

***Emergency Remote Teaching (ERT) in the COVID-19 Pandemic:
Impact on the Education of Higher Education Students in the Health Area***

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Abstract

Emergency Remote Teaching (ERT) emerges as a temporary resource for teaching students of courses in the health area, in higher education institutions, during the global pandemic COVID-19. The remote teaching modality brought with it positive aspects, as well as important challenges regarding the learning process in the area of higher education under analysis. This study intends to describe the impact of emergency remote teaching on the teaching of students in the health area, during the COVID-19 pandemic. This is a narrative literature review including articles published between 2020 and 2023, written in Portuguese, Spanish and English. The inclusion criteria were defined: primary source studies, with higher education students in the health area, during the COVID-19 pandemic phase. The research was carried out in several databases, including CINAHL, ERIC, B-On, SciELO, Pubmed, EBSCO Host and Google Academic. Using the descriptors: Health student; Emergency Remote Teaching; COVID-19; Education. The analyzed articles describe the dichotomous impact of ERT on the teaching and learning process of higher education students in the health area, during the COVID-19 pandemic, experienced worldwide.

Keywords: Health Student, Emergency Remote Teaching, COVID-19, Education

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Introduction

Human infection with the coronavirus was declared by the World Health Organization (WHO) in January 2020 as a public health emergency of international concern and was identified as a pandemic in March of the same year. In this way, strategies were defended by the WHO, namely: interrupting the transmission of the virus between humans; identify, isolate and care for infected users; accelerate the development of diagnostics, treatments and vaccines; carry out community awareness activities; and minimize social and psychological impacts. In this sense, the pandemic scenario has posed complex challenges for health professionals and students (Baixinho & Ferreira, 2021; Lira, Adamy, Teixeira & Silva, 2020; World Health Organization [WHO], 2020).

Between March and May 2020, around 166 countries closed schools, affecting more than 87% of the world's student population, corresponding to 1.52 million students who were no longer in the classroom (UNESCO, 2020). The COVID-19 pandemic brought with it a new reality and paradigm shifts in the educational context of higher education institutions. During confinement, classes took place in a distance learning regime, using Emergency Remote Teaching (Bloom et al., 2020; Minghelli et al., 2022; Prata et al., 2020).

Emergency Remote Teaching emerges as a temporary resource for teaching students of courses in the health area, in higher education institutions, during the COVID-19 global pandemic. Classes started to be taught using online platforms, however, many practical classes and clinical teaching could not be adapted or carried out. Courses in the health area offer practical classes and direct contact with users to ensure the acquisition of skills by students and maintain the quality of teaching (Evans et al., 2023; Minghelli et al., 2022; Oliveira et al., 2021).

In this way, the students' academic path was compromised due to the teaching-learning methodologies adopted in the pandemic period. The remote teaching modality brought with it positive aspects, as well as important challenges regarding the learning process in the area of higher education under analysis (Idem).

Taking into account a brief review of concepts, we ask: What is the impact of emergency remote teaching on the teaching of higher education students, in the health area, during the COVID-19 pandemic? In response to this concern, the objective of the study was defined: to describe the impact of emergency remote teaching on the teaching of students in the health area, during the COVID-19 pandemic.

Methodology

A narrative review of the literature was carried out. This type of study consists of a regrouping of works already published, in a given period of time, with a common research theme (Fortin, 2009). Thus, in the chronological period from January to March 2023, searches were carried out in the databases: CINAHL, ERIC, B-On, SciELO, Pubmed, EBSCO Host and Google Academic. Using the descriptors: Health student; Emergency Remote Teaching; COVID-19; Education. The search resulted in 35 articles, with inclusion and exclusion criteria being applied for their selection (Table 1).

| Selection criteria | Inclusion criteria | Exclusion criteria |
|--------------------|--|---------------------------------|
| Participants | Higher education students in the health area | Other students |
| Intervention | Experience with Emergency Remote Teaching | Traditional teaching experience |
| Study context | COVID-19 pandemic | Before the COVID-19 pandemic |
| Study design | Primary source | Secondary source |

Table 1: Article selection criteria

After applying the selection criteria, figure 1 describes schematized the sorting of the scientific evidence carried out.

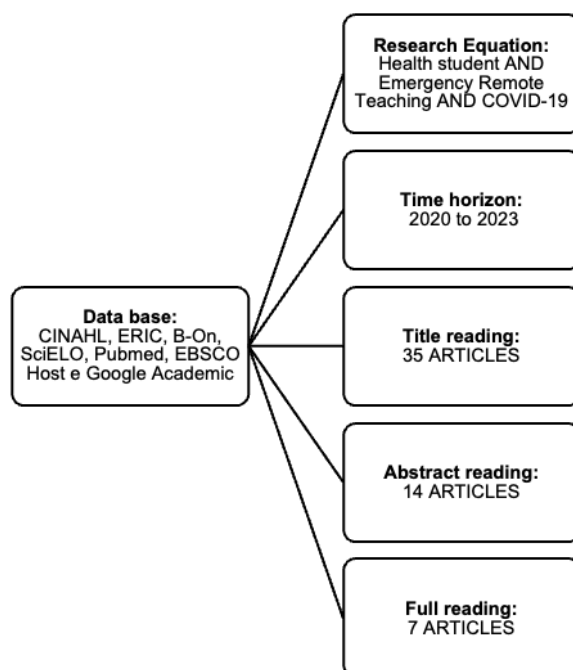


Figure 1: Screening of scientific evidence

Presentation and Critical Analysis of Data

The selection of articles and their reading in full allow presenting the essential data to know the studies, as well as preparing the discussion of data. In this way, and to facilitate the reading and interpretation of the data obtained, Table 2 was prepared with the synthesized content of each of the articles, work carried out by the researcher.

