2010
8	Incorporating Bioterrorism Content in the Nursing Curriculum: A Creative Approach (27)	Journal of Nursing Education / JCR 1.070	Not stated	The USA 2010
9	Predictors of Nurses' Intentions to Work During the 2009 Influenza A (H1N1) Pandemic (28)	American Journal of Nursing / JCR 1.355	Not stated	The USA 2013
10	FORENSIC NURSING: Key to Disaster Preparedness Strategy (29)	Forensic Examiner / -	Not stated	The USA 2013
11	Disasters, Nursing, and Community Responses: A Historical Perspective (30)	Nursing History Review / SJR 0.12	Caso estudio 4	The USA 2015
12	Managing boundaries between professional and lay nursing following the influenza pandemic, 1918–1919: insights for professional resilience today? (31)	Journal of Clinical Nursing JCR 1.757	Historical research 4	New Zealand 2016
13	Nurses' fears and professional obligations concerning possible human-to-human avian flu (32)	Nursing Ethics / JCR 1.957	Quantitative cross-sectional study 4	Taiwan 2016
14	Registered nurses' perceptions regarding nurse-led antiretroviral therapy initiation in Hhohho region, Swaziland (33)	International Nursing Review / JCR 1562	Phenomenological qualitative study 4	Swaziland 2017
15	A multi-faceted approach of a nursing led education in response to MERS-CoV infection (10)	Journal of Infection and Public Health / JCR 2.487	Not stated	Saudi Arabia 2017
16	Emerging Global Health Issues: A Nurse's Role (1)	Online Journal of Issues in Nursing / JCR 0.37	Not stated	The USA 2017
17	The Eighteen of 1918–1919: Black Nurses and the Great Flu Pandemic in the United States (34)	American Journal of Public Health / JCR 5.381	Case study 4	The USA 2019

	Article title	Journal / Impact factor 2019 (according to SCImago Journal Rank -SJR- or Journal Citation Reports -JCR-)	Design / Evidence	Country / Year
18	Call to Action for Advocacy of Immigrant Nurses during COVID-19 Pandemic (35)	Journal of Advanced Nursing / JCR 2.376	Editorial	Canada 2020
19	Nursing Situacion in America, in front of the Covid -19 pandemic (36)	Revista Salud y Bienestar colectivo /	Narrative-qualitative documentary 5	The Americas 2020
20	Increasing Critical Care Nurse Engagement of Palliative Care During the COVID-19 Pandemic (37)	Critical Care Nurse / JCR 1.484	Not stated 5	The USA 2020
21	The perception of nurses towards their roles during the COVID-19 pandemic (38)	International Journal of Clinical Practice / JCR 2.444	Qualitative study 6	Jordan 2020
22	Mitigating strategies and nursing response for cancer care management during the COVID-19 pandemic: an Italian experience (39)	International Nursing Review / JCR 1562	Not stated 6	Italy 2020
23	Role of Anesthesia Nurses in the Treatment and Management of Patients With COVID-19 (40)	Journal of Perianesthesia Nursing / JCR 1084	Not stated 6	China 2020
24	Nurses' core disaster-response competencies for combating COVID-19—A cross-sectional study (41)	PLoS ONE / JCR 2.74	Cross-sectional study 5	Slovenia 2021
25	Nurses' experiences of caring for people with COVID-19 in Hong Kong: a qualitative enquiry (42)	BMJ Open / JCR 2496	Qualitative study 4	Hong Kong 2021
26	Nurses' Grief Counseling for Bereaved Family Members of COVID-19 Patients in Wuhan, China: A Cross-Sectional Survey (43)	Journal of Psychosocial Nursing / SJR 0.25	Qualitative study 4	China 2021
27	Experiences of nurses amidst giving care to COVID-19 patients in clinical settings in Iraqi Kurdistan: A qualitative descriptive study (44)	Journal of Clinical Nursing / JCR 1.757	Qualitative study 4	Iraq 2021
28	Improving adult coping with socialisolation during COVID-19 in the community through nurse-led patient-centered telehealth teaching and listening interventions (45)	Nursing Forum / JCR 1.89	Pilot study 4	The USA 2021
29	Experiences of nurses caring for respiratory patients during the first wave of the COVID-19 pandemic: an online survey study (46)	BMJ Open Respiratory Research / JCR 3.16	Not stated 5	The UK 2021
30	Trabalho do enfermeiro no contexto da pandemia de COVID-19 (47)	Revista Brasileira de Enfermagem / JCR 0.534	Reflective study 6	Brazil 2021
31	Australian critical care nurses' knowledge, preparedness, and experiences of managing SARS-COV-2 and COVID-19 pandemic (48)	Australia Critical Care / JCR 2.727	Exploratory cross-sectional study 4	Australia 2021
32	"New Normal" Home Chemotherapy in Thailand: How the Challenging Roles of Nurses Are Changing? (49)	Asia Pacific Journal Oncology Nursing / SJR 0.542	Brief report 6	Thailand 2021

Source: Own elaboration.

Once the 32 selected studies had been evaluated (Table 1), it was observed that more than half of the articles stemmed from the Americas: Canada (3, 35), The USA (1, 23-30, 34, 37, 45), Brazil (47) and one article that refers to the American continent in general (3); the rest of the evidence is distributed across studies from Asia (10, 14, 32, 38, 40, 40, 42, 43, 43, 44, 49), Europe (39, 41, 46), Oceania (6, 31, 48), and Africa (33); therefore, all the articles are written in English. Regarding the journals where these articles were published, it was noted that all were published in journals indexed in the Proquest, Scopus, and Pubmed databases. In addition, it was evident that a large percentage of the retrieved articles did not state their design, and those articles that did had a level of evidence of 4 (14, 24, 26, 30-34, 42-45, 48).

Considering the objectives set and the results obtained, it is noted that all actions were focused on three main instances: a) Training and updating for role performance; b) Predictors, enablers, and enabling factors for exercising the role in the face of a pandemic; and, c) Evidence of the role in the face of pandemics. In light of this information, a synthesis of the evidence is presented in Tables 2, 3, and 4.

Results regarding training and updating for the performance of the nursing role in the face of a pandemic

Following a thorough search, a number of 10 articles that demonstrated aspects of nursing education and updating of knowledge for the performance of the professional role in the face of a pandemic were described (Table 2).

Table 2. Studies that focused on the training and updating of knowledge for the performance of the role in the face of a pandemic.

No.	Author	Objectives	Conclusions
S1	Spero JR (23)	To educate nursing students on quality care and safe practices in the AIDS epidemic.	The nursing schools, colleges, and universities can be key resources for developing curricula, policies, and practice guidelines that will support the nursing community and the public in responding to the AIDS epidemic.
S2	Gardner A (6)	To provide up-to-date information on the avian influenza virus (H5N1) and its means of transmission, principles of containment and management, and key knowledge in the event of a pandemic.	Nurses will face difficult ethical dilemmas in the event of a flu pandemic. These professionals will have to consider how to balance their responsibilities towards their families, their patients, and their own health. They are encouraged to think about these issues now and discuss them with their families and coworkers before a pandemic arises, as they will have to make sound decisions and, although these are personal, they should be discussed beforehand.
S3	Krau SD, Parsons LC (25)	To understand the current status of avian influenza (H5N1), vaccine research, recommendations, and ethical issues that could be raised by this pandemic.	It is worth considering different aspects of a pandemic before it occurs so that a plan of action is in place. As this plan develops and evolves, it is imperative that critical care nurses contribute to informed healthcare practices. This can only be accomplished when there is a deliberate effort to understand the virus, its implications, current research, and consider the ethical issues that this pandemic might raise.

