

## Permanent Education for Health Professionals during COVID-19: Scoping Review

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### ABSTRACT

**Background:** The pandemic of COVID-19 was declared by the World Health Organization on March 11, 2020. With this, the world had to adapt to a new way of carrying out permanent health education. The objective was to map what the national and international literature currently has to say about how continuing education is being provided to health professionals in the context of the COVID-19 pandemic.

**Methodology:** This is a scoping review, thus, the PRISMA-ScR guidelines were used for its elaboration. The search was performed in several stages, by four independent reviewers, following the criteria of the Joanna Briggs Institute (JBI), in the following databases: PubMed, Science Direct, LILACS and MEDLINE (via BVS). The descriptors used were "Continuing Education", "health" and "COVID-19".

**Results:** Ten articles dealing with the proposed theme were included and analyzed in this review. The year of publication ranged from 2020 to 2021. Six articles were conducted in Brazil, one in Poland, one in China and one in Canada. Five of them were in Portuguese and five in English. Nine studies are descriptive experience reports and one theoretical-descriptive study of actions performed to promote HPS. The most prevalent research site was the Brazilian Basic Health Units (BHU), but it also occurred in tertiary hospitals. It was possible to identify several measures for continuing education in Brazil and worldwide during the COVID-19 pandemic.

**Conclusion:** The strategies employed were effective and produced a positive impact on the communities employed. We encourage actions like those presented to be carried out within health services, within the reality and singularity of each place, in order to provide updates and continuity of education in health.

### Keywords

Permanent education, Health, COVID-19.

### Introduction

The pandemic of COVID-19 was declared by the World Health Organization (WHO) on 11 March 2020 [1]. This infection mainly affects the respiratory system and may produce mild to severe symptoms, possibly leading to death. Two years later, on 24 October 2022, more than 628 million cases and 6.58 million

deaths were recorded worldwide [2]. The repercussions of the pandemic caused economic, social and environmental impacts. It was a period of great adaptation of society to overcome the various challenges encountered due to social isolation and high demand for health services.

Thus, health professionals worldwide were of great relevance in facing the pandemic of COVID-19. Many had to stay away from their families, work high workloads, and had to be very attentive

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to the disease updates that changed every day. Thus, education and research played a primary role in unravelling the pathophysiology and treatment of Sar-CoV-2 virus. Given this scenario, it is fundamental to revisit the concept of Permanent Health Education (PHE), raising it to a category of extreme necessity in the different world health services.

Continuing education was introduced in Latin America due to the inadequacy of professional training, which was once based on technical skills and productive performance, without the appreciation of political, ethical and social values that encompass health [3]. In Brazil, this debate began through the Human Resources Development Program of the Pan American Health Organization (PAHO) in the 1980s, which enabled the construction of a new learning model based on the involvement of health professionals in the health production process [4].

Over the years, the HPS was enacted by the Ministry of Health through Ordinances nº198/2004 and nº1996/2007, which guided the training and qualification of workers in public health services, aiming to educate them holistically and focused on the needs and difficulties of the Unified Health System (SUS), in addition to updating them of the techno-scientific advances in health care practice [5,6].

Thus, with these HPS premises and in view of the pandemic difficulties, we aimed to map what the national and international literature currently reports about the continuing education process being provided to health professionals in the pandemic scenario of COVID-19.

## Methodology

This study is configured as a scoping review, which aims to map, through a rigorous and transparent analysis, the conditions of a subject in a thematic area, providing a descriptive view of the reviewed studies. Moreover, the PRISMA-ScR guidelines were used for its preparation.

To formulate the research question, the mnemonic PCC was used, where P (participants) refers to health professionals, C (concept investigated) to continuing education, and C (context) in times of COVID-19. Thus, the following question was formulated: How is continuing education being made feasible for health professionals in times of COVID-19?

The search was performed in several stages, following the criteria of the Joanna Briggs Institute (JBI), in the databases: Science Direct, BDENF, LILACS and MEDLINE (via BVS). The descriptors used were "Continuing Education", "health" and "COVID-19", which are in the DeCS (Descriptors in Health Sciences) platform. Articles were included that focused on continuing education for health professionals in times of COVID-19; quantitative and qualitative studies, with different methodological designs that met the inclusion criteria. The filters applied contemplated languages (English, Spanish and Portuguese) and time, which was 3 years, i.e., from 2020 to 2022 - dates related to the pandemic period.

