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Discent resilience: modifications of the teaching method in front of covid-19

Resiliência discente: modificações do método de ensino frente ao covid-19

Resiliencia discente: modificaciones del método de enseñanza frente al covid-19

RESUMO

Objetivo: Compreender a percepção dos estudantes de medicina mediante as adaptações do método de ensino decorrente da pandemia do covid 19. Método: Trata-se de uma pesquisa de caráter exploratório, descritivo com abordagem qualitativa. Desenvolvido em uma Instituição de Ensino Superior privada, localizada no noroeste do Paraná, que possui o curso de medicina e adaptou-se às exigências do Ministério da Saúde e Educação para a elaboração das aulas remotas. Resultados: A pesquisa teve 120 participantes, com idades variando de 18 e 39 anos, sendo 84 do sexo feminino e 36 do masculino. Conforme as respostas dos discentes, foi possível constatar quatro categorias: Identificando as principais adaptações dos discentes; Observação dos discentes em relação ao ensino remoto; Avaliando os impactos na formação acadêmica-profissional; Reconhecendo os pontos positivos do ensino remoto emergencial. Conclusão: Conclui-se que o aprendizado sofreu alteração, porém houve outros avanços como a utilização de novas tecnologias para continuidade do ensino.

DESCRIPTORES: Infecções por coronavírus; Aprendizagem online; Educação superior.

ABSTRACT

Objective: To understand the perception of medical students through the adaptations of the teaching method resulting from the covid pandemic 19. Method: This is an exploratory, descriptive research with a qualitative approach. Developed in a private Higher Education Institution, located in the northwest of Paraná, which has a medical course that has been adapted to the requirements of the Ministry of Health and Education for the preparation of remote classes. Results: The research involved a total of 120 participants, aged between 18 and 39 years, of which 84 were women and 36 men. Based on the answers of the students, it was possible to mark four categories: Identify the main adaptations of the students; Observation of students in relation to distance education; Evaluate the impacts on academic and professional training; Recognizing the positive aspects of remote emergency education. Conclusion: Therefore, it is concluded that learning has changed due to distance, however, there have been other advances such as the use of new technologies to continue learning.

DESCRIPTORS: Coronavirus Infections; Learn online; University education.

RESUMEN

Comprender la percepción de los estudiantes de medicina a través de las adaptaciones del método de enseñanza resultantes de la pandemia de covid 19. Método: Se trata de una investigación exploratoria, descriptiva y de abordaje cualitativo. Desarrollado en una Institución de Educación Superior privada, ubicada en el noroeste de Paraná, que cuenta con un curso de medicina y se ha adaptado a los requerimientos del Ministerio de Salud y Educación para la preparación de clases a distancia. Resultados: La investigación contó con 120 participantes, con edades comprendidas entre los 18 y los 39 años, 84 mujeres y 36 hombres. De acuerdo con las respuestas de los estudiantes, fue posible verificar cuatro categorías: Identificación de las principales adaptaciones de los estudiantes; Observación de los estudiantes en relación con la educación a distancia; Evaluar los impactos en la formación académica y profesional; Reconocer los aspectos positivos de la educación remota de emergencia. Conclusión: Se concluye que el aprendizaje ha cambiado, pero ha habido otros avances como el uso de las nuevas tecnologías para la continuidad de la enseñanza.

DESCRIPTORES: Infecciones por coronavirus; Aprender en línea; Educación universitaria.

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INTRODUCTION

Since the end of the first quarter of 2020, the World Health Organization (WHO) has demanded some restrictions such as social distance resulting from the dissemination of the new Coronavirus (SARS COV-2). In addition to Brazil, several other countries were affected by the pandemic and, in a short period of time, thousands of teachers and students needed to create alternatives for teaching and learning at a distance. 1 Faced with this, educational institutions around the world began to experience a new educational model, marked by the change from traditional classroom education to online teaching. 2

Therefore, Emergency Remote Education (ERE) was implemented, which is a methodology characterized by a temporary and alternative curriculum change due to crisis circumstances. It involves the use of fully remote teaching solutions for instruction or education that would otherwise be delivered face-to-face or in hybrid courses and which will revert to this format once the crisis or emergency subsides. The main

objective in these circumstances is not to recreate a robust educational ecosystem, but to provide temporary access to institutions and institutional supports in a way that is quick to set up and is reliably available during an emergency or crisis. 3