No.	Author	Objectives	Conclusions
S4	Carter MR, Gaskins SW (27)	To design a creative educational experience for community health science students concerning bioterrorism and disaster preparedness.	The students have evaluated the experience positively. Although students do not experience firsthand the consequences of a bioterrorist attack and the nursing care of patients with an exposure, this experience provided the opportunity to recognize the signs and symptoms of exposure, practice procedures, increase confidence, develop critical thinking skills in a safe environment, and potentially improve personal and public health.
S5	Doyle L (29)	The purpose of this article was to introduce forensic nurses to a novel and exciting field to pursue.	Knowledge learned from past disasters to predict the types of trauma likely to occur in similar future situations grants forensic nurses the ability to take preventative measures and be proactive rather than just reactive. Assessment skills, the ability to anticipate potential problems based on risk, and the aptitude to recognize causes and possible interventions are all factors that should compel disaster managers to include forensic nurses in all preparedness and prevention activities. Forensic nurses, in addition to contributing to disaster preparedness and prevention, contribute to disaster response, although some argue that the contribution to preparedness is even more important.
S6	Wall BM (30)	To improve the understanding of the social and political powers that have informed nurses' actions and of the tensions and inconsistencies that have arisen at particular times and places.	Instead of strictly reacting to disasters with firefighters, search and rescue teams, and emergency medical care, attention was focused on disaster forecasting and prevention. City mayors and other disaster responders can also benefit from observing nurses and physicians in their regular work, as they cooperate and communicate daily with many other healthcare personnel under situations of extreme pressure. Nurses and physicians are ready for contingencies. To understand and deal effectively with disasters, multidisciplinary approaches are needed that include meteorologists, engineers, anthropologists, lawyers, political scientists, economists, journalists, and other professionals.
S7	Edmonson C, McCarthy C, Trent-Adams S, McCain C, Marshall J (1)	To examine the response to issues posed by emerging infectious diseases, human trafficking, as well as maternal and newborn health; preparedness to mitigate health inequities within a framework of social justice, equity and countering a disproportionate distribution of the global healthcare workforce.	Global health issues (GHI) do not exist in a vacuum chamber; they are highly complex issues that must be examined in a comprehensive and holistic way. Nurses are positioned in settings such as governmental roles, public health, academia, clinical care, leadership, and private industries with the ability to develop a creative and effective network to respond to multifaceted issues. There is a clear need for increasing nurses' awareness and education on GHI, including, but not limited to emerging infectious diseases, human trafficking, and maternal and newborn health. Professional nurses can contribute as global leaders of change by actively participating in communities, professional nursing organizations, health policy-making and advocacy organizations, and in their workplaces.
S9	Rosa W, Ferrell B, Wiencek C. (37)	To promote palliative care involvement in critical care; share palliative care resources to assist critical care nurses in alleviating suffering during the 2019 coronavirus disease pandemic; and formulate recommendations to strengthen nursing capacity to deliver high-quality, person-centered critical care.	The COVID-19 pandemic has rendered explicit the need for the integration of palliative care into hospital and community settings worldwide as the suffering of patients and their families worsens. It calls for the integration of palliative care into all high-quality critical care practices to ensure that the comprehensive needs of patients and their families are met in these uncertain times. Achieving this ideal will require leadership, advocacy, perseverance, and rapid change in perspectives and protocols. Palliative care is critical care; and critical care nurses are in an ideal position to ensure that this congruence is carried out, disseminated, and empathically translated into practice geared towards improved quality outcomes and person-centered care.
S10	Karnjus I, Prosen M, Licen S. (41)	To explore how registered nurses perceive the core competencies involved in disaster nursing, their role in disaster management, and potential barriers towards the development of disaster nursing in Slovenia.	Registered nurses perceive the core competencies listed as fundamental to their disaster preparedness; however, they lack adequate education, training programs, and experience in disaster nursing. Registered nurses working in nursing homes and nurse managers in leadership positions are more aware of the active role of nurses and their responsibilities in disaster management. As the frequency and impact of disasters increase worldwide, there is a need to integrate disaster management into nursing education programs in both formal and continuing education. The core competencies of disaster nursing should be included in future research, as the framework of disaster nursing competency is under the influence of several contextual factors that need to be investigated.

Source: Own elaboration.

It can be noted that the objectives of the articles collected are focused on providing and updating the knowledge of nurses in the face of global health issues, including emerging infectious diseases, providing information on pandemics experienced by humanity such as the avian flu or the chaos in the face of a bioterrorist attack (27); in addition, updating the knowledge in healthcare that the team and nurses could face in the event of a possible pandemic (6, 25). It should be noted that the evidence recovered also reports new fields of action for nursing professionals regarding disaster preparedness; an example is the “forensic nursing” field (29). However, although they have the basic competencies to deal with disasters, these professionals lack sufficient experience as well as adequate and specific preparation for disasters, which is evident in the lack of continuous training programs in this field (41). In this context, it is also suggested to promote the participation of palliative care in other fields of nursing in which it was not present, such as intensive care, with the aim of assisting nurses to provide care for the pain of patients and their families (37). Another topic raised by the selected articles focuses on describing the experiences lived by students in the process of implementing curricula that address *safe care and practices* for patients and their families in the face of epidemics such as the HIV epidemic (23), exploring, in addition, the understanding and interaction of political, social, and nursing actors in the event of a disaster (30).

In light of the above, the results were conclusive regarding the existence of key strategies for the preventive preparation of nurses in the face of a catastrophe and/or epidemic, which corresponds to the training role of universities and nursing schools as an essential resource in the development of curricula, policies, practice guidelines, and simulation experiences; this would allow the development of skills, increase confidence and communication to face a potentially unsafe environment in order to provide care in personal and public health contexts. This innovation in education could also be extended to professionals currently working in this field, thus taking advantage of the knowledge they have acquired from previous disasters, their assessment skills, their ability to anticipate potential issues based on risk so that nursing professionals can play a proactive rather than a reactive role. It is necessary for nursing professionals to talk about and discuss this theme with their families and coworkers before a catastrophe happens, so that, when the time comes to make decisions, they are informed, also understanding that these professionals will face ethical dilemmas in the performance of their duties and that, simultaneously, they must face responsibilities regarding their families, the people they care for and their own health.

Finally, emerging global health issues should be viewed from a comprehensive and multidisciplinary perspective, under which nurses are the most suitable professionals to respond effectively since in their routine they are positioned in management, care, academic, and public health roles; with this experience, they are able to develop a creative and effective network to respond to an emerging health issue.

Results regarding predictors, enablers, and barriers in the exercise of the nursing role in a pandemic

From the totality of findings recovered in this research, this section describes the objectives and conclusions of 16 articles that demonstrate factors that predict, enable, and/or hinder the exercise of the role in the face of a pandemic (Table 3).

Table 3. Studies developed concerning predictors, enablers, and barriers to the performance of the nursing role in the face of a pandemic.