We identified 89 articles, being 47 in MEDLINE (52.8%), 38 in ScienceDirect (42.7%), 3 in LILAC (3.4%) and 1 in BDENF (1.1%). Of these, 15 articles were excluded for duplicity and 3 for not being available in full. Thus, 71 applications were analyzed through titles and abstracts (analysis I). After this step, 52 articles were excluded because it was not possible to identify a relationship with the theme and four that did not answer the research question. Then, the 15 selected articles were read in full (analysis II), and only 10 of them met the inclusion criteria. Concluding 10 articles included in this scope review (Figure 1). Data extraction was performed by four independent reviewers, and included specifics on continuing education for health professionals in times of COVID-19. Other elements included were: year of publication, country of origin, place of research, language, author, journal and type of study, which will be presented in the following.

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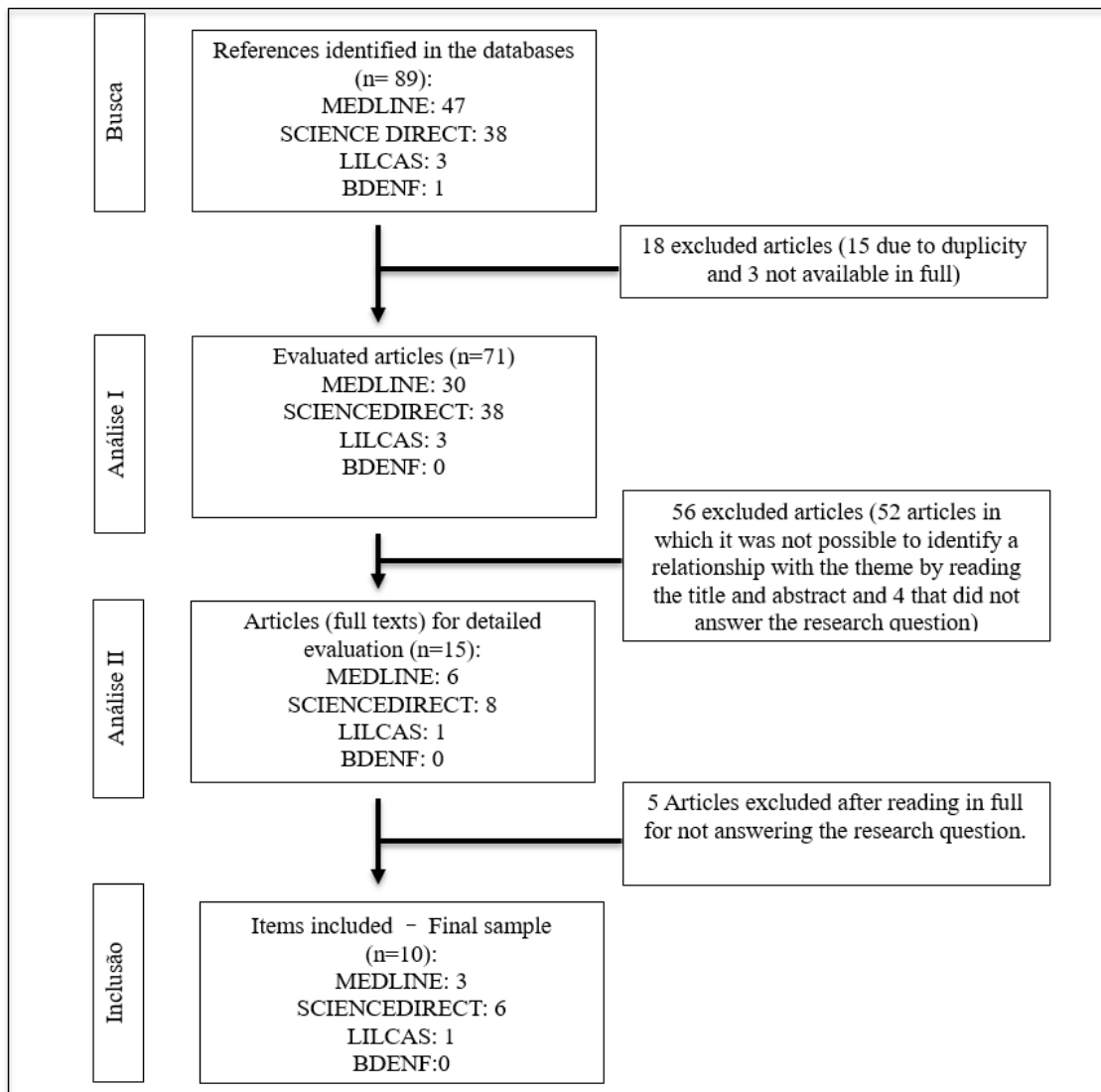
## Results

