Creative Education, 2022, 13, 2038-2050
https://www.scirp.org/journal/ce
ISSN Online: 2151-4771
ISSN Print: 2151-4755

Transitions of Permanent Education in Health Professionals in the Face of COVID-19 Pandemic

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How to cite this paper: Lino, M. M., Amadigi, F. R., Bizarro, J. C. M. S., Zuanazzi, E. C., Castro, L. S. E. P. W., & Lino, M. M. (2022). Transitions of Permanent Education in Health Professionals in the Face of COVID-19 Pandemic. *Creative Education, 13,* 2038-2050.
https://doi.org/10.4236/ce.2022.136126

Received: May 16, 2022
Accepted: June 25, 2022
Published: June 28, 2022

Abstract

Objective: The main objective of this study was to understand how the pandemic influenced Continuing Education in Workers' Health in the face of the COVID-19 pandemic. **Methods:** This study was performed using a qualitative exploratory and descriptive research. We analyzed the content of semi-structured interviews that were carried out with the worker's health team of a big company. **Results:** The results were categorized and three categories emerged: Organization of Continuing Education before the pandemic; Changes in Continuing Education resulting from the pandemic; and Long-term implications for Continuing Education in the face of the pandemic. **Conclusion:** So, with the large impact of COVID-19 we conclude that Permanent Health Education moved from a face-to-face model to e-learning; from professional topics to issues related to the pandemic. The knowledge in technology area was renewed to maintain communication in times of social distance. It is necessary to strengthen return-to-work policies, which highlight the quality of life and the impacts on workers' mental health, inserting consistent and significant educational policies and mechanisms of confrontation (coping).

Keywords

E-Learning, Health Education, Nursing, Pandemic, Worker's Health

1. Introduction

The COVID-19 pandemic has become a global public health challenge. Al-

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though the advent of the vaccine has influenced the protection against the virus, the importance of creating and optimizing educational strategies at work for prevention remains unquestionable, especially in the area of workers' health. The relevance of nursing and occupational medicine is incontestable, which through multidisciplinary efforts, has supported the reorganization of industrial and business activities—environments that result in clusters and may be associated with highly transmissible events (Gross et al., 2021).

The transmission of the virus in industries and companies is associated with work in restricted areas, shared environments, air conditioning and recirculated. These workers are potent virus transmitters to the community (Gross et al., 2021). Education at work consolidates prevention and control measures, even in the workplace (Gross et al., 2021; Schall & Chen, 2021).

The World Health Organization developed guidelines for dealing with the pandemic, which include the promotion of training associated with other measures, such as access to Personal Protective Equipment (PPE). In this context, the Permanent Education (PE) of the Worker's Health Team is essential for the conduct and proper management during the crisis (Schall & Chen, 2021).

As the organizations begin to bring employees back to their workplaces face-to-face, they reveal the importance of creating training to enforce security protocols and policies. For example, factories must follow strict safety procedures and hospitals and restaurants must comply with social distancing requirements. Even in a business environment characterized by office desks, health education must address questions about how to hold meetings while keeping their distance, what PPE is needed or recommended, and how to keep workplaces sanitized. The sectors and people responsible for training have the task of quickly educating employees about the new regulations and guidelines, as well as their importance (Kaszycki et al., 2021).

The PE of the Worker's Health Team (WHT) is fundamental to the development and implementation of prevention measures in companies and industries (Gross et al., 2021; Kaszycki et al., 2021). In addition, WHT plays a principal role in leading the development of educational strategies within companies and industries. However, as in other areas, the pandemic made the structuring of training more complex—which was previously hegemonically carried out in person. There was a need to rethink the pedagogical method, the best ways of communicating with workers to make content/knowledge accessible, as well as pointing out issues that necessarily involve aspects related to biosafety.

It should be noted that PE in Health is a formal and permanent process of updating/learning that aims to provide improvements in the service and individual performance of health professionals. Health education should be encouraged by the responsible institutions/organizations, with the adoption of training instruments, incentives for updates and courses, in order to keep workers updated and prepared for different situations (Silva et al., 2021).

Since educational measures influenced the prevention of the pandemic and were relevant both for the worker and for public health, the question is: how did

the pandemic influence PE in Workers' Health? This study aimed to understand how the pandemic influenced PE in Workers' Health in the face of the COVID-19 pandemic.

2. Methodology

For this study was used an exploratory and descriptive qualitative research. In this study an Occupational Health Sector of Eletrosul Power Stations S.A., located in Florianópolis, Santa Catarina, a large company from south of the country participated, which has projects in the states of Paraná, Santa Catarina and Rio Grande do Sul, Mato Grosso do Sul, Pará and Rondônia. There are one thousand and five hundred employees in the company under the care of this WHT.

Data collection took place via virtual environment from January to May 2021, using a semi-structured and individual interview script. The invitation letter was sent by e-mail and, after the return with the acceptance of WHT members, the individual appointment was made, according to the indicated availability.

The participants from this study were: two administrative assistants, one psychologist, two doctors, one nurse, one nursing technician and one occupational safety technician. The following inclusion criteria were adopted in this research: being an WHT professional and agreeing to participate in the research. The study includes all possible participants, so there are no exclusion criteria.

The interviews took an average of two hours. All content was recorded and later transcribed into a text file. Participants were invited to read and validate all the transcribed material.

The collected data were processed using the Atlas.Ti® Software. The organizated and systematizated interviews findings were carried out based on Bardin's thematic content analysis, which included: pre-anaysis, material exploration, processing of results and interpretation/inferences through consistent literature, national and international reference, as well as updated.

The research was approved by the Committee for Ethical Compliance in Research Involving Human Beings. All participants signed a free and informed consent form. Participants are identified by pseudonyms throughout the present study, in order to preserve their identity and maintain confidentiality. Thus, the textual clippings presented to illustrate the speech are followed by a letter and number, namely: AA1 and AA2 (two administrative assistants), P1 (one psychologist), D1 and D2 (two doctors), N1 (one nurse), NT1 (one nursing technician) and WST1 (one work safety technician). The Resolutions of the National Health Council n. 466/2012 and 510/2016 were respected.

3. Results

The results are organized into three strands: 1) Organization of Permanent Health Education (PHE) before the COVID-19 pandemic; 2) Permanent Health Education changes and the work process resulting from COVID-19 pandemic;

and 3) Long-term implications for Permanent Health Education in the face of the COVID-19 pandemic.

3.1. Organization of Permanent Health Education before COVID-19 Pandemic

According to the interviewees, the company organizes training for all workers through mandatory training guided by normative and regulations. The WHT, within this context, is a reference in health-related training in the pedagogical scope to perform such activity.

We, from the health team, are educator employees. We had a vast amount of training hours on pedagogical methods, how to do it, what is the best way to be prepared to teach courses and theoretical-practical training and within a well-dialogued line, from the perspective of Permanent Education. So, we are reference for providing training, qualifications, seminars and other formats on health matters in the company (*N1*).

As for the organization of educational processes, the participants mention a differentiation with regard to the Corporate Education area: for workers, the process is systematic. However, for WHT it is another model.

There are legal trainings that are mandatory, regardless of the whether it is demanded by the worker or by management. There is the training demanded by the worker's needs—which may or may not be accepted—and there is the demand that comes from the company, especially if there is any perceived weakness in the worker, in its work process. All this through the Corporate Education area (*N1*).

There is continuing education for the other employees of the company, even with legal issues [*mandatory*], *an update, a protocol review, in short. With the sector team* [*WHT*] *there is no systematic process of updating, training. Basically, all the training I have took place on my own initiative* (*NT1*).

Still in this perspective, when there is PHE directed to WHT, the administrative assistants that work with the team do not participate. They justify that this situation happened because they are outsourced professionals and, therefore, are not considered effective members of the company.

The entire WHT has training and they pass on the little bit of what they learned to us, because for us we never had. I have been here for eight years (*AA1*).

The outsourced company that we are linked to does not provide any training. And when the company offers any type of training here, we are not invited to participate because we are outsourced. We have to run after the information and the ones who keep us informed are the other WHT colleagues (*AA2*).

When the training processes originate from own initiative of WHT professional's, the company assesses whether there is interest in the subject and, if so, there are some incentives, as indicated by the interviewees: release during working hours to participate in scientific events; partial release/negotiation of work-

ing hours to attend classes; course costing; among other possibilities.