No.	Author	Objectives	Conclusions
S1	Rankin J (3)	The objective was to determine whether the SARS outbreak was a unique experience for nurses or whether nurses shared similar experiences in the past.	Nurses' reactions to the possibility of contracting a deadly disease remain human: two of these are fear and isolation, as well as leadership in the face of this situation not unlike in the past or present. Nurses' responses to SARS can be meaningfully studied, and information or impressions from previous crises may be of interest to the nursing profession as a whole.
S2	Wong SYS, Wong ELY, et al. (14)	To study the willingness of Hong Kong community nurses to work during the H1N1 influenza pandemic.	A high rate of nurses working for community nursing services were found to be unwilling to work with patients suspected of being infected with H1N1 influenza. Interventions to provide infection management training and to address the psychological needs of community nurses could increase their willingness to provide care to patients during the H1N1 influenza pandemic. This would support an effective and appropriate health system response during a pandemic triggered by the aforementioned virus.
S3	Martin SD, Brown LM, Reid WM (28)	To examine possible predictors of nurses' intentions to work during the 2009 influenza A (H1N1) pandemic.	To maintain an adequate nursing workforce during an influenza pandemic, employers should ensure that policies and procedures include providing appropriate PPE (personal protective equipment) and ensuring the health of nurses and their families. The level of perceived threat is likely to affect the proportion of nurses willing to work. Some nurses will refuse to work during an influenza pandemic, regardless of the protections and incentives offered. Efforts to force or entice all nurses to work are unlikely to be successful.
S4	Tzeng HM, Yin CY (32)	To explore the factors contributing to nurses' fear of a potential avian influenza pandemic with human-to-human transmission and their professional duties.	The nurses' fear of an unknown infectious disease, such as the H5N1 influenza virus, the lack of infection management measures and equipment to prevent nosocomial infection, as well as the fear of infecting their families, are factors contributing to the fear experienced by them, and these could easily rise to levels higher than those that occurred during the 2003 SARS outbreak in Taiwan.
S5	Mavhandu-Mudzusi AH, Sandy PT, Hetteema A (33)	To analyze graduate nurses' perceptions of the nurse-led antiretroviral therapy initiation program (NARTIS) in the Hhohho region of Swaziland.	The study findings have generated information concerning this program that is useful in providing care for patients living with HIV/AIDS in Swaziland. Despite this, there are negative factors such as a low number of clinic wards and nurses, as well as nurses' limited knowledge on this theme, which may sometimes affect the NARTIS program's effectiveness. Nurses need regular, ongoing, and updated educational support to ensure effective implementation of their practices. Support is also needed for nurses in resource fields.
S6	Al-Tawfiq JA, Rothwell S, Mcgregor HA, Khouri ZA (10)	To develop a nurse-led program to evaluate and screen patients with MERS-CoV infection.	The implementation of specific protocols minimizes the risks of cross-infection, emphasizing patient and staff safety, and expediting patients towards definitive treatment. Nurse educators have a critical role in training nurses and other healthcare providers on the details needed to identify, contain, and manage patients presenting with MERS-CoV.

No.	Author	Objectives	Conclusions
S7	Tayaben JL, Younas A (35)	To call for action in advocating for rights and assisting immigrant nurses with transition and registration.	During the current COVID-19 crisis, immigrant nurses who are considered less competent and skilled are an essential part of the workforce and perform a vital role in alleviating the workload of the healthcare workforce in high-income countries. Immigrant nurses want to support their countries of residence, but they would not be able to do their part if restrictive and differential policies and requirements are in place. Therefore, equal privileges and respect are needed for all immigrant and non-immigrant nurses during this public health crisis; nursing associations have an important role to perform in this regard.
S8	Zeneli et al. (39)	To describe the emergency response to COVID-19 in a cancer center to enable other nursing organizations to determine what elements might be useful in managing a surge of patients in their own setting.	Our institute's nursing staff provided invaluable support in numerous areas during the first phase of the COVID-19 pandemic; namely, patient assessment and treatment schedule planning; patient and family support, information, and education; and participation in patient care, research, and education. In addition, they performed an active role in ensuring the appropriate use of healthcare resources and increasing the benefit to patients and the community. Key policies will be needed for an action plan: health policies, coordinated planning and communication strategies, technology and health IT, nursing organization and safety culture.
S9	Abuhammad S, Alazzam M, Mukattash T. (38)	The study aimed to evaluate, in local Jordanian Facebook nursing groups, the perception of their roles during the coronavirus pandemic.	The Jordanian nurses perceived that their role during the COVID-19 outbreak was constructive and not limited to their usual roles during the outbreak. Indeed, they performed the task of supporting and advocating for the sick and their families. Despite these efforts during the outbreak, the lack of awareness and underestimation of nurses' essential work compared to physicians and other healthcare providers persists. Improving the prestige of nursing professionals and their social standing, including providing opportunities for creativity and innovation in nursing practice, will change the perception of nurses, promoting effective and permanent changes in the notion of nursing.
S10	Chau JPC et al (42)	This study aimed to explore the experiences of registered nurses providing care to patients with suspected or diagnosed COVID-19 during the first 6 months of the ongoing global pandemic.	Our study found that nurses were resilient, were capable of self-care, and were adaptable in the face of resource shortages, changes in nursing protocols, and threats to physical and mental health during the COVID-19 pandemic. However, coordinated support from the clinical setting, local authorities, and the community, in addition to advanced preparedness, would likely improve nursing responses to future pandemics.
S11	Abdulah D, Mohammadsadiq H, Liamputtong P. (44)	We have explored the experiences of nurses who provided care to patients with the 2019 coronavirus disease in Iraqi Kurdistan.	The patients had some concerns regarding their health and their stay in the hospitals, and some of them displayed aggressive behaviors towards the nurses in the <i>corona hospitals</i> . The public, close friends, and relatives of the nurses feared contracting the virus infection from the nurses. However, the nurses tried to protect themselves, their colleagues, and their family members and provide the best care for patients with the 2019 coronavirus disease. The findings have implications for healthcare administrators who need to be sensitive to the psychological well-being of nurses. Better support needs to be established as this would provide more effective and safer work practices.
S12	Robert NJ, Kelly CA, Lippiett K et al. (46)	To identify and characterize self-reported issues that exacerbated or relieved their concerns during the first wave of the COVID-19 pandemic.	There are concerns regarding the work environment, availability of PPE, quality of care, changing environment patterns, the impact on the mental health of nurses and their families. Support for staff is essential, both during and after the pandemic, and it is essential to recognize the preparedness of individuals regarding the development of resilience. It is also clear that psychological support and services for nurses and the healthcare team in general must be available and rapidly called upon in the event of similar major incidents, whether globally or locally.

No.	Author	Objectives	Conclusions
S13	Silva VGF, Silva BN da, Pinto ESG, Meneses RPM (47)	To reflect on the work experienced by nurses responding to the COVID-19 pandemic in a public hospital in the State of Rio Grande do Norte.	The role of nurses is highlighted, since their role in the organization of front-line services and in the exercise of care management demonstrates their relevance. However, the existence of several factors that often lead to burnout in the nursing team's work was identified, especially those related to low professional recognition, material and personnel deficits in the care services, as well as psychosocial and interpersonal aspects. From this perspective, it is necessary to acknowledge the work of nurses in all its attributes, as well as to strengthen interdisciplinary work processes that collaborate to overcome the crisis caused by the pandemic.
S14	Nahidi S, Sotomayor-Castillo C, Li C, et al. (48)	To explore the knowledge, preparedness, and experiences of Australian intensive care nurses in managing patients diagnosed with severe acute respiratory syndrome, coronavirus 2 infection (SARS-CoV-2), and COVID-19.	While most nurses expressed sufficient preparation for managing patients with COVID-19, specific education had been conducted and experiential learning was evident. Fears of inadequate or lack of adequate PPE and the provision of support in the face of contracting the disease hindered the nurses' and the community's response to the pandemic. Preparedness and psychological support to counteract anxiety and mental exhaustion are critical factors for the successful management of the COVID-19 pandemic and future outbreaks of emerging infectious diseases.
S15	Ross L, Meier N. (45)	To improve the adult population's response to the COVID-19 pandemic in the community by 80 % within 8 weeks.	Telehealth interventions programmed to be patient-centered can provide isolated populations with meaningful social contact.
S16	Encalada G, Yanca C, Guerrero G. et al. (36)	To describe the nursing situation in the Americas facing the COVID-19 pandemic.	The current pandemic demonstrates the importance of having an adequate number of healthcare providers according to the needs and care required by each patient; for this reason, countries need to invest in improving the working conditions of nursing professionals, including individual protective equipment, support for teamwork and continuing nursing education, which will lead to significant achievements, demonstrating the professionalism of nurses and their absolute dedication, by applying their four fundamental roles in order to protect the health and improve the lives of people, despite the obvious real and potential risks they face at the workplace.