Of the articles analysed, the year of publication ranged from 2020 to 2021. Six articles were conducted in Brazil, one in Poland, one in China and one in Canada. Five of them were in Portuguese and five in English. Nine studies are descriptive experience reports and one theoretical-descriptive study of actions performed to promote HPS. The most prevalent research location was the Brazilian Basic Health Units (BHU), but it also occurred in tertiary hospitals.

Therefore, we will now present the mapping of the knowledge produced by the different authors of the articles that were established as the final sample, by year of publication.

Rocha et al. addressed the preparation of the nursing team to face COVID-19. The authors reported the construction and implementation of a Permanent Education Program for the preparation of the teams that would deal directly or indirectly with patients and suspected cases. By interviewing ten professionals, the authors revealed that the program provided improvements in the performance of the team and in the quality of services provided, ensuring patient safety. Thus, they concluded that continuing education contributed emphatically to the safe practice of the relationship between health professionals and patients in the context of the pandemic.

The study by Rios et al. in 2020 carried out an experience report on a Primary Care Health Centre in Bahia in which the objective was to expose the permanent education programme to train the team professionals to minimise the transmission of coronavirus in the community. The authors claim that with the health educational actions, based on the protocols and other documents related to COVID-19, it was possible for the PHC family health team to train the health professionals, with daily updates on the theme and its new protocols. But they detected a gap with the lack of effective municipal protocols, and thus, a team was created to assemble its own protocol based on the existing secure information. With this,



*Source: Prepared by the authors.*

this research obtained a positive result with the lowest number of cases of COVID-19 in the local community in the municipality.

Similarly, the report of Zingra, et al. described the training process for health professionals as a strategic way to deal with the pandemic of COVID-19 in municipalities of the State of Rondônia and Amazonas. The authors report on the continuing education strategies used in the period from February to August 2020 that were the active methodologies with discussion of clinical cases and creation of debates, also, the realistic simulation with mannequins to improve the practice. In the training, the main topics covered were cardiopulmonary resuscitation, orotracheal intubation, pronation manoeuvre of critical patients, paramentation, hand hygiene and care of personal protective materials through lectures and workshops administered by a professor with a degree in medicine. This experience resulted in a positive process with training using the case-based learning method to develop skills and abilities in professionals during the pandemic, to improve the teams' performance in health care.

The report by Campos et al. concluded that the use of continuing education is important, not only during the pandemic, to ensure the quality of nursing care to patients, but at any time. This research clarifies the performance of the Commission for Continuing Education in Nursing at a tertiary hospital in Ceará for in-service training of the nursing team on the care of patients with COVID-19. The strategies in permanent education adopted were the creation of workshops with about 300 participating nurses in which they developed flowcharts and realistic workshops. Through this reported experience, the authors affirm that before the intervention there was insecurity and negligence in caring for patients with COVID-19 because they performed techniques insecurely and erroneously due to lack of practice and knowledge.

In the theoretical-reflective study by Maciel et al. [7], the position of community health agent (CHA) was reassessed in view of the reorganization of the CHA work process and its changes during the pandemic. The authors praised the importance of the ACS work due to the function of creating a link between PHC and the local population, and consequently the action of health education

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for them. However, with the change of work scenario caused by the pandemic, it was identified that the CHWs needed to adapt to continue their work with training on new health protocols to prevent the spread of COVID. As an example of this strategy, it is pointed out the use of the new means of communication and assistance that was very widespread, the telemedicine. Therefore, the training through permanent education of the CHAs becomes essential to provide continuity for the main bridge of communication and collection of information from the community.