| Articles | References | Methodology | Participants | Objectives |
|--------------------|--|--|--|--|
| Article 1 | Lima et al., (2022). Experiences of nursing students at the beginning of the Covid-19 pandemic: a qualitative approach. <i>OBJN</i> , 1-9. https://doi.org/10.17665/1676-4285.20226575 | An exploratory study with a qualitative approach | 36 nursing students at a Brazilian public university | To understand the experience of nursing students at the beginning of the Covid-19 pandemic |
| Conclusions | The ERT, in the pandemic scenario, presented challenges and potential. Nursing students demonstrated difficulties in understanding and accepting emergency remote teaching as something substitute and not a methodological choice, there was a need to adapt and change stereotypes in face of face-to-face teaching. | | | |

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|-------------------------|---|--------------------|---|---|
| Article 2 | Moreira et al., (2022). Active methodology in emergency remote teaching with nursing students: experience report. <i>Research, Society and Development</i> , 11 (7), 1-11. https://rsdjournal.org/index.php/rsd/article/view/29485/25564 | Case study | Nursing students in an interior of Minas Gerais federal university | Describe the experience of using teaching strategies of active methodology in Emergency Remote Teaching with nursing students at a federal university in the interior of Minas Gerais |
| Main Conclusions | The possibility for students to be protagonists in the teaching-learning process allowed for dynamic, interactive and collaborative classes, with problem solving, knowledge construction and skills development. With ERT, students had more autonomy in class, due to the active methodology that allowed participation, interaction during class and positive feedback. | | | |
| Articles | References | Methodology | Participants | Objectives |
| Article 3 | Nóbrega et al., (2020). Remote teaching in nursing among the covid-19 pandemic. <i>Scientific Journal of Nursing</i> , 10 (32), 358-366. https://doi.org/10.24276/rrecien.2020.10.32.358-356 | Case study | 7 nursing students at a Paraíba university | To report the teaching and student experience and their perceptions about remote teaching in nursing in the face of the COVID-19 pandemic |
| Main Conclusions | The remote teaching modality brought with it positive aspects as well as important challenges on the learning process in nursing. A experience with remote teaching in the midst of the COVID-19 pandemic demonstrated numerous challenges for training nurses, but it was considered an effective temporary alternative of an emergency nature to minimize social and educational damage in the pandemic period. | | | |
| Article 4 | Flores et al., (2021). Portuguese higher education students' adaptation to online teaching and learning in times of the COVID-19 pandemic: personal and contextual factors. <i>Higher Education</i> , 83, 1309-1408. https://doi.org/10.1007/s10734-021-00748-x | quantitative study | 2718 students from different Portuguese higher education institutions | Research aimed at investigating higher education students' perceptions and experiences of online teaching and learning during lockdown |
| Main Conclusions | This study demonstrated that both personal and contextual factors seem to explain students positive or negative adaptation to online teaching and learning, as a result of closure of higher education institutions during the pandemic phase. | | | |
| Article 5 | Sharma et al., (2021). The Pedagogical Shift During COVID-19 Pandemic: Emergency Remote Learning Practices in Nursing and its Effectiveness. <i>Asian Journal of Distance Education</i> , 16 (1), 98-110. https://doi.org/10.5281/zenodo.4695275 | Quantitative Study | 254 nursing students of Tribhuvan University | This study aimed to assess the perceived effectiveness and factors affecting emergency remote learning practices |

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|-------------------------|--|--------------------|---|--|
| Main Conclusions | Almost all respondents preferred live classes over recorded classes. The distance learning method was less effective than the face-to-face method for 33.5% of students and 59.2%. The overall effectiveness of remote learning has declined. However, As positive aspects, the ERT allowed for greater communication between students and the teacher, greater cooperation between students, there was active learning. | | | |
| Article 6 | Evans et al., (2023). Preparing New Nurses During a Pandemic. <i>Nursing Clinics</i> , 58 , 49-57. https://www.nursing.theclinics.com/action/showPdf?pii=S0029-6465%2822%2903379-5 | Qualitative Study | 26 nursing students of United States University | The purpose of this article is to explore 2 examples of how educators transformed the undergraduate nursing |
| Main Conclusions | This study showed that using technology to learn and practice assessment skills can be used effectively to meet course objectives. In addition, the use of technology can standardize messages and clearly define expectations of the assessment skills to be demonstrated for student learning. The use of ERT allowed providing real-time feedback to students, the development of critical thinking and the development of debates between students and teachers. | | | |
| Articles | References | Methodology | Participants | Objectives |
| Article 7 | Sy et al., (2022). Emergency remote teaching for interprofessional education during COVID-19: student experiences. <i>British Journal of Midwifery</i> , 30 (1), 47-55. https://www.magonlinelibrary.com/doi/abs/10.12968/bjom.2022.30.1.47 | 2 Case Studies | Obstetrician students at Northumbria University | There is a growing interest in the use of online learning in interprofessional education in part because of the emergency remote teaching implemented during the COVID-19 pandemic |
| Main Conclusions | The students involved consider that ERT allows interpersonal collaboration, interaction between those involved and makes education more effective and relevant. Effective teamwork stands out. | | | |