We do a lot of online courses. The company allows us to have time to dedicate to courses including paid ones. The institution can bear the costs, if it is interesting for the area, so we can take these courses anywhere in the world. I just did one with the University of London, this possibility exists (*D1*).

There is mention of the inexistence of a salary increase as result of the expansion of professional qualification, as happened in other companies, organizations and/or public institutions.

Our career plan does not provide any type of salary increase related to Permanent Education. The demands of workers in the search for technical courses, new graduations, pos-graduations or even free courses, are from the perspective of self-interest to its self-development. On the part of the company, there is a certain collaboration in accepting this demand from the worker and analyzing the possibility, the availability. For example, I have two specializations, master's, doctorate and don't receive anything extra for that (*N1*).

I've been here for ten years. I have four specializations and a master's degree and unfortunately it doesn't make any difference financially. It's all individual demand, so I miss the company valorizing more in this sense (*P1*).

3.2. Permanent Health Education Changes Resulting from the COVID-19 Pandemic

Changes in PHE happened as a result of the pandemic, including the company's usual courses/training which were discontinued. Only those that were, in fact, considered essential, moved from a face-to-face perspective to the virtual modality.

State and municipal decrees limited this educational issue. In person training and qualifications were restricted. Slowly we are recovering, but it certainly influenced a lot and practically caused the stagnation. Only strictly legal training, for example, employees who had to enter a risk area and needed training because it was an essential activity, for this reason they were released, were emergency situations, but routine like that, it stagnated (*NT1*).

There are courses which are required by law, the person [*worker*] *cannot work if they do not have the specific course for that, that was kept. The theorical part is done at the workplace. But in our area* [*WHT*], *specifically, we have not participated as much in improvement, due to the pandemic* (*D2*).

There was a need to redirect training to the COVID-19 theme and strengthen knowledge about biosafety standards for the entire company: both for workers and for WHT.

With the pandemic we had a training about COVID-19, formal, with certificate, in an online learning modality. The training came ready, assembled and all workers were obliged to do it, to understand a little bit about COVID-19: how it transmits, the cares, etc. So, everyone did and was properly certified. But it was not a training that came out of the occupational health area, although we [*WHT*] *had this desire* [*to plan and set up the course*], *but due the course being already*

ready [*through corporate education*], *it ended up being used* (*N1*).

Now in the pandemic, it was atypical. We [*WHT*] *had to seek knowledge from professionals and colleagues who work even in hospital infection committee, infectious disease specialists who work together. We had to seek training, because it is not much in our daily lives, the pandemic was very atypical in this regard, we had to seek knowledge* (*NT1*).

You have to be well prepared [*to work in the pandemic*], *you have to study and know how things work, you have to always be up to date* (*D2*).

The interviewees indicate that formal and informal educational processes took place resulting from the need that emerged in the different spaces of the company. The informal processes were specifically conducted by WHT.

What we did [*WHT*] *was what we call informal training, which does not generate certification. From the area visits, we informed the people who were working in person. We also promote podcasts during the pandemic period. We made informative Bulletins—perceived as an educational path as well—they are reports made by institutional e-mail that are sent to all workers. This is, indeed, a way of promoting education at work, even if the person does not have a certificate for having received that report* (*N1*).

The use of active methodologies, such as clinical simulation, has been discontinued. This information is referred in a negative way by several interviewees, with a perspective of loss, even if temporary.

Now, in times of pandemic, we are not doing the practical part, but we usually do the practical part: we have a training defibrillator, we have mannequins, we have all the simulation part for first aid, for example. We, from the team [*WHT*], *do a test with them* [*company workers*] *at the end of the training, a practical test in a simulated context—and all this gives people a feeling of "truth", which is very positive, but at this moment this is not happening, unfortunately* (*N1*).

For the young apprentice, we have a calendar in which certain topics are discussed during the year. With the pandemic it was much more difficult, everything had to be done online, but it was usually performed face-to-face and experientially too, with dynamics, in short it is misfortune (*P1*).

Other activities inherent to the work of WHT, beyond Permanent Education were interrupted.

We had to cancel face-to-face gymnastics (*N1*).

With the pandemic, some activities, even inherent, basic activities of a sector, even as provisional measures, were released from being carried out, such as occupational exams, in short, as a result of the pandemic period, exposing the employee to do a test or a training were avoided (*NT1*).

Changes in the work process occurred, as reported by the interviews, in an attempt to overcome this health crisis.

An infectious disease specialist was hired to assist in the pandemic, because I am from the risk group and I am working remotely, at home. Imagine, with all the demand from these employees. He came at the right time, supported the whole scheme [*management of patients in the pandemic*] *and then made it a lot*

easier. And, even working remotely, my service doubled (*D2*).

Before [*the pandemic*] *we were able to go directly to the person, for example, to ask questions about absence, about vacations. We even started to make improvements to the computerized systems last year, but because of the pandemic it was not possible to continue this in terms of improving communication* (*AA1*).

Daily doubts appeared and WHT were looking for guidance from peers, in other words, they were looking for other companies with same nature activities; for Legislation; through formal consultation in other instances within the company or higher. The search for specific professional qualification was cited, which would instrumentalize and optimize the work in the face of the ongoing pandemic.

Basic doubts appeared. For example: there was a worker that we know who caught COVID-19 at work and did a request to open a Communication of a Work Accident. Then we stopped and thought: is it possible that, in the midst of pandemic, there is communication of an accident at work? They are doubts of the day to day, of the dynamic process. We had to call the INSS, call the surveillance, call the Ministry of Economy, because there was a specific Ordinance on this. We lost two days; "lose" is a way of saying it, but it takes two days of work to seek answers, sometimes for simple information (*N1*).

Most employees took courses, I took within my area. It is usually done, but with the coronavirus, with the pandemic, there was a lot of need, there was a plenty of things to be improved (*D2*).

3.3. Long-Term Implications for Permanent Health Education in the Face of the COVID-19 Pandemic

The interviewees reported situations that imply the works of WHT and that are directly or indirectly associated with PHE activities. Initially, it was approached with emphasis how much misinformation influenced mental health issues, as well as the attitudes of the company's workers.

Even at dawn many calls. It is the time to go to work, there is a shift change at 5 am: "I got a fever, what do I do, doctor?" (*D2*).

So this is all the time, all the time someone is calling or sending an email, telling about their health status, for fear of being COVID-19. So, we have to make a decision. Another, who had contact with someone who tested positive, has to leave. Everyone be worried (*D1*).

We have some cases of people who were a little bit anxious and now it's accentuated. There were cases that I had to take some distance, even for a period. People who developed a very high level of anxiety. These are things that the pandemic itself causes: there is a lot of information on television, everyone says something different and the person is quite scared. A lot of information, many of them right, others wrong or invented and ends up making the person very worried. It is up to us [*WHT*], *many times, to put an end to mystification, we need to explain, guide, educate or even remove them if necessary* (*D2*).

Regarding the recordings of training/classes, meeting performed in the virtual

environment and the manipulation of technological instruments, a certain lack of preparation in the company, including the WHT, was highlighted. In this sense, the participants point out that the pandemic forced them to develop further knowledge in this regard, but that there is still a need to expand professional qualifications in this area.

There should be a studio for this videoconferencing business, we [*WHT*] *are very amateur, very scared of the pandemic we should be on another level. There was even an PPE training that we were going to hire a company to do in a distance learning format, in the beginning of the pandemic. But we saw that it was better through Webex itself. We quit hiring a professional, but we did not become professional: we are still at a very amateur level, we are doing the job, but the audio, video, Webex resources…we need to improve. There is a course about Legislation that has several videos and we do not know what happens, but the videos come out without audio. Then we try to solve this problem in the following way: we take the audio from the video on the speaker and the audio from the camera captures this audio, so we show it in this way for them* [*workers*] (*WST1*).

4. Discussion

The COVID-19 pandemic had an intense impact on institutionally developed by PHE, which was found to be ongoing in companies and organizations. WHT's around the world had to quickly learn about a new evolving clinical entity; and performed in a virtual way. National and international organizations increased the effort in collaborative works to ensure that the clinical information be readily widespread to all health professionals team (Victor, Gupta, & Erlich, 2022; Daniel et al., 2021).

Perhaps the most obvious challenge and change within the scope of PHE refers to the fact that before the pandemic, when training took place in person, conducted by an instructor. With the pandemic, 75% of the content is taught in the e-learning format. This forced change, however, can be an opportunity for positive changes. As technology has advanced in recent decades, professionals who prepare PHE have been looking for ways to effectively incorporated into their programs. The use of e-learning has become more common over time, but there has always been resistance from people who claim that there is no substitute for face-to-face learning. The COVID-19 pandemic, however, has neutralized these objections. When maintaining the health and safety of employees prevented them from being in a classroom, the organizations had to choose between changing the learning to an online format or eliminating it completely (Kaszycki et al., 2021).

Studies point out that online teaching can allow learning equivalent to face-to-face learning, with a tendency to reinforce autonomous learning, reduce the time spent commuting to carry out activities, greater efficiency in the investment of resources and security, in times of pandemic (Guizardi & Britto, 2021).

Thus, companies and organizations have trained their employees and, in some cases, customers, to use the new technologies that they have adopted, to face the challenges of the pandemic. For example, WHT or hospitals, as well as company employees or patients, needed training on virtual consultation portals; teachers and students needed training in virtual classrooms; restaurant staff needed training to insert the menus in a virtual format. And this list is endless. As platforms and tools continue to evolve to accommodate pandemic-related changes in the ways that employees and customers operate, PHE professionals have the opportunity to play a key role in the adoption and implementation of new technologies (Kaszycki et al., 2021).

In this context, web conferences, webinars and podcasts were the solutions found and largely used during the pandemic to keep the PHE of workers' physical safety, as they are socially distant. If, on the one hand, the literature points out numerous advantages of these resources—including over traditional and face-to-face methods—on the other hand, there was a sudden paradigm shift, with an overload in the frequency of appointments, meetings, training through these resources (Ismail, Abdelkarim, & Al-Hashel, 2021; Tarchichi & Szymusiak, 2021).

In this uniqueness context, it should be noted that a fundamental premise that the PHE refers, in its essence, is precisely to show up the practices of daily work, focusing on solving problems with a view to evolution, thinking and innovation. Worker health considers the structure and organization of activities performed by people in the organization/company. Thus, thinking about PHE, from the perspective of WHT, necessarily involves thinking about everyday problems and re-signifying them through improvement in the educational process (Lopes & Cordeiro, 2021).

In industries and organizations where physical presence is not essential during this crisis adopted teleworking, in other words, the practice of not commuting to a central workplace. This has been the prevailing approach to mitigating transmission of the virus. In fact, many companies adopted this system definitively, even after the pandemic ended, since good productivity was maintained, in some cases, a reduced cost was observed (Schall & Chen, 2021). In situations that require the presence of workers, it is necessary to adopt measures to mitigate the transmission of the virus and protect workers. It should be noted that: both in telework and in person, an education process is necessary in the occupational background, either for the use of PPE, or for the adoption of measures related to ergonomics and the related parameters (Kawczak et al., 2021).

It seems to be axiomatic to point out that prevention measures must be available to workers and WHT. However, this did not always happen. In the recent period of the pandemic, there was limited availability of PPE's, respirators and COVID-19 tests. Therefore, it is important to always adapt strategies based on what is actually viable under existing circumstances, or to create and explore possibilities, such as the reuse of disposable PPE like masks. In addition, the availability of safe procedures and the use of PPE reduce anxiety and the risk of mental health problems (Gross et al., 2021; Monteiro et al., 2021).

Employers need to be aware of the full preparation of the work environments for the return in person, in the post-pandemic. Thus, it is recommended to design a safety and health program, with an effective aggregated PHE policy, to substantially reduce the risk of exposure to COVID-19 in the workplace and prevent diseases to its workers (Yosia & Adi, 2021).

COVID-19 prevention measures follow a hierarchical order according to the level of importance, also known as RTOP principles, with R for Replacement: replacing high-risk procedures with low-risk procedures, for example, resorting to videoconferences instead of face-to-face meetings; T of Technical measures: for example, performing aerosol generating procedures in negative pressure rooms; letter O refers to Organizational measures: such as home office; and the letter P for Protection: in this case, PPE, such as FFP2-N95 masks (Gross et al., 2021).

Proper paramentation and the use of PPE were ways to reduce the transmission of microorganisms in the work environment. In this context, PHE is unique to promote information based on the work reality and appropriate for the target audience (Silva et al., 2021).

To be accepted, workers need to understand why and how to use these prevention measures. In this sense, studies show that the educational process provides greater effectiveness and acceptance of preventive measures against COVID-19 (Gross et al., 2021).

For workers that work remotely, there is a major concern: while effective prevention efforts reduce psychological distress and increase long-term resilience, loneliness and suffering need to be addressed. In addition to excess deaths during the pandemic, delaying or avoiding routine and maintenance care which can have long-term health consequences and overload the health systems for decades. Large-scale home confinement and social isolation have already served and will continue to serve as potential stressors. Routine, frequent and extensive surveillance with a daily scope should be administered to detect signs and symptoms of altered mental and behavioral health. In this regard, it will require greater involvement of WHT professionals, communities and institutions for such surveillance and prioritization of populations at risk, including young adults, unpaid caregivers, those in quarantine or self-isolation following infection with SARS-CoV-2, and those grieving after losses to COVID-19 or other causes (Czeisler, Howard, & Rajaratnam, 2021).

Evidence shows that the health crisis has increased the state of anguish and the prevalence of psychological suffering and depressive symptoms among Italians and Americans, especially among young people and adults, low-income people and people exposed to more stressors, such as job loss, financial problems and infection and/or death of someone close by COVID-19 (Czeisler, Howard, & Rajaratnam, 2021).

WHT should consider supplemental training and remain vigilant for psychological distress among workers and consider additional clinical screening tools during worker interactions to identify those at risk for mental and behavioral

health symptoms. Communication strategies should broaden the focus on aid services (Czeisler, Howard, & Rajaratnam, 2021).

Along this path, as the COVID-19 pandemic increased the prevalence of teleworking, new challenges were introduced for the safety, health and well-being of workers who were not familiar with this novelty. Organizations that invest in resources to prevent exposure to physical and psychosocial stressors, while motivating teleworkers to engage in safe and healthy behaviors, offering active educational opportunities, must be mindful of mental health issues by constantly monitoring (Schall & Chen, 2021).

Corroborating with the present study, the COVID-19 pandemic aroused anxieties and stress in the lives of workers. In addition to the obvious fear—and significant—of getting sick or having a loved one sick, some employees are also experiencing stressors of working from home for the first time, balancing work with family obligations and, in some cases, job instability. Thus, it is essential that, within an PHE policy in companies and organizations that deal with these workers, that coping measures be developed to deal with insecurity and fear; to face a series of new stressors, creating channels and resources to promote well-being and reduce anxiety (Kaszycki et al., 2021).

In the Brazilian context, there was a massive spread of fake news about COVID-19, vaccines and prevention measures, bringing a major problem to the health area, especially to professional educators and scientists, in this information age (Galhardi et al., 2020). Education is the formal instrument to combat fake news and is also a responsibility of health workers, institutions/organizations and society.

5. Conclusion

The PHE transitioned from a traditional face-to-face model to e-learning; from a focus on professional topics to issues related to the pandemic. There was a need to renew knowledge in the technology area in order to maintain communication in times of social distance. Now it is necessary to think about return-to-work policies that consider the quality of life and the impacts on workers' mental health, inserting consistent and significant educational policies and coping mechanisms.

Author Contribution

Monica M. Lino and Felipa R. Amadigi: Conceptualization, methodology, investigation, data curation, writing-original draft, project administration, supervision, validation; Jean C. M. S. Bizarro: writing-original draft, visualization; Eloisa C. Zuanazzi: data curation, writing-original draft; Luiza S. E. P. W. Castro: writing-original draft, visualization, writing review & editing; Murielk M. Lino: conceptualization, writing review & editing, validation.

Acknowledgements

The authors like to acknowledge Eletrosul to help with the interviews contributions.

Funding

This work was supported by research grants from the Conselho Nacional de Pesquisa (CNPq).

Conflicts of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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