The ERE is not new and was not created as a result of the COVID-19 pandemic, similar methods have been developed in several countries that have areas devastated by tornadoes and other natural phenomena. This makes us think about the urgency of constant reflection by the academic world about the modalities of teaching and even the importance of thinking about specific pedagogical strategies to face different situations. An alternative is the tendency to transform face-to-face classes into web conferences, that is, a moment of synchronous communication in which the teacher stands in front of the camera and speaks to the students. It is important to point out that not all students can always have access and be connected to the meeting, so it is of paramount importance to consider asynchronous activities for the ERE, that is, those that can be performed by those invol-

ved in different times and spaces. 3

Thus, it is possible to identify teaching peculiarities that can only be conducted in the face of this model of emergency remote education, which can be positive for some and negative for others. The student's profile and its determination, even the preparation and training of the faculty in technological resources to support this type of study are variables that determine the effectiveness of the student in this type of teaching. 4

ERE, when emphasized on specific content, can be an effective way of studying, especially for self-taught and more committed students. On the other hand, if this form of teaching is maintained for a relatively long period, students may worsen their results, thus reducing the possibility of academic success. 5

It is noteworthy that the ERE implemented during the pandemic is different from distance learning, they have similarities only because they are modalities of education mediated by technology. However, the principles of remote learning continue to be the same as in face-to-face teaching. 6

The ERE adopted in teaching places brings with it a concern in relation to the lack of inspection that it presents, which can compromise the quality of education, harming the training of future professionals in the medium and long term. 7

Thus, the question is: how is the process of adaptation of students taking place in relation to emergency remote classes? This article aims to understand the perception of medical students at a private institution regarding the adaptations caused in their teaching method due to the Covid-19 pandemic.

METHOD

This is a qualitative approach research, developed in a Private Higher Education Institution, located in a municipality in the Northwest of Paraná, which has a medical course and adapted itself to the requirements of the Ministry of Health and Education for the preparation of remote emergency classes. Study participants were one hundred and twenty participants from the first to third year of the medical course, being scaled as 51 participants of the 1st year, 62 participants of the 2nd year and 7 participants of the 3rd year.

Students under 18 years old were adopted as exclusion criteria, due to the authorization process of parents and students who were in the internship due to the maintenance of clinical practice and the reduced theoretical workload due to the activities of outpatient clinics.

Data collection took place from September 2020 to November 2020, carried out via a virtual platform, using an instrument with two main characteristics, the first aimed at identifying the characterization of students, collecting information regarding the sociodemographic profile and the second with subjective questions about the main impacts of the reorganization of the classroom teaching modality for the emergency remote.

The data were analyzed according to the method of Bardin (2011), in which the data are explored in order to describe the content of the messages, following the steps

of floating reading (pre-analysis), then the coding of the messages and the construction of meaning cores, in which it is the choice of indices or categories that emerged from the guiding questions, in which there was a selection of common themes to materialize the coding and recording of data. And the last stage where there is inference of data based on correlation with scientific reading.

The key information was operationalized using the IRAMUTEQ® ALFA 2.3.3.1 software (acronym for R pour les Analyses Multidimensionnelles de Textes et de Questionnaires), in which the results were presented using the Word Cloud. The software enables different processing and analysis of the narratives produced. 8

Participants were identified using the initial E of respondents and numbers from 1 to 120 sequentially, for example, E1, E2, E3... E118, E119 and E120, in order to ensure confidentiality and anonymity on the part of employees.

The study was carried out in accordance with the guidelines set forth by Resolution 466/12 of the National Health Council (2012), after authorization from the educational institution and the consideration of the Standing Committee on Ethics in Research with Human Beings (CEP) of Unicesumar under opinion number 4.194.905 and CAAE 35917220.6.0000.5539. The Free and Informed Consent Form (FICF) was available on a Google forms link, and was also sent via email, after authorization and completion of the interview, which only started confirming the signature of the proper authorization.