Table 2: Summary of the evidence found

Data Discussion

The narrative review of the literature presented consisted of chronological articles between 2020 and 2023. The result of different groups of researchers, from different countries, being mostly available in English. The scientific production under analysis consisted of primary source studies, in which the primary objective is to describe the dichotomous impact of ERT on the teaching and learning process of higher education students in the health area, during the COVID-19 pandemic, experienced worldwide.

In the pandemic scenario, face-to-face classes were suspended due to the high risk of contagion, and Emergency Remote Teaching was applied. From this emerged several challenges and potentialities, having contributed to the dichotomous impact of the teaching and learning process of higher education students in the health area (Flores et al., 2021).

In an initial phase, the ERT generates feelings of stress and dissatisfaction with the selected methodology, since it differs significantly from the face-to-face method. Some authors report that the quality of teaching was questioned many times by students, mainly due to the

impossibility of attending clinical teaching and practical classes, essential for courses in the health area (Lima et al., 2022; Nóbrega et al., 2020).

Another challenging aspect of the ERT is related to equity in internet access among individuals, with no democratic distribution in the population. About 46.4% of the school population does not have access to the internet at home, compromising students' adherence to the teaching process. The fact that classes take place online, through platforms, causes different types of disturbances and/or distractions for students (Flores et al., 2021; Nóbrega et al., 2020; Sharma et al., 2021).

One of the worrying factors about the use of computer technologies is their influence on the eye health of students, since there is daily eye overload with the application of ERT. Some authors advocate that attending long online classes becomes harmful and ineffective for the academic path of those involved (Sharma et al., 2021; Sy et al., 2022).

In addition to these challenging impacts on the learning process of higher education students, significant gaps were identified in the interaction between students and professors, limiting communication to the virtual classroom environment (Evans et al., 2023).

Not all students consider the ERT as a challenge, but rather as a blossoming of essential qualities and potential for their future as a health professional (Moreira et al., 2022). However, the COVID-19 pandemic has enhanced the resilience of students, contributing to their professional development (Lima et al., 2021).

The ERT allows students a greater theoretical support in certain disciplines and the development of new skills. On the other hand, this modality makes access to the content taught more flexible, since classes can be recorded and accessed at any time (Lima et al., 2021; Moreira et al., 2022).

The remote teaching process allows students to be protagonists in the teaching-learning process, ensuring dynamic, interactive and collaborative classes (Moreira et al., 2022). This process also allows the resolution of problems, the construction of knowledge and the development of skills, which were previously not explored, guaranteeing the evolution of higher education in general (Evans et al., 2023).

Online classes allow real-time feedback to students, ensuring more effective and interactive communication, as well as the development of reflective critical thinking (Evans et al., 2023; Sy et al., 2022). Students who have positively adapted to emergency remote teaching associate their previous experience with the process, namely, their results suggest that the previous experience of online teaching and learning was related (Flores et al., 2021).

Interestingly, ERT presents itself as an alternative to face-to-face teaching, minimizing damage to the teaching-learning process; however, it cannot be considered a substitute for face-to-face teaching, if applied in the manner described by the studies under analysis (Evans et al., 2023; Flores et al., 2021; Lima et al., 2021).

Conclusion

The situation of the COVID-19 pandemic, and the measures adopted by several countries regarding education, have driven higher education institutions towards an Emergency Remote Teaching process at an accelerated and, above all, unstructured pace.

The pertinence of the described reality contributes to compromising the teaching and learning process, cooperating in the development of dichotomous impacts among students in the health area. There are several personal and/or contextual factors that explain the positive or negative adaptation of students to online teaching, after the temporary closure of higher education institutions, during the COVID-19 pandemic that hit the world in 2020.

However, it is important to understand how technology mediates the teaching-learning process in order to facilitate the adaptation of those involved, making it possible to see ERT as a more effective methodology in pandemic contexts.

The study highlights the need for training students on Information and Communication Technologies (ICT) to be used in this process, equitable access to the internet, as well as a more assertive interaction between students and teachers in order to facilitate the process of acceptance of the ERT.

In this way, it is understood that more research is needed in order to determine the impact of emergency remote teaching on the teaching of higher education students in the health area, even outside the pandemic context.

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