

## NURSING STUDENTS' PERSPECTIVES ON REMOTE EDUCATION IN THE CONTEXT OF COVID-19

### PERSPECTIVAS DE ESTUDANTES DE ENFERMAGEM SOBRE O ENSINO REMOTO NO CONTEXTO DA COVID-19

### PERSPECTIVAS DE LOS ESTUDIANTES DE ENFERMERÍA SOBRE LA EDUCACIÓN A DISTANCIA EN EL CONTEXTO DEL COVID-19

Thaís Araújo da Silva<sup>1</sup>, Nayhara Rayanna Gomes da Silva<sup>2</sup>, Ruth Silva dos Santos<sup>3</sup>, Ryanne  
Carolynne Marques Gomes Mendes<sup>4</sup>

**How to cite this article:** Silva TA, Silva NRG, Santos RS, Mendes RCMG. Nursing students' perceptions on remote education in the context of COVID-19. Rev Enferm Atenção Saúde [Internet]. 2024 [access:\_\_\_\_\_]; 13(2): e202422. DOI: <https://doi.org/10.18554/reas.v13i2.6807>

#### ABSTRACT

**Objective:** to analyze the evidence of emergency remote education in the context of COVID-19 from the perspective of undergraduate nursing students. **Method:** qualitative approach study, carried out between 2021 and 2022. Semi-structured interviews were carried out with 11 students from the Bachelor's Degree in Nursing at a public university. Subsequently, the interviews were analyzed using Content Analysis. **Results:** The advantages and disadvantages of emergency remote teaching were highlighted; the Digital Information and Communication Technologies used; the students' perceptions inherent to the classes taught by teachers in the respective period; as well as prospects related to the future of remote teaching as a teaching methodology after the pandemic scenario. **Conclusion:** based on the analysis of nursing students' perspectives on remote teaching in the context of COVID-19, it was noticed that emergency remote teaching led to positive and negative repercussions, as well as that there was a deficit in the teaching-learning process.

**Descriptors:** Covid-19; Education, Nursing; Online Teaching; Students, Nursing; Pandemics.

<sup>1</sup>Professor at the Federal University of Pernambuco. Center of Health Sciences. Department of Nursing. Pernambuco, PE, Brazil. E-mail: [thais.araujosilva@ufpe.br](mailto:thais.araujosilva@ufpe.br) . <http://orcid.org/0000-0002-1218-9096>

<sup>2</sup>Nursing student at the Federal University of Pernambuco. Center of Health Sciences. Department of Nursing. Pernambuco, PE, Brazil. E-mail: [nayhara.gomes@ufpe.br](mailto:nayhara.gomes@ufpe.br) . <https://orcid.org/0000-0002-3162-6079>

<sup>3</sup>Nursing student at the Federal University of Pernambuco. Center of Health Sciences. Department of Nursing. Pernambuco, PE, Brazil. E-mail: [ruth.ssantos@ufpe.br](mailto:ruth.ssantos@ufpe.br) . <https://orcid.org/0000-0001-8987-1707>

<sup>4</sup>Professor at the Federal University of Pernambuco. Center of Health Sciences. Department of Nursing. Pernambuco, PE, Brazil. E-mail: [ryanne.carolynne@ufpe.br](mailto:ryanne.carolynne@ufpe.br) . <http://orcid.org/0000-0001-7554-2662>

## RESUMO

**Objetivo:** analisar as percepções do ensino remoto emergencial no contexto da COVID-19 sob a óptica de graduandos em Enfermagem. **Método:** estudo de abordagem qualitativa, realizado entre os anos 2021 e 2022. Foram realizadas entrevistas semiestruturadas com 11 discentes do Curso Bacharelado em Enfermagem de uma universidade pública. Posteriormente, as entrevistas foram analisadas por meio da Análise de Conteúdo. **Resultados:** Foram evidenciadas as vantagens e as desvantagens do ensino remoto emergencial; as Tecnologias Digitais da Informação e Comunicação utilizadas; as percepções dos discentes inerentes às aulas ministradas pelos docentes no respectivo período; bem como, as prospecções relacionadas ao futuro do ensino remoto como metodologia de ensino após o cenário pandêmico. **Conclusão:** a partir da análise das perspectivas de estudantes de Enfermagem sobre o ensino remoto no contexto da COVID-19, percebeu-se que o ensino remoto emergencial levou a repercussões positivas e negativas, bem como que houve um déficit no processo ensino-aprendizagem. **Descritores:** Covid-19; Educação em Enfermagem; Ensino Online; Estudantes de Enfermagem; Pandemias.

## RESUMEN

**Objetivo:** analizar las evidencias de la enseñanza remota de emergencia en el contexto de la COVID-19 desde la perspectiva de estudiantes de pregrado en enfermería. **Método:** Estudio cualitativo, realizado entre 2021 y 2022. Se realizaron entrevistas semiestructuradas a 11 estudiantes de la Licenciatura en Enfermería de una universidad pública. Posteriormente, las entrevistas fueron analizadas mediante Análisis de Contenido. **Resultados:** Se destacaron las ventajas y desventajas de la enseñanza remota de emergencia; las Tecnologías de la Información y las Comunicaciones Digitales utilizadas; las percepciones de los estudiantes inherentes a las clases impartidas por los docentes en el respectivo período; así como perspectivas relacionadas con el futuro de la enseñanza remota como metodología de enseñanza luego del escenario de pandemia. **Conclusión:** a partir del análisis de las perspectivas de los estudiantes de enfermería sobre la enseñanza a distancia en el contexto de la COVID-19, se percibió que la enseñanza a distancia de emergencia tuvo repercusiones positivas y negativas, así como que hubo déficit en el proceso de enseñanza-aprendizaje. **Descritores:** Covid-19; Educación en Enfermería; Enseñanza en Línea; Estudiantes de Enfermería; Pandemias.

## INTRODUCTION

Due to the COVID-19 pandemic, health authorities in countries across all continents have implemented prophylactic strategies, such as social distancing, prolonged closure of schools and universities, and work-related restrictions. These measures were aimed at reducing the risk of transmission of the disease between people.<sup>1</sup>

The pandemic has been the cause of the impacts on education, given the need for social isolation, whose actions were based on the premise of emergency remote teaching (ERE), undertaken between 2020 and 2021, which consisted of didactic and pedagogical strategies that aimed to minimize the impacts of social isolation on learning, with the use of synchronous classes (referring to concurrent moments

between students and teachers in the same virtual environment in real time) and asynchronous classes (there is no simultaneous presence between students and teachers; however, there are school activities that can be carried out at any time and location).<sup>2</sup>

With the establishment of the ERE, it was essential to plan the temporary pedagogical activities adopted by educational institutions at all levels, mediated by Digital Information and Communication Technologies (TDIC), in order to guarantee the continuity of the training process for professionals in this field.<sup>3</sup>

It is worth noting that, since before the pandemic and up to the present day, educational institutions have implemented remote teaching mediated by ICT, in which the teaching-learning process is guided by the principles of face-to-face education. This is different from online learning, which also uses teaching technologies and consists of Distance Education (EaD), which goes beyond the synchronous or asynchronous moments of remote teaching.<sup>4</sup>

The ERE in the field of Nursing in undergraduate, postgraduate, continuing education and health education courses, was configured as the best possible option in the pandemic scenario, given the

determination of social distancing and the closure of educational institutions as a protective measure, marked by the COVID-19 pandemic.<sup>5</sup>

With the respective health scenario, even with the expansion of learning possibilities and the facilities that remote teaching provided to Nursing course students, students and teachers found themselves in a situation that required specific knowledge and skills.<sup>6</sup>

Organizational and pedagogical changes brought challenges in this pandemic context that implied institutional, personal and collective adversities regarding adaptation, flexibility and innovation.<sup>6</sup> Thus, it is essential to identify the perceptions of remote teaching in the context of COVID-19 from the perspective of Nursing undergraduates, since the results of this study are relevant, as they contribute to the elaboration of educational interventions that started from a reality experienced by this group of people.

It is understood that the development of studies with the purpose of analyzing the perceptions of Nursing undergraduates about remote teaching in the pandemic context contributes to the promotion of new strategies aimed at teachers and students for the continuous improvement of remote teaching with a view to obtaining better results regarding this teaching method. In

view of the above, the objective is to analyze the perceptions of emergency remote teaching in the context of COVID-19 from the perspective of Nursing undergraduates.

## **METHOD**

This is a qualitative study, carried out between 2021 and 2022, which is characterized by the understanding and interpretation of subjective data evidenced through ideology, behavior, among others.<sup>7</sup>

The study was conducted at a public Higher Education Institution (HEI) located in the Northeast Region of Brazil. During the study period, there were 333 students enrolled in the Nursing course, according to the course coordinator. The sample was defined using the saturation technique, which is defined as the suspension of inclusion of new participants when the data obtained begin to present some redundancy or repetition, and it is not considered relevant to continue collecting data.<sup>8</sup> Therefore, 11 students participated in this research.

Nursing students enrolled in the 2nd to 10th semester were included; who took at least one course in the emergency remote learning modality, within the context of the COVID-19 pandemic, who had an institutional email and access to Google Meet or video calls via WhatsApp. Students

who were absent due to health problems; who were on vacation or school recess; and those who did not have access to the internet were excluded.

Invitations were first sent to class representatives of the Nursing course, who were instructed to forward the message to other students, inviting them to participate in the study voluntarily, via WhatsApp or email. The objectives of the research were explained to them and they were asked to consent and digitally sign the Free and Informed Consent Form (FICF).

To characterize the interviewees, a form was distributed, which was developed through Google Forms and, later, was sent to the institutional email and/or via the WhatsApp application of the students, together with the TCLE. The day and time for the individual interview were agreed with the students, which was carried out with the support of a semi-structured questionnaire constructed by the researchers containing questions about the perceptions of remote teaching in the context of COVID-19.

The interviews conducted online, between October and November 2021, were recorded with the support of two digital supports and, later, were transcribed, transcoded and validated by the interviewees.

Participants were informed about the research objectives and procedures and signed the Informed Consent Form, in accordance with Resolution No. 466/12 of the National Health Council, which ensures confidentiality and privacy. The participants' right to anonymity was guaranteed, and they were identified by means of an Arabic number sequence after the letter 'E' for student (for example: E1, E2, E3, etc.).

It should be noted that data collection was carried out with the approval of the Ethics Committee, under opinion no. 5,014,317.

Content Analysis was used, which is a method of systematically evaluating the content manifested in different forms of communication, through the categorization of words, phrases and themes considered “key” for future comparison, providing the interpretation of texts and audiovisual tools.<sup>9</sup>

## RESULTS

The interviews resulted in four categories. The first - Perceptions about remote learning - portrays the advantages and disadvantages that Nursing students encountered when taking their respective degree in the ERE modality:

*On the one hand, it was good, because we could theoretically attend classes from the comfort of our*

*own homes, without having to stress about catching the bus or going to college. On the other hand, it was quite outdated because our families end up distorting the idea that we are in class and think that we are just messing around on the computer, doing nothing. (E1)*

*You can save time with some things, you can have the opportunity to participate in a research group with more free time, to do PIBIC and research with more "free time" and, also, I think you have more time to study in my opinion.. (...). It was tiring, because I felt like I wasn't fully focused on everything (...)* (E2)

*(...) It was challenging, mainly because I had never studied anything remotely before, I had never had any remote classes. (...). The main factors were: unstable internet and the issue of adaptation, due to the fact that I had never had remote classes and a greater likelihood of dispersion, since we have more focus on in-person teaching. (E4)*

*(...) In relation to learning, sometimes I had some deficits, because remotely you have the possibility of being more distracted. (...). And the issue of you being with your friends, this also influences you sharing there directly, talking to them about the subjects, it's different. (E5)*

*The advantage is the savings on travel, time and transportation. (...). There were several thoughts (...) that I wouldn't be able to be a good professional because I was doing everything online and Nursing is a course focused on practice in general. (...). It's more tiring ((remote learning)). (...). There's also the issue of noise at home, noise from the family (...). There's the problem of not having practical teaching...(E6)*

*I had more time to do more extension projects, because before I could only manage one at most, and now I'm able to juggle more. You can delve deeper into your studies in relation to research. I got a PIBIC and was more present at research group meetings and extension projects. (...) I had more time to juggle activities and organize myself. (...)* (E7)

*Not having to take the bus to go to college. Now that I've gotten used to distance learning a bit, the convenience of being at home, attending classes, and then doing other activities. (...) I also had difficulty with the internet and because of my computer. The environment at home isn't all that great for quality education either (...)* (E9)

In the second category - Use of digital platforms during remote teaching - it

was possible to include speeches related to the digital platforms used as well as prior training for using them.

*Google meet, classroom, AVA, Google forms, youtube (...) "no, as far as I remember I didn't have any training. (E1)*

*(...) There are also some platforms that teachers made available for dynamics related to the subject, such as Jamboard and Kahoot; I didn't have any training. (E3)*

*Google meet, Classroom, I had contact with the AVA in the subject 'Happiness (...) no, no training. (E4)*

*I think Classroom, Google Forms, Canva too, Google Scholar; I didn't have any training, I just learned, some of the ones I had difficulty with, I learned little by little. (E5)*

*The virtual platforms that I managed in relation to the course were Google Forms, WhatsApp groups, Google Meet, Google Classroom, Canva, and the PowerPoint slide platform. (E6)*

*I use Google Meet all the time, for sure, both for classes and for contacting friends to do work, and for study platforms. I made all my slides on Canva. I used Google Classroom and WhatsApp, the latter of which I feel brings me closer to people; usually my classmates and I would meet in person, but now we use WhatsApp to chat. (E7)*

*We used Docs a lot, I've never used Docs as much in my life as I do today; Training, no. I learned the hard way (...) (E11).*

In the third category - Students' perceptions inherent to classes taught by teachers during remote teaching - it was possible to note how students evaluated the classes taught by teachers in the remote teaching modality:

*I don't even rate it 100% or 0%. I think there were some subjects that could have been taught remotely and others that couldn't, and maybe the subjects could have been divided better, because sometimes it becomes very heavy and after a long time you end up losing patience watching that class because it's such long content that you can't*

*really remember it for two hours, you can't stay in front of the computer, on your cell phone (...) (E1)*

*I noticed that some teachers taught classes as if they were in a face-to-face class. Others got lost, because in order to have quality distance learning, other teaching methods and tactics need to be included, and this was not the case in most cases. (E2)*

*(...) Some teachers insisted on using the traditional methodology, which is the use of slides and expository presentations, but we know that in this remote environment, there are also issues of difficulties, such as distractions. I think teachers could adapt better, to create a more dynamic, more interactive class, so that all students could participate and better understand the content. (E3)*

*I believe that some teachers were able to adapt to the online model, as the classes were more dynamic. However, many teachers taught classes in the same way as in person. In a way, this may have harmed teaching because it is a completely different context. (...) (E4)*

*Some teachers didn't have much empathy with the students regarding the issue of activities, we usually had too many activities in more classes, but some knew how to manage the remote issue well, they created platforms for us to assimilate the subjects better, like Jamboard, for example, that Mentimeter (...) (E5)*

*Sometimes, it's not even the teacher's fault, because the remote itself already lowers the level. But, in general, there wasn't such a glaring difference in terms of the class, but obviously there was in terms of learning, but that's because the environment is different. (E7)*

*Some teachers were positive, some were not, because I saw that some teachers had a lot of difficulty because they did not have training, and if they did, it was not enough to be able to work on a daily basis. Some teachers had difficulties with the system, with platforms, with sending materials, with sending exercises (...) (E8)*

*(...) We realize that some teachers are really concerned about adapting the classroom to remote classes, while other teachers were bringing classes that were being taught as in the classroom (...) You spend four hours in front of a computer without a break paying attention to that, it's not possible, there is no human being capable of doing that. This was very damaging. There was a deficit in my training (...) (E11)*

Finally, the fourth category - Futuristic prospects for remote teaching - denotes narratives related to the future of remote teaching as a teaching methodology after the pandemic scenario.

*I think that remote teaching should only exist in subjects that are entirely theoretical. I think that this way, theoretical-practical teaching would not be harmed.* (E2)

*With this experience, we realized that it is possible to have classes in a remote format in completely theoretical subjects, because this way we will have more time at home to invest in activities, group work, etc. I think it is possible to invest in a hybrid modality, mixing remote and in-person classes (...)* (E3)

*I believe that online teaching for Nursing can be provided as long as it is only 100% theoretical classes. Subjects that have practical classes should be taught in a face-to-face format (...)* (E4)

*I think it would be possible to continue with hybrid teaching. There are subjects that can be set as remote, but I believe that most of them cannot be (...) I hope that if we are really going to have remote teaching, that it is hybrid, as I said, that it reconciles both, remote and practical, in-person teaching and the like. I don't think that only remote teaching is interesting.* (E6)

*I hope it will be an extra platform, complementary to the Nursing course. There is no way we can stay the entire course only on the remote platform, because all courses, especially Nursing, require practice.* (E8)

*Remote and/or online teaching is not advantageous for the healthcare sector, because due to the difficulties in adapting the transmission of content, there is also the aggravating factor of practices, which leave some learning deficits. Therefore, I do not believe that completely remote teaching has the same quality as face-to-face teaching.* (E9)

*Nursing is a difficult course to be taught remotely. If it is to continue, I believe that there are some subjects that could have a remote part, but in a hybrid way so as not to lose personal contact (...).* (E11)

## DISCUSSION

In the first category, the positive and negative interfaces inherent to remote learning were observed. Regarding the advantages, the convenience of being at home, time for studying and savings, since transportation was not required, were

highlighted. The disadvantages are related to difficulty in learning, internet failures, lack of interaction and fatigue.

A study points out the difficulties in the adaptation process at the beginning of remote teaching, such as: tiredness, difficulty with the home environment, low performance and discouragement; however, they managed to adapt to the impossibility of face-to-face teaching, by improving integration and dynamics with the group and gaining study time, due to the fact that it is not necessary to travel to college.<sup>10</sup>

In other countries, it is also notable that remote teaching has brought challenges to students due to demotivation, lack of engagement and inadequate equipment and connectivity, which has hindered learning. In this context, the COVID-19 pandemic has had repercussions and reverberations on education worldwide for university students, such as those in Nursing courses.<sup>11</sup>

Regarding the second category, the reports pointed to the use of technological tools such as Google Meet for online classes, virtual classrooms through Google Classroom, use of Google Forms for conducting subject assessments, use of WhatsApp to facilitate communication and work among classmates, and use of graphic presentation programs such as Canva and PowerPoint, among others. Some subjects made use of electronic resources, such as

Kahoot! and Jamboard, in an attempt to make classes more dynamic.

According to the study, virtual environments used in learning were made available, such as Canvas, Moodle, especially Google Classroom, in addition to communication resources for use in synchronous activities carried out via videoconferencing, focusing on their use through Google Meet, which made online classes and the presence of students and teachers virtually possible, as it enabled the promotion of collaborative activities, as well as the use of means such as quizzes and gamification to promote dynamism during synchronous classes.<sup>12</sup>

A study conducted in India also showed that Google Meet and Google Classroom were the most used tools during emergency remote classes. Furthermore, it addressed that training in the use of these tools was essential for the didactic-pedagogical process.<sup>13</sup>

It can be inferred that the virtual scenario has reverberated and will possibly continue to reverberate in the way of teaching and learning, especially due to the use of virtual tools that continue to be disseminated and have been instituted in various fields of knowledge, especially with the perspective of ubiquitous education, which aims to expand beyond the classroom, characterized as a mobile

learning modality, which allows the student to access the study wherever they are;<sup>14</sup> or even, through the hybrid teaching modality and blended learning that combine face-to-face teaching with online learning, with the support of ICT.<sup>15</sup>

The third category denotes that some disciplines adapted to the remote modality, since many teachers adjusted to remote teaching and provided dynamic and less tiring classes; however, disciplines that remained with methods used in person became inadequate in the remote modality, since it harmed learning and promoted an exhausting teaching environment for students, which made it difficult to adapt to the ERE.

In a study carried out with Nursing students, it was possible to observe some praise regarding the increase in extracurricular activities, recognizing their need. However, other students criticized this teaching method, given that teachers were unprepared to teach in a remote environment, in addition to communication and the relationship between teachers and students being affected.<sup>16</sup>

International literature also shows that nursing students point out positive and negative points regarding remote teaching methods. Some students mentioned that they were satisfied with the different applications used during classes, while



others complained about the teaching method, which corroborates the findings of this study.<sup>17</sup>

Regarding the lack of preparation of teachers for remote teaching, it is important to highlight the need for continuous training and the inclusion of teaching activities that include virtual environments today and in the future. This consideration is mentioned in a study that examined how future pedagogical approaches can promote constructive learning environments and facilitate the learning processes of nursing students in future post-pandemic scenarios, demonstrating that experiences during the pandemic suggest that digital platforms and e-learning strategies can facilitate and favor the learning of nursing students.<sup>18</sup>

In the fourth and final category, some students evaluated the hybrid use of remote teaching as a favorable method, given that entirely theoretical subjects could remain in the online format. However, they defended the end of this modality for theoretical-practical subjects because they claimed that this could compromise learning in practical hospital classes. Other statements identified the irreducibility regarding the use of this format, since it involves socio-affective and relational processes; however, they emphasized that this model can be used in a complementary

way and at specific moments such as meetings, research, and extension.

Participants in one study reported missing face-to-face activities, especially in the exchanges between colleagues and teachers in the classroom and in the practical activities carried out in the laboratory or in health services. Some students indicated deficiencies in the teaching and learning process due to the sudden virtualization of courses as a result of the pandemic.<sup>19</sup>

Similar to this study, a study conducted in Singapore, Asia, demonstrated that practical nursing training was significantly affected by the ERE, due to the sudden changes in the face of the COVID-19 pandemic. However, in relation to student acceptance, remote teaching was well accepted, which contradicts the findings demonstrated. In addition, it mentions that it was necessary to adapt and innovate nursing teaching, and this is therefore essential to continue in the post-pandemic period.<sup>20</sup>

Given the results, it is clear that the students' perspectives for current and future education are that it will be carried out remotely for subjects considered theoretical, but that for practical subjects, it will be carried out in person, so that there is no harm to learning and, consequently, it

will not have a negative influence on nursing care for patients.

Thus, students believe that education cannot return to the way it was before the pandemic. Their perspectives are that education will be hybrid, which consists of face-to-face learning at educational institutions, but also online, with the use of active methodologies being an important tool in the teaching-learning process, since these contribute to the increase in knowledge, the acquisition of skills and the professional training of individuals.

## CONCLUSION

This study allowed us to analyze the perspectives of nursing students on remote learning in the context of COVID-19. Positive and negative repercussions were observed, and it was also pointed out that the digital platforms used were common in all subjects studied. Failures related to the readjustment of subjects in the remote modality were identified and it was noted that remote learning, in hybrid classes, is supported by students, since they agreed to gain knowledge, especially in subjects that had a small workload and that were entirely theoretical.

The study has limitations because the perspectives presented come from students at a single HEI located in northeastern Brazil, which may provide data from only one reality and prevent the generalization of the findings. Furthermore, it has a limitation because the study was carried out during the COVID-19 pandemic, which may have influenced the students' responses, since it was a period of sudden changes in teaching and, therefore, perceptions were influenced incongruently with the real objective of remote teaching. In this sense, it is suggested that other research in other regions of Brazil be carried out to investigate new developments regarding the theme proposed in this study.

## REFERENCES

1. Fong MW, Gao H, Wong JY, Xiao J, Shiu EY, Ryu S, et al. Non Pharmaceutical measures for pandemic influenza in Non Healthcare Settings-Social Distancing Measures. *Emerg Infect Dis*. [Internet]. 2020 [citado em 13 abr 2023]; 26(5):976-84. Disponível em: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7181908/pdf/19-0995.pdf>
2. Brown S, Krzic M. Lessons learned teaching during the COVID-19 pandemic: incorporating change for future large science courses. *Natural Sciences Education* [Internet]. 2021 [citado em 13 abr 2023]; 50:e20047. Disponível em: <https://acess.onlinelibrary.wiley.com/doi/epdf/10.1002/nse2.20047>
3. St-Onge C, Ouellet K, Lakhil S, Dubé T, Marceau M. COVID-19 as the tipping point for integrating e-assessment in higher education practices. *Br J Educ*

- Technol. [Internet]. 2022 [citado em 13 abr 2023]; 53(2):349-66. Disponível em: <https://bera-journals.onlinelibrary.wiley.com/doi/epdf/10.1111/bjet.13169>
4. Sunde RM, Júlio ÓA, Nhaguaga MAF. O ensino remoto em tempos da pandemia da covid-19: desafios e perspectivas. *EPEduc Revista Epistemologia e Práxis Educativa* [Internet]. 2020 [citado em 10 nov 2023]; 3(3):2-11. Disponível em: <https://revistas.ufpi.br/index.php/epeduc/article/download/11176/7075>
5. Carneiro PRC, Meira JL, Nascimento LR, Silveira ZM, Xavier AB, Soares PP, et al. O ensino de enfermagem e os desafios do uso de tecnologias remotas em tempos de pandemia do coronavírus (covid-19). *Braz J Dev.* [Internet]. 2021 [citado em 13 abr 2023]; 7(1):8667-82. Disponível em: <https://ojs.brazilianjournals.com.br/ojs/index.php/BRJD/article/view/23600/18970>
6. Dias FSS, Melo CC, Fernandes TF, Queiroz PDSF. O ensino remoto na pandemia da COVID-19: opinião de estudantes de um curso técnico em enfermagem. *Rev Eletr Acervo Saúde* [Internet]. 2021 [citado em 13 abr 2023]; 13(3):e6530. doi: 10.25248/reas.e6530.2021
7. Soares SJ, Fonseca VM. Pesquisa científica: uma abordagem sobre a complementaridade do método qualitativo. *Quaestio: Revista de Estudos em Educação* [Internet]. 2019 [citado em 13 abr 2023]; 21(3):865-81. Disponível em: <https://periodicos.uniso.br/quaestio/article/view/3363/3503>
8. Minayo MCS. Amostragem e saturação em pesquisa qualitativa: consensos e controvérsias. *Revista Pesquisa Qualitativa* [Internet]. 2017 [citado em 13 abr 2023]; 5(7):1-12. Disponível em: <https://editora.sepq.org.br/rpq/article/view/82/59>
9. Bardin L. *Análise de conteúdo*. São Paulo: Edições; 2016. 70 p.
10. Rodrigues PS, Marin MJS, Souza AP, Grandin GM, Almeida KRV, Oliveira CSR. Aprendizagem baseada em problemas no ensino remoto: vivências de estudantes de enfermagem na pandemia COVID-19. *REME Rev Min Enferm.* [Internet]. 2021 [citado em 13 abr 2023]; 25:e-1407. Disponível em: <http://www.revenf.bvs.br/pdf/reme/v25/1415-2762-reme-25-e-1407.pdf>
11. Madhavanprabhakaran G, Francis F, John SE, Al Rawajfah O. COVID-19 pandemic and remote teaching: transition and transformation in nursing education. *Int J Nurs Educ Scholarsh.* [Internet]. 2021 [citado em 10 nov 2023]; 18(1):20200082. Disponível em: <https://www.degruyter.com/document/doi/10.1515/ijnes-2020-0082/html>
12. Sabadin I, Rosário JR, Mota MED, Sacardo Y, Soler ZASG, Jericó MC. Ensino remoto emergencial e morbidade autorreferida no contexto da pandemia por covid-19: percepção entre graduandos de enfermagem. *Enferm Bras.* [Internet]. 2022 [citado em 13 abr 2023]; 21(3):254-68. Disponível em: <https://www.convergenceseditorial.com.br/index.php/enfermagembrasil/article/view/5211/8034>
13. Swaminathan N, Govindharaj P, Jagadeesh NS, Ravichandran L. Evaluating the effectiveness of an online faculty development programme for nurse educators about remote teaching during COVID-19. *J Taibah Univ Med Sci.* [Internet]. 2021 [citado em 10 nov 2023]; 16(2):268-73. Disponível em: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8046826/pdf/main.pdf>
14. Aljawarneh SA. Reviewing and exploring innovative ubiquitous learning tools in higher education. *J Comput High Educ.* [Internet]. 2020 [citado em 7 maio 2024]; 32:57-73. Disponível em: <https://link.springer.com/content/pdf/10.1007/s12528-019-09207-0.pdf>
15. Ulla MB, Perales WF. Hybrid teaching: conceptualization through practice for the post COVID19 pandemic education. *Front Educ.* [Internet]. 2022 [citado em 13 abr 2023]; 7:924594.

Disponível em:

<https://www.frontiersin.org/articles/10.3389/feduc.2022.924594/full>

16. Michel A, Ryan N, Mattheus D, Knopf A, Abuelezam NN, Stamp K, et al.

Undergraduate nursing students' perceptions on nursing education during the 2020 COVID-19 pandemic: a national sample. *Nurs Outlook* [Internet]. 2021 [citado em 13 abr 2023]; 69(5):903-12.

Disponível em:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8514289/pdf/main.pdf>

17. Kalanlar, B. Nursing education in the pandemic: a cross-sectional international study. *Nurse Educ Today* [Internet]. 2022 [citado em 10 nov 2023]; 108:105213.

Disponível em:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8592810/pdf/main.pdf>

18. Karlsen K, Aronsen C, Bjørnnes TD, Harberg TB, Halland AN, Holand T et al.

Integration of e-learning approaches in a post-pandemic learning environment - Norwegian nursing students' recommendations from an action research study. *Heliyon* [Internet]. 2023 [citado em 7 maio 2024]; 9(2):e13331. Disponível em:

<https://www.sciencedirect.com/science/article/pii/S2405844023005388/pdf?md5=e09891fdc51630192341f6486888dc44&pid=1-s2.0-S2405844023005388-main.pdf>

19. Pissaia LF, Costa AEK. Pandemia da covid-19: percepções de estudantes de enfermagem sobre o seu ensino. *Oikos (Viçosa): Família e Sociedade em Debate* [Internet]. 2021 [citado em 13 abr 2023]; 32(1):148-64. Disponível em:

<https://periodicos.ufv.br/oikos/article/view/11312/6596>

20. Natarajan J, Joseph MA. Impact of emergency remote teaching on nursing students' engagement, social presence, and satisfaction during the COVID-19 pandemic. *Nurs Forum* [Internet]. 2022 [citado em 10 nov 2023]; 57(1):42-8.

Disponível em:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8662288/pdf/NUF-9999-0.pdf>

RECEIVED: 04/16/23

APPROVED: 04/30/24

PUBLISHED: 09/2024