RESULTS

One hundred and twenty students participated in the study, aged between 18 and 39 years, among them, 84 were female and 36 were male. 51 respondents belonged to the first year of graduation, 62 respondents from the second year and 7 respondents from the third year.

The word cloud (figure 1) made it possible to identify the words that emerged most frequently, which supports the cate-

gories explored by the data analysis, which allowed the identification of the main adaptations that occurred with the students facing the new teaching modality and the strengths and weaknesses in academic-professional training. The categories were named as: Identifying the main adaptations of students; observing students in relation to emergency remote teaching; evaluating the impacts on academic and professional training and recognizing the positive points of emergency remote teaching:

Identifying the main adaptations of students

Faced with the Covid-19 pandemic experienced in recent months around the world, students from private and state education systems were adapted from the classroom for emergency remote learning. In this sense, numerous adaptations were needed by educational institutions in carrying out activities in the home environment, which until then were hardly used for this purpose. In addition, most participants reported that they never had contact with classes or courses remotely, which certainly entails a more gradual adaptation process and with difficulties implemented by the use of new technologies.

However, about half of the students reported that adapting to the tools used for the online environment ended up requiring more time, which was compensated by the convenience of being at home. In addition, in some cases, it was necessary to adapt the material they used to attend classes. With the higher education institutions closed, the students had to make some acquisitions, as they did not have access to the college's computers, library books and could not meet in person to carry out the tutorials.

Headset with microphone and internet. (E25)

A new notebook. The other was very old and couldn't handle what was necessary to do with it (class, uploading schoolwork, downloading books, tutorials). (E45)

Added to the factors presented above,

ses, including practical classes held in the institution's laboratory, there was a great concern among academics regarding their academic training.

[...] due to the absence of practical classes, willingly or not, it makes much difference in medical training. Even with the justification for replacement, I find it very difficult for this to happen without somehow harming the students' learning [...]. (E21)

Furthermore, the change in the learning environment ended up generating implications for a large number of students, due to the fusion of study and home environments. The main one being the loss of concentration, followed by changes in sleep, reduced mood and finally decreased appetite.

[...] At home, on the other hand, it reminds us of moments of rest, pleasure, leisure and also study, but not as strong as in college, as there are distractions in the environment. (E53)

Because being at home, we have a lot more distractions than in the classroom [...]. (E57)

Recognizing the strengths of emergency remote learning

The changes made it possible to include and recognize strengths in the learning process, for example, the fact that classes are saved on the online platform, and students can have access to it, whenever and wherever they are, in this way, it is possible to re-watch them in case of doubt and when necessary.

Recorded lessons, which make studying later easier, as you can follow them more slowly later. (E1)

I can attend the class more than once, I feel more comfortable in clearing up my doubts. For me, the lectures fit in very well remotely.

(E11)

It is noteworthy that, for higher education institutions, recorded classes have the ability to reach a greater number of students, and in the presence of a single teacher would give the same class to 3 different classes at different times. In remote mode, the online and recorded class can reach all students at the same time, and with the possibility of watching it later.

Ability to reach a larger audience with less effort. (E4)

Remote classes have the potential to maximize the number of students who attend classes together and reach people from anywhere in the world, as long as you have an internet connection and a way to access the class [...]. (E21)

In addition, the remote emergency classes made it possible for students who do not live close to the university or even in other cities to spend more time with their families, organize their studies and even adapt their study schedule, this is due to the fact that the time of moving to an institution is no longer necessary. Understanding this factor was essential for the success of emergency remote classes.

Greater proximity to the family, not having to travel to college, being able to better organize my own schedule. (E57)

For me, the biggest gain with the remote classes was the greater availability of time for study, without having to go to college to take the theoretical classes [...]. (E80)

Given the positive points highlighted above, it was asked which could be implemented in face-to-face teaching, thus, there was a prevalence of responses in relation to recorded classes and the dynamism proposed by teachers in this remote environment, which pleased many students with the use

of online platforms and forms with questions, which in addition to making the class more interesting, resulted in a closer relationship between students and teachers.