In 2021, Santos et al., reported the experience of training, conducted in a health institution in the state of Pernambuco, on the preventive measures adopted during the pandemic of COVID-19, for the strengthening and empowerment on the part of health professionals. The training of professionals in the service was designed according to the protocols of the Ministry of Health and addressed the following themes: COVID- 19, the epidemiological situation in Brazil and in Pernambuco, signs and symptoms, standard precautionary measures, use of PPE, paramentation and de-paramentation, and execution by the participants of the step by step of hand hygiene. This experience resulted in 2,152 trained professionals, mainly professionals with technical level by their own search, in a period of six months. The authors conclude that the performance of continuing education during the pandemic was challenging to monitor the daily updates of protocols and the responsibility to train all multidisciplinary teams, so the continuing education process is essential to remedy the lack of knowledge and anguish in the workplace.

The study of Santos, Souza and Soares [8] brought a theoretical reflection with discursive purposes on the need for the effectiveness of the systematization of COVID-19 precaution by health professionals. In the context, the authors highlighted how necessary the implementation of prevention and control measures of occupational contamination was in the national context. The authors attribute to managers the role of having a Health Care-Related Infection Control Committee, whose function is to conduct training and continuing education of employees and health teams. In addition, they emphasize that direct supervision may also work, based both on the mandatory use of PPE and on the removal of such equipment. They then concluded that it is possible to invest in the systematization of precautionary measures with different tools, the main ones being permanent education and intensive training.

In the Polish study by Naylor and Torres [9], the use of a new tool called Script Concordance Test (SCT) was reported to continue the studies of medical emergency to residents of a tertiary university hospital. The SCT consists of a written test, which has a clinical vignette that addresses questions about the investigation, treatment and diagnosis of a given clinical case. Each question is complemented by new information about the initial problem, and depending on the answer chosen the SCT employs a Likert scale of 5 or 3 points to assess how much this information influenced the answer to the previous question. Thus, it is possible to quantify and identify the way that newly graduated physicians are performing their clinical judgment. In addition, a 20 hours course was held to

review the main emergency topics. The authors concluded that the use of this tool during the pandemic served to give continuity to the process of permanent education of newly graduated physicians, and that it was very efficient, mainly because it was applied via internet.

Similarly, the Chinese study by Tan et al. [10], proposed the development of a personal protective equipment (PPE) emergency training program for general healthcare workers who were exposed to the Sars-CoV-2 virus. This training covered the entire process of PPE handling and use, as well as other protective skills. The authors concluded that the measure was highly effective since it provided a lower rate of infection of the disease in the workers of that hospital. Moreover, they emphasized the importance of teaching the correct use of PPE for health professionals, so that it can cover all workers in a short period.

The Canadian study by Reece et al. [11] described the use of the virtually facilitated simulation (VFS) program during the COVID-19 pandemic. This provided simulations and airway management training for health care workers in rural and remote communities. These teams were able to be better prepared for highly complex events, have consistent access to continuing medical education, improve local interprofessionalism and teamwork. The study obtained initial positive feedback from participants and, because it was online, made it possible to impact professionals from a wide geographical area quickly. The authors concluded that this training model promotes effective health system improvement and should be encouraged to continue professional development in rural areas even after the COVID-19 pandemic has passed.

## Conclusion

It was possible to identify several measures for the continuity of continuing education programs in Brazil and in the world during the pandemic of COVID-19. Although few studies were found, understood as a limitation, but due to the time and possibility of researching, these reported researches made it possible to point out that health professionals needed to participate in continuing education programs with the purpose of being able and updated to care for the various aspects that permeated the disease caused by Sars-CoV-2.

We conclude that the strategies employed were effective and produced a positive impact on the communities employed. Thus, it is encouraged that actions such as those presented are carried out in health services, considering the reality and uniqueness of each location, to provide updates and continuity of education in health, always aiming to offer quality health care that society needs and requires.

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