Source: Own elaboration.

In the selected evidence, the *predictors, enablers, and barriers* to the professional role of nurses can be noted. It is concluded that in order to maintain a nursing workforce in the face of a pandemic, there are *predictors* that should be considered to carry out this role, one of them being the need for support from local authorities and the community (42), providing training in infection control and addressing the psychological needs of nursing professionals in the community, with the aim of increasing their willingness to care for patients during times of crisis (14).

On the other hand, the evidence also reports that there are *enabling factors* for the performance of the role, firstly, when it is considered that these professionals provide “constructive” support with their work (38); in addition, they are resilient, capable of self-care and adaptability towards the continuous changes in protocol and scarcity of resources (42), as well as their capacity for planning, support, information, active participation in research and adequate use of resources (39), relevant aspects that should be considered by the employers of healthcare services, since they must ensure clear practices in the care to be provided, control measures for infections and personal protection equipment that is adequate for the use of healthcare providers, which are all indispensable variables to en-

sure the health of healthcare providers and their families (28); in addition, the need for psychological support for these professionals is also evident (48), as well as the need for their continuing education. This need should not only satisfy nurses but also other healthcare providers who are for the implementation of programs and protocols with the objective of minimizing cross-infection for patient and staff safety in the face of a pandemic (10, 33, 48), strengthening interdisciplinary work (46). One strategy reported in this review that will undoubtedly support their performance in improving communication with isolated populations is telehealth.

Among the *factors that hinder* the performance of their role were the fear of working with patients with infectious diseases experienced by nursing professionals (32) — and therefore, the need for support in case of contracting the disease (48) —, the insecurity of not having adequate personal protective equipment (46, 48), the fear of contaminating members of their family, the social isolation that these professionals must face (3, 46), as well as the limited infrastructure and the deficit of nursing professionals (33), the feeling of ignorance and underestimation of the efforts of nurses compared to physicians (38), and the lack of social recognition (46), all of which undoubtedly affect their willingness to work with and provide care for patients with infectious diseases (28); in addition, the crucial contribution and work of immigrant nurses in support of the existing workforce is often overlooked, since despite the different nature and environment of their jobs, they can play a key role during times of crisis such as what has been witnessed in the COVID-19 pandemic (35).

Finally, a study that unveils the reality of nursing in the Americas comments that, in order to have adequate nursing professionals, countries need to invest in improving their working conditions, ensuring the provision of personal protective equipment, and continuing education (36).

Results found in the evidence dimension of the professional role in pandemics

Regarding the results found in the dimension ‘evidence of the professional role in pandemics’, nine articles were found. Their objectives and conclusions are detailed below (Table 4).

Table 4. Studies developed regarding role performance during pandemics and disasters

No.	Author	Objectives	Conclusions
S1	Kuehnert PL (24)	To present the development of a program in response to the AIDS epidemic in a Midwestern community in the USA.	The dynamic interaction of community health nursing activities with individuals, families, and community, guided by the nursing process, has been used to demonstrate the roles of community health nurses (CHNs). CHN roles may include the following: direct caregiver, advocate, case manager, health educator, program planner, program coordinator, and policy advocate. The community-based approach to AIDS allows for a caring and compassionate response, as well as improving the public image of CHNs as innovators and enablers of change.

No.	Author	Objectives	Conclusions
S2	Keeling AW (26)	To describe and analyze the role of nurses in the response to the influenza epidemic in New York City in 1918.	In 1918, close cooperation between a previously established network of nursing and other social organizations, as well as early cooperation with the American Red Cross and the U.S. Public Health Service, were essential to New York City's response to the crisis.
S3	Wood PJ (31)	To examine the boundaries of the nursing profession in New Zealand after the 1918-1919 influenza pandemic.	This historical example demonstrates how the nursing profession faced a perceived threat to its professional boundaries. It also demonstrates how the competing goals of building "lay", secular, community-based nursing capacity and protecting professional boundaries can be effectively managed.
S4	Jones MM, Saines M (34)	To examine the role of African American nurses during the influenza pandemic of 1918-1919 and the aftermath of World War I.	This analysis demonstrates that the pandemic progressively increased civil rights in the Army Nurse Corps and Red Cross, while providing ephemeral opportunities for black nurses in general. This case study reframes the response to epidemics and other public health emergencies as potential opportunities for advancing health equity.
S8	Chen et al. (40)	To evaluate the role and responsibility of nurses in the treatment of COVID-19 patients.	Nurse anesthetists have skills and experience in the management of the respiratory tract and can adapt quickly to the treatment and management of patients with COVID-19. However, they lack experience in infectious disease prevention and management. They may also lack expertise in nursing procedures and patient communication, which are two deficiencies. Therefore, nurse anesthetists require training in emotional management and communication.
S9	Kong et al. (43)	To evaluate nurses' actions and skills regarding bereavement counseling for bereaved family members of patients who died of coronavirus disease 2019 (COVID-19) in Wuhan, China.	Nurses' actions and skills regarding bereavement counseling in Wuhan were poor. Educational level, communication skills, and training related to bereavement counseling were the main factors affecting nurses' actions in Wuhan (China). Responsibilities and roles, frequency of contact with the bereaved, and positive view of counseling were the main factors affecting nurses' bereavement counseling skills. Hospitals should establish bereavement counseling committees, staff training, and the organization of related activities. Considering that the COVID-19 pandemic is ongoing, short videos, webcasts, and open online courses are recommended for this type of training.
S9	Srithumsuk W, Wangnum K (49)	To describe the lessons learned from oncology nurses in administering home chemotherapy to cancer patients during the COVID-19 pandemic and the new normal situation in Thailand.	During the COVID-19 pandemic oncology and home health care (HHC) nurses have been challenged in this new normality to care for cancer patients using home chemotherapy. Oncology and HHC nurses must focus on effective ways to prevent COVID-19 infections in those cancer patients undergoing home chemotherapy, as well as appropriate nursing practices in the fight against this developing health crisis, which has the potential to cause serious and life-threatening issues for patients' conditions.

Source: Own elaboration.

Regarding the evidence on the role of nursing professionals in times of pandemic crisis, the first articles retrieved reported the role of American (26) and African-American nurses in outbreaks such as the 1918 "Spanish flu" as a model of past pandemic experiences that occurred in periods of history with racial segregation and violence in which people of color were denied access to health, educational, and political institutions; nevertheless, these borderline situations that humanity experienced provided ephemeral opportunities for these professionals of color to deliver nursing care in response to public health emergencies (34). Other articles have also demonstrated how nursing professionals coped with the formation of a lay nursing force without threatening their professional boundaries in times of pandemics.

As a consequence of the exposed results, it can be interpreted that nursing professionals in past pandemic experiences had a more reactive role, since, in the midst of pandemic crises, such as the AIDS crisis, for example, they promoted the interaction between community health nursing activities with individuals, families, and community, through the nursing process, managing to play diverse roles such as direct caregiver, advocate, case manager, health educator, program planner, program coordinator, which allowed these professionals to be considered agents of change (24). Another role that was evident in the retrieved bibliography was the immediate reaction and cooperation of nursing professionals with the assistance of local community organizations in the face of a pandemic disease such as the influenza of 1918, since in the face of a shortage of supplies and medicines, and a rapid spread of the disease, “nursing home care” represented the only response and treatment that could be offered to the population in the midst of these crises (26).

After a century, this same strategy was used again, bringing oncology care to patients’ homes with the aim of minimizing the risk of infection in patients undergoing chemotherapy (49). In a context of the low global availability of nursing professionals and the need for home care in the midst of the pandemic crisis, in the past it was necessary to consider the formation of a second line of lay or volunteer nurses in response to this need, with caution and keen avoidance of crossing professional boundaries regarding the basic instruction that non-professional nurses should receive; this consideration had to be taken into account, since in the future it could constitute a risk for the population to become dependent on these volunteers with precarious knowledge, in situations in which the nursing professionals became massively ill (31). Currently, the evidence reports some experiences that were necessary to address the need for care professionals; one of them was the need for a change of professional role that had to be experienced, for example, by nurse anesthetists, who used their experience, competencies, and skills in the management of the respiratory tract to contribute to the care of patients with pathologies derived from COVID-19 (40). On the other hand, there was also an urgent need to improve bereavement counseling as a way of focusing attention not only on patients but also on their families (43).

Discussion

In the study’s integral analysis, it was found that all the articles retrieved were published in scientific journals indexed in the databases, which meet methodological quality standards and enjoy greater international recognition (50). However, due to the historical characteristics of the information found in the first stage of collection, these articles presented a low level of evidence and used traditional historical methods for data collection, such as case studies and critical analysis of the social, political, and economic context in times of pandemics and disasters. Subsequently, the highest percentage of the information retrieved in the current COVID-19 pandemic context was mainly of a qualitative nature, being worth mentioning that the articles in these journals, originating from 16 countries worldwide, are

in English, making the mastery of this language a pressing need and one of the main challenges for our profession since it is one of the tools that nursing professionals must possess to train and exchange knowledge (51, 52). It should be noted that a significant percentage of the evidence collected was obtained from databases with restricted access and in agreement with higher education centers; therefore, it is urgent to make effective agreements with healthcare professors to grant them access to these databases from healthcare centers, if research is to be done from a healthcare perspective.

Regarding the information obtained in this review, it is noted that the first studies found date back to the 1980s and contain little information regarding the role of nurses; later, in the current circumstances of the pandemic that humanity is experiencing, it is noted the report of sufficient and varied information that was useful in answering the research question.

According to the interpretation of the evidence collected, nursing professionals have had a reactive role in the face of emerging infectious diseases, that is, a rapid and immediate response in which they mainly fulfilled an assistance role, providing nursing care at home to families and the community in the face of an unexpected emerging public health issue. It should be noted that this reactive role also had its expressions inside the hospitals, carrying out its competencies to different services, but understanding that the preparation and experience were deficient in disasters and pandemics. Unfortunately, this action was deployed when emerging pandemic diseases were already present and their dissemination was imminent, both within and outside the borders of a country and/or continent.

Currently, as empirical knowledge advances along with the development of technologies, nursing graduates are starting to evolve in their professional work and in their visibility to society, managing direct care roles, becoming chaos managers, pandemic planners, health educators, and so on (24), benefiting from their experience, knowledge and direct contact with the issue; these characteristics will undoubtedly be useful for the effective management of a recent emerging event and, of course, those to come.

It is undoubted, and the bibliography reports it, that in order to effectively perform the nursing role, it is necessary to invite nurses to reflect upon some ethical dilemmas that they must face in times of pandemics in their workplaces, first of all, questioning where their professional responsibilities begin and end, the existence of care protocols, work and contingency plans that the facility has in case of a pandemic, and the need for training and updates that should be provided by their employers since there is evidence reporting that nurses with limited training are less likely to stay on the job (14).

Regarding the evidence found, the results of this review coincide with other reviews retrieved (53, 54) regarding the barriers to the performance of their professional role; some of the relevant factors,

which have been developed by several authors, are “fear” (3, 14, 46), uncertainty (55), psychological stress and the reluctance of health-care professionals—especially nurses and nursing assistants (56)—to work with patients infected with emerging infectious diseases in an environment of scarce personal protective equipment (46, 48) and, therefore, the fear of bringing the infection to their homes and families (48, 57, 58). This situation has not been addressed by governmental and health agencies, nor by the ICN (International Council of Nurses); the aforementioned institution, although it has recently published the 12 main priorities for the COVID-19 pandemic (59), did not consider in any of the points of the declaration the protection of the fundamental pillar of every human being, and of course, of a healthcare professional, namely, *their families*. Failure to address this situation could lead to a setback in the effort to mitigate absenteeism and the deficit of human and material resources currently available to health systems (60) since it is unquestionable that the nursing professionals’ unwillingness to work is clearly related to the scarcity of personal protective equipment (PPE) (61), as well as to their personal safety and that of their families. Thus, a debatable ethical dilemma arises in the field of nursing regarding the moral obligation to provide care under any circumstances. The ICN (62), in the code of ethics that governs nursing practice, emphasizes in the section “The nurse and practice”, the moral autonomy that nursing professionals have in the development of their professional practice, mentioning that they “will maintain a level of personal health that does not compromise their ability to provide care”. In this sense, the American Nursing Association (ANA) (2) also develops the idea of autonomy in the practice of nursing without compromising health, stating in its provision number 5: “nurses owe the same duties to themselves as they owe to others, including the responsibility to promote health and safety”.

An enabling element for the implementation of the professional role in times of pandemic is to consider, on one hand, nursing professionals as “constructive” support that has characteristics of resilience, self-care, and adaptability; and on the other hand, the aspect raised by some authors (1) stating that if nursing professionals want to have a successful impact in the fight against emerging global health issues, they must develop leadership skills and strengthen interdisciplinary work (46), directing their focus beyond the hospital wards and healthcare settings, with an understanding of the broader context. This is stated by the Canadian Nurse Association (63), an organization that proposes eight essential competencies for nurse leaders in 2020; they approach leadership from a global perspective in the face of health and professional nursing issues. This approach allows the dynamic interaction of nurses at all levels of care, preferably in community health nursing activities with individuals, families, and the community, granting them the opportunity to become innovative agents of change (1, 24). In this context, one author (64) argues that it is imperative to support a change agent by evidence-based practice, this being the framework in which nurses begin prevention, early recognition, intervention, and implementa-

tion of practices and programs to address these issues, actions that in the perspective of the results achieved in this study, and the on-site experience of the authors, should be worked upon immediately.

Another element that the literature reports as an enabler, and that conditions the development of the professional role, is related to the training that future nurses receive in nursing schools and colleges (65); These should encourage a change in curricular innovation, incorporating in their curricula policies, guidelines, and experiences in the simulation of epidemics and/or catastrophes, and even in preparation for bereavement counseling since the community and patients expect expert care and specific training in such areas, which can reassure them regarding the competencies of nurses. This training in times of pandemics, not only can be contemplated from the formal academic environment, but also from the need to constitute a non-professional nursing capacity whose objective would be to have a second line of nurses with basic training to provide care, as a viable alternative if there is a need for additional human resources to provide care to the community. In this regard, some authors state (31) that, although “informal” training is necessary in times of pandemics, it must be strongly protected so as to not cross professional boundaries since in the future there could be a serious risk of becoming dependent on these volunteers with basic knowledge in situations in which nurses become massively ill or decide to refuse to work. Faced with this issue, the authors agree with some studies (35) which suggest that, faced with a deficit of nurses in times of pandemics, a call should be made to allow the arrival of immigrant nursing professionals from countries less affected by the pandemic; this would respond to one of the 12 priorities of the ICN in the face of the COVID-19 pandemic (59), since in its priority number 6 they comment that when faced with a deficit of nursing professionals, “an effective response in terms of registration and regulation should be provided by rapidly increasing the nursing staff”. In addition, they demand that, in order to rapidly increase the number of nurses, the graduation of students or the reinstatement of retired nurses should be accelerated, ignoring the fact that this skilled workforce of immigrant nurses may be better prepared than students and retired nurses.

Ultimately, to ensure that an adequate frontline nursing workforce is in place, while simultaneously ensuring that the autonomous role of the frontline nurses is fulfilled during a pandemic and/or disaster, a number of issues need to be addressed: pre-planning by employers, training, and updates prior to and during pandemic crises, provision of full personal protective equipment to provide safety for frontline staff, ensuring a safe environment for the nursing team and a holistic environment in their workplace by providing resting and feeding areas, shift rotation of work teams, psychological support, incentives, and life insurance, religious facilities, transportation in case of social restrictions, ensuring the frontline nursing team and their families easy access to medications, vaccinations, nursing homes, and psychological support; and finally, to provide incentives and life insurance for frontline staff.

Conclusion

This study allowed, firstly, to identify the barriers and enablers that allow or hinder the fulfillment of nurses' professional role in the face of pandemics or catastrophes; secondly, to understand that emerging infectious diseases should be addressed immediately and collaboratively by governmental and local agencies and, ideally, in a preventive manner once they emerge, with a complex and multidisciplinary approach.

With the information collected, it is possible to change the paradigm that nursing is only a technical and reactive profession in the face of emerging health crises since the work of nurses goes beyond care: it encompasses management, education, and research, so that the community recognizes the importance of nursing and can be confident that these professionals will be there to take care of them in the event of an unexpected pandemic event, thus developing a much more proactive and visible professional role in their social actions.

Limitations

A relevant limitation to consider is that the articles retrieved in this review were evaluated by a single researcher; therefore, there is a possibility that the data could be biased. Since the review results are from 16 countries spanning across different continents, these countries may hold different cultural perspectives or beliefs regarding this pandemic, so the synthesis of issues in this review may not be applicable to all populations of nurses worldwide.

Conflict of interests: none declared

References

- Edmonson C, McCarthy C, Trent-Adams S, McCain C, Marshall J. Emerging global health issues: A nurse's role. *Online J Issues Nurs* [Internet]. 2017;22(1):manuscript 2. DOI: <https://doi.org/10.3912/OJIN.Vol22.Noo1Mano2>
- American Nurses Association [ANA]. Code of Ethics for Nurses with Interpretive Statements [Internet]. Silver Spring (MD, USA): ANA; 2015. Disponible en: <https://www.nursingworld.org/practice-policy/nursing-excellence/ethics/code-of-ethics-for-nurses/coe-view-only/>
- Rankin J. Godzilla in the corridor: The Ontario SARS crisis in historical perspective. *Intensive Crit Care Nurs* [Internet]. 2006;22(3):130–137. DOI: <https://doi.org/10.1016/j.iccn.2005.10.001>
- Keegan JJ. The prevailing pandemic of influenza. *J Am Med Assoc* [Internet]. 1918 [cited 2020 Oct 13];71(13):1051–1055. DOI: <http://doi.org/10.1001/jama.1918.26020390002013>
- Hilleman MR. Realities and enigmas of human viral influenza: Pathogenesis, epidemiology and control. *Vaccine* [Internet]. 2002;20(25–26):3068–3087. DOI: [https://doi.org/10.1016/s0264-410x\(02\)00254-2](https://doi.org/10.1016/s0264-410x(02)00254-2)
- Gardner A. Pandemic containment and management. *Aust Nurs J* [Internet]. 2006;14(3):25–27. PMID: 16989388. Disponible en: <https://pubmed.ncbi.nlm.nih.gov/16989388/>
- Epidemiology Working Group for NCIP Epidemic Response - Chinese Center for Disease Control and Prevention. The epidemiological characteristics of an outbreak of 2019 novel coronavirus diseases (COVID-19) in China. *Chin J Epidemiol* [Internet]. 2020 [cited 2020 Oct 13];41(2):145–151. DOI: <https://doi.org/10.3760/cma.j.issn.0254-6450.2020.02.003/>
- Lakshmi Priyadarsini S, Suresh M. Factors influencing the epidemiological characteristics of pandemic COVID 19: A TISM approach. *Int J Healthc Manag* [Internet]. 2020 [cited 2020 Oct 13];13(2):89–98. DOI: <https://doi.org/10.1080/20479700.2020.1755804>
- Worldometer [Internet]. COVID-19 Coronavirus Pandemic. 2020 [cited 2020 Oct 13]. Disponible en: <https://www.worldometers.info/coronavirus/#countries>

10. Al-Tawfiq JA, Rothwell S, Mcgregor HA, Khouri ZA. A multi-faceted approach of a nursing led education in response to MERS-CoV infection. *J Infect Public Health* [Internet]. 2018;11(2):260–264. DOI: <https://doi.org/10.1016/j.jiph.2017.08.006>
11. International Council of Nurses [ICN]. Nurses and disaster risk reduction, response and recovery -Position statemen [Internet]. Geneva (Switzerland): ICN; 2019. Disponible en: https://www.icn.ch/sites/default/files/inline-files/PS_E_Nurses_and_disaster_risk_reduction_response_and_recovery.pdf
12. American Nurses Association [ANA]. ANA's Covid-19 Video Education Series [Internet]. 2021 [cited 2021 Nov 13]Disponible en: <https://www.nursingworld.org/practice-policy/work-environment/health-safety/disaster-preparedness/coronavirus/education/ana-covid-19-video-education/>
13. Walton M, Conoolly C. A Look back: Nursing care of typhoid fever. The pivotal role of nurses at the children's Hospital of Philadelphia between 1895-1910: how the past informs the present. *Am J Nurs* [Internet]. 2005;105(4):74-78. Disponible en: https://journals.lww.com/ajnonline/fulltext/2005/04000/a_look_back__nursing_care_of_typhoid_fever__the.31.aspx
14. Wong ELY, Wong SYS, Kung K, Cheung AWL, Gao TT, Griffiths S. Will the community nurse continue to function during H1N1 influenza pandemic: A cross-sectional study of Hong Kong community nurses?. *BMC Infect Dis* [Internet]. 2010;10. DOI: <https://doi.org/10.1186/1472-6963-10-107>
15. Mackler N, Wilkerson W, Cinti S. Will First-Responders Show Up for Work During a Pandemic? Lessons From a Smallpox Vaccination Survey of Paramedics. *Disaster Manag Response* [Internet]. 2007;5(2):45–48. DOI: <https://doi.org/10.1016/j.dmr.2007.02.002>
16. Qureshi KA, Merrill JA, Gershon RRM, Calero-Breckheimer A. Emergency preparedness training for public health nurses: A pilot study. *J Urban Health* [Internet]. 2002;79(3):413–416. DOI: <https://doi.org/10.1093/jurban/79.3.413>
17. Guirao Goris SJA. Utilidad y tipos de revisión de literatura. *Ene* [Internet]. 2015 [cited 2020 Oct 14];9(2). DOI: <https://doi.org/10.4321/S1988-348X2015000200002>
18. Santos WM, Secoli SR, Püschel VAA. The Joanna Briggs Institute approach for systematic reviews. *Rev Latino-Am Enfermagem* [Internet]. 2018;26:e3074. DOI: <https://doi.org/10.1590/1518-8345.2885.3074>
19. Carrión-Pérez JM, Correa-Romero A, Alvarado-Gómez F. El MeSH y la pregunta PICO. Una herramienta clave para la búsqueda de información. *SANUM Rev Científico-Sanitaria* [Internet]. 2020 [cited 2020 Oct 14];4(1):46. Disponible en: https://www.revistacientificasanum.com/pdf/sanum_v4_n1_a5.pdf
20. Grant MJ, Booth A. A typology of reviews: An analysis of 14 review types and associated methodologies. *Health Info Libr J* [Internet]. 2009;26(2):91–108. DOI: <https://doi.org/10.1111/j.1471-1842.2009.00848.x>
21. Manterola C, Asenjo-Lobos C, Otzen T. Jerarquización de la evidencia: niveles de evidencia y grados de recomendación de uso actual. *Rev Chil Infectol* [Internet]. 2014;31(6):705–718. DOI: <https://doi.org/10.4067/S0716-10182014000600011>
22. Galvão CM, Sawada NO, Costa Mendes IA. A busca das melhores evidências. *Rev Esc Enferm USP* [Internet]. 2003;37(4):43–50. DOI: <https://doi.org/10.1590/S0080-62342003000400005>
23. Spero JR. Educating nursing students about quality care and safe practices in the AIDS epidemic. *Public Health Rep* [Internet]. 1988;103(3):278–281. Disponible en: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1478075/pdf/pubheal-thre00170-0072.pdf>
24. Kuehnert PL. Community Health Nursing And The Aids Pandemic: Case Report Of One Community's Response. *J Community Health Nurs* [Internet]. 1991;8(3):137–146. DOI: https://doi.org/10.1207/s15327655jchno803_3
25. Krau SD, Parsons LC. Avian Influenza: Are We Ready? *Crit Care Nurs Clin North Am* [Internet]. 2007;19(1):107–113. DOI: <https://doi.org/10.1016/j.ccell.2006.10.009>
26. Keeling AW. 'When the city is a great field hospital': the influenza pandemic of 1918 and the New York city nursing response. *J Clin Nurs* [Internet]. 2009;18(19):2732–2738. DOI: <https://doi.org/10.1111/j.1365-2702.2009.02893.x>
27. Carter MR, Gaskins SW. Incorporating bioterrorism content in the nursing curriculum:A creative approach. *J Nurs Educ* [Internet]. 2010;49(7):406–409. DOI: <https://doi.org/10.3928/01484834-20100217-08>
28. Martin SD, Brown LM, Reid WM. Predictors of nurses' intentions to work during the 2009 influenza A (H1N1) pandemic. *Am J Nurs* [Internet]. 2013;113(12):24–31. DOI: <https://doi.org/10.1097/01.NAJ.0000438865.22036.15>
29. Doyle L. Forensic Nursing: Key to Disaster Preparedness Strategy. *Forensic Exam* [Internet]. 2013;22(4):58–69. Disponible en: <https://www.proquest.com/docview/1549251769?pq-origsite=scholar&fromopenview=true>
30. Mann Wall B. Disasters, nursing, and community responses: A historical perspective. *Nurs Hist Rev* [Internet]. 2015 [cited 2021 Jul 9];23(1):11–27. DOI: <https://doi.org/10.1891/1062-8061.23.11>
31. Wood PJ. Managing boundaries between professional and lay nursing following the influenza pandemic, 1918-1919: insights for professional resilience today? *J Clin Nurs* [Internet]. 2017;26(5-6):805–812. DOI: <https://doi.org/10.1111/jocn.13570>
32. Tzeng HM, Yin CY. Nurses Fears and Professional Obligations Concerning Possible Human-to-Human Avian Flu. *Nurs Ethics* [Internet]. 2006;13(5):455-470. DOI: <https://doi.org/10.1191/0969733006nej8930a>
33. Mavhandu-Mudzusi AH, Sandy PT, Hetteema A. Registered nurses' perceptions regarding nurse-led antiretroviral therapy initiation in Hhohho region, Swaziland. *Int Nurs Rev* [Internet]. 2017;64(4):552–560. DOI: <https://doi.org/10.1111/inr.12375>
34. Jones MM, Saines M. The eighteen of 1918–1919: Black nurses and the great flu pandemic in the United States. *Am J Public Health* [Internet]. 2019;109(6):877–884. DOI: <https://doi.org/10.2105/AJPH.2019.305003>
35. Tayaben JL, Younas A. Call to Action for Advocacy of Immigrant Nurses during COVID-19 Pandemic. *J Adv Nurs* [Internet]. 2020;76(9):2220-2221. DOI: <https://doi.org/10.1111/jan.14432>
36. Encalada G, Yanca C, Guerrero G, Daquilema M, Morán B. Situación de enfermería en América, frente a la pandemia COVID-19. *Salud Bienestar Colect* [Internet]. 2020 [cited 2021 Sep 18];4(3):108–128. Disponible en: <https://revistasaludybienestarcolectivo.com/index.php/resbic/article/view/106/103>
37. Rosa WE, Ferrell BR, Wienczek C. Increasing critical care nurse engagement of palliative care during the COVID-19 pandemic. *Crit Care Nurse* [Internet]. 2020 [cited 2021 Sep 18];40(6):e28–e36. DOI: <https://doi.org/10.4037/ccn2020946>
38. Abuhammad S, AlAzzam M, Mukattash T. The perception of nurses towards their roles during the COVID-19 pandemic. *Int J Clin Pract* [Internet]. 2021 [cited 2021 Sep 18];75(4):e13919. DOI: <https://doi.org/10.1111/ijcp.13919>
39. Zeneli A, Altini M, Bragagni M, Gentili N, Prati S, Golinucci M, et al. Mitigating strategies and nursing response for cancer care management during the COVID-19 pandemic: an Italian experience. *Int Nurs Rev* [Internet]. 2020 [cited 2021 Sep 18];67(4):543–553. DOI: <https://doi.org/10.1111/inr.12625>
40. Chen Q, Lan X, Zhao Z, Hu S, Tan F, Gui P, et al. Role of Anesthesia Nurses in the Treatment and Management of Patients With COVID-19. *J PeriAnesthesia Nurs* [Internet]. 2020 [cited 2021 Sep 18];35(5):453-456. DOI: <https://doi.org/10.1016/j.jopan.2020.05.007>

41. Karnjuš I, Prosen M, Ličen S. Nurses' core disaster-response competencies for combating COVID-19—A cross-sectional study. *PLoS One* [Internet]. 2021 [cited 2021 Sep 18];16(6):e0252934. DOI: <https://doi.org/10.1371/journal.pone.0252934>
42. Chau JPC, Lo SHS, Saran R, Leung CHY, Lam SKY, Thompson DR. Nurses' experiences of caring for people with COVID-19 in Hong Kong: a qualitative enquiry. *BMJ Open* [Internet]. 2021 [cited 2021 Sep 18];11:e052683. DOI: <https://doi.org/10.1136/bmjopen-2021-052683>
43. Kong C, Tan L, Gao X, Fan H, Zhang J, Wang Z, et al. Nurses' Grief Counseling for Bereaved Family Members of COVID-19 Patients in Wuhan, China: A Cross-Sectional Survey. *J Psychosoc Nurs Ment Health Serv* [Internet]. 2021 Jul 1;1-7. DOI: <https://doi.org/10.3928/02793695-20210527-03>
44. Abdulah DM, Mohammedsadiq HA, Liamputtong P. Experiences of nurses amidst giving care to COVID-19 patients in clinical settings in Iraqi Kurdistan: A qualitative descriptive study. *J Clin Nurs* [Internet]. 2021 [cited 2021 Sep 18];00:1-15. DOI: <https://doi.org/10.1111/jocn.15909>
45. Ross L, Meier N. Improving adult coping with social isolation during COVID-19 in the community through nurse-led patient-centered telehealth teaching and listening interventions. *Nurs Forum*. 2021;56(2):467-473. DOI: <https://doi.org/10.1111/nuf.12552>
46. Roberts NJ, Kelly CA, Lippiett KA, Ray E, Welch L. Experiences of nurses caring for respiratory patients during the first wave of the COVID-19 pandemic: An online survey study. *BMJ Open Respir Res* [Internet]. 2021 [cited 2021 Sep 18];8:e000987. DOI: <https://doi.org/10.1136/bmjresp-2021-000987>
47. Fernandes da Silva VGF, Silva BN, Pinto ÉSG, Menezes RMP. Trabalho do enfermeiro no contexto da pandemia de COVID-19. *Rev Bras Enferm* [Internet]. 2021 [cited 2021 Sep 18];74(Suppl 1):e20200594. Disponible en: <http://www.scielo.br/rj/reben/a/MH4YCt9PWtGJFqySZ4jSYDB/?lang=pt>
48. Nahidi S, Sotomayor-Castillo C, Li C, Currey J, Elliott R, Shaban RZ. Australian critical care nurses' knowledge, preparedness, and experiences of managing SARS-COV-2 and COVID-19 pandemic. *Aust Crit Care* [Internet]. 2021 [cited 2021 Sep 18];s1036-7314(21)00064-3. DOI: <https://doi.org/10.1016/j.aucc.2021.04.008>
49. Srithumsuk W, Wangnum K. "New Normal" Home Chemotherapy in Thailand: How the Challenging Roles of Nurses Are Changing? *Asia-Pacific J Oncol Nurs* [Internet]. 2021 [cited 2021 Sep 18];8(3):340-343. DOI: https://doi.org/10.4103/apjon.apjon_54_20
50. Rogel-Salazar R, Santiago-Bautista I, Martínez-Domínguez N. Revistas científicas latinoamericanas de Comunicación indizadas en WoS, Scopus y bases de datos de Acceso Abierto. *Comun Soc* [Internet]. 2017;0(30):167-196. DOI: <https://doi.org/10.32870/cys.voi30.6514>
51. Ortiz Sánchez NL, Zamora González M, Díaz Bueno BM, Vázquez Lugo M, Rodríguez González DA. Desarrollo de la expresión oral en el inglés con fines específicos en la carrera Medicina. *Humanidades Médicas* [Internet]. 2016 [cited 2017 Dec 18];16(2):285-300. Disponible en: <http://scielo.sld.cu/pdf/hmc/v16n2/hmco8216.pdf>
52. San Lucas Marcillo M, Azua Menéndez M, Tigua Anzules J. El Idioma Inglés como segunda lengua en los profesionales de la carrera de enfermería. *Sinapsis* [Internet]. 2015 [cited 2020 Oct 13];1(6). DOI: <https://doi.org/10.37117/s.v1i6.60>
53. Joo JY, Liu MF. Nurses' barriers to caring for patients with COVID-19: a qualitative systematic review. *Int Nurs Rev* [Internet]. 2021 [cited 2021 Sep 20];68(2):202-213. DOI: <https://doi.org/10.1111/inr.12648>
54. Fernandez R, Lord H, Halcomb E, Moxham L, Middleton R, Alanzeh I, et al. Implications for COVID-19: A systematic review of nurses' experiences of working in acute care hospital settings during a respiratory pandemic. *Int J Nurs Stud* [Internet]. 2020 [cited 2021 Sep 20];111:103637. DOI: <https://doi.org/10.1016/j.ijnurstu.2020.103637>
55. Ortiz Z, Antonietti L, Capriati A, Ramos S, Romero M, Mariani J, et al. Preocupaciones y demandas frente a COVID-19. Encuesta al personal de salud. *Med (Buenos Aires)* [Internet]. 2020 Oct 13];80(Supl. III):16-24. Disponible en: https://ri.conicet.gov.ar/bitstream/handle/11336/111616/CONICET_Digital_Nro.bce1d250-846a-433e-93fa-632a2ab82993_A.pdf?sequence=2&isAllowed=y
56. Damery S, Wilson S, Draper H, Gratus C, Greenfield S, Ives J, et al. Will the NHS continue to function in an influenza pandemic? a survey of healthcare workers in the West Midlands, UK. *BMC Public Health* [Internet]. 2009;9:142. DOI: <https://doi.org/10.1186/1471-2458-9-142>
57. Velázquez CA, Ruiz Benítez OD. Actitudes del personal de enfermería en el hogar ante la pandemia COVID-19 [Internet]. *Academic Disclosure* [Internet]. 2020 [cited 2020 Oct 13]; 1(1):262-267. Disponible en: <https://revistascientificas.una.py/index.php/rfenob/article/view/85>
58. Ferreira do Nascimento V, Yuri Hattori T, Pereira Terças-Trette AC. Dificultades y temores de las enfermeras que enfrentan la pandemia de COVID-19 en Brasil. *Humanidades Médicas* [Internet]. 2020 [cited 2020 Oct 14];20(2):312-333. Disponible en: http://www.humanidadesmedicas.sld.cu/index.php/hm/article/download/1656/pdf_135
59. Consejo Internacional de Enfermeras [CIE]. El Consejo Internacional de Enfermeras pone de relieve las principales prioridades para derrotar al COVID-19 - Comunicado de Prensa [Internet]. Ginebra (Suiza), 2020 abril 9. Disponible en: https://www.icn.ch/sites/default/files/inline-files/PR_15_ICN_COVID_Top_Priorities_ES.pdf
60. Shapira S, Friger M, Bar-Dayyan Y, Aharonson-Daniel L. Healthcare workers' willingness to respond following a disaster: A novel statistical approach toward data analysis. *BMC Med Educ* [Internet]. 2019 [cited 2020 Oct 13];19(1):130. DOI: <https://doi.org/10.1186/s12909-019-1561-7>
61. Schwartz J, King CC, Yen MY. Protecting Healthcare Workers During the Coronavirus Disease 2019 (COVID-19) Outbreak: Lessons From Taiwan's Severe Acute Respiratory Syndrome Response. *Clin Infect Dis* [Internet]. 2020 [cited 2020 Oct 14];71(15):858-860. DOI: <https://doi.org/10.1093/cid/ciaa255>
62. Consejo Internacional de Enfermeras. Código deontológico del Consejo Internacional de Enfermeras para la profesión de enfermería. *Rev Enferm Inst Mex Seguro Soc* [Internet]. 2017;25(2):83-84. Disponible en: <https://www.medigraphic.com/pdfs/enfermeraimss/eim-2017/eim172b.pdf>
63. Canadian Nurses Association. Nursing leadership – Position Statement [Internet]. 2009. Disponible en: <https://www.cna-aiic.ca/en/download-buy/leadership>
64. Oulton JA. Leading nursing globally. *Heal Emerg Disaster Nurs* [Internet]. 2014;1(1):29-33. DOI: <https://doi.org/10.24298/hedn.2014-1.29>
65. Gerbotto M, Saez NB, Gattari MdLÁ, Daro MV. Prácticas y representaciones de estudiantes de enfermería en torno al rol enfermero. *Rev Uruguaya Enferm* [Internet]. 2019;14(1):28-37. DOI: <http://doi.org/rue2019v14n1a3>. Disponible en: <http://rue.fenf.edu.uy/index.php/rue/article/view/268/271>