Something that works a lot for me is re-watching classes. This tool has improved my studies compared to pre-pandemic college days. (E21)

Use forms during the face-to-face class, often to locate us, to see if we are understanding. (E27)

Use of different methodologies and new forms of interaction (such as Mentimeter, Kahoot!, Jam board technologies, etc). (E55)

Finally, it is known that during graduation, there are numerous events focused on the medical field. Prior to the quarantine event, it was possible to attend extra classes, journeys offered by the academic leagues of the medical course, below the curriculum. However, these classes were more reserved, and reached a smaller number of students due to numerous factors, and with adaptation to the remote environment, it was possible to expand these extracurricular classes to a greater number of academics, including academics from other institutions, which allows the proliferation of knowledge.

The possibility of hosting online events (such as leagues and IFMSA) for a larger number of people, including college students from other cities. Some theoretical classes could be kept in this format. (E49)

Arguably, every change initially generates fear and uncertainty, however, over time, adaptations are minimized and the potential of the remote modality can be implemented in order to contribute and add to the learning process of medical students.

DISCUSSION

With the implementation of social distancing, the most effective prophylactic measure against the coronavirus, there was a need to reassess the teaching-learning process, since from the distancing, students

from all over the world had to adopt information and communication technologies (ICTs) to continue with the study routine.⁹

The procedure for performing emergency remote learning requires long planning and a series of adaptations. One of the adaptation factors that delayed the implementation of remote learning was the need to set up an action plan to offer emergency digital assistance to students in a state of vulnerability, so that they could follow virtual classes, since most students had never had contact with this type of learning.¹⁰

In addition, another adaptation of the students was the acquisition of materials necessary for the use of the ERE. Students from private universities had to pay for themselves with the extra expenses, not receiving any kind of support from the institution for the acquisition of new equipment, such as better internet, notebook and even headphones for web conferences. In return, many federal universities offered financial aid or loaned these objects to students.¹⁰

Student performance was affected during this period of the pandemic, the drop in productivity was reported by the vast majority of students during remote education, which can be explained by the high levels of stress, apathy, anxiety and discouragement caused by social isolation, reflecting negatively in academic performance.¹¹

Given this scenario, the students were able to draw some conclusions about emergency remote teaching. One of the main observations was about the difficulty of student-teacher interaction generated by the pandemic. Certain skills or competencies are not teachable through remote learning – such as basic social skills (eg, empathy, assertive communication) and commonly called “technical” skills (such as those required by a physical therapist or physician who needs to perform a cardiorespiratory massage).¹²

The acquisition of effective communication skills is one of the pillars of medical education, being necessary for interaction with co-workers, users and family members. Effective communication is at the

base of the training of physicians, not only for conducting anamnesis, but also for building a doctor-patient partnership relationship. The ERE is a major obstacle to the acquisition of this skill, since ICTs hinder the teacher-student and student-student interaction, an essential process for the construction of good communication.⁹

Another relevant point is related to the tiredness generated by emergency remote teaching, there are several factors that trigger this feeling. The tireless hours of sitting in a chair, besides being very unpleasant, reduces the students' concentration. In a context in which many students go to school to feel good, having a quiet room in the house with a computer to focus on is for few.¹³

It is known that higher education implies training students and, as a result, future professionals, to develop skills to act in a comprehensive, ethical and efficient manner. Therefore, higher-level learning, therefore, develops the student's ability to characterize social reality and derive, from available knowledge and technology, professional and personal behaviors that increase the quality and effectiveness of their interventions.¹²

However, it is possible to notice flaws in the ERE, such as time limitations, planning, training and technical support, which compromise the quality of teaching.³ The lack of this planning, added to the need to continue the school year in an emergency way, ends up resulting in: a) low academic performance of students; b) increase in school failure; c) increased probability of dropping out of Higher Education; and, d) exhaustion of teachers, who were overloaded by multiple activities and the challenges of dealing with technology in order to promote teaching.¹²

It is noteworthy that the many courses were hampered by the absence of practical classes, which are of fundamental importance to develop technical knowledge in students and to develop skills aimed at a humanized and comprehensive care for patients. Despite the difficulties of this education system, studies show that at this time of emergency due to COVID-19, it is one of the most assertive strategies for univer-

sities to return or continue with their teaching activities.¹⁴

Furthermore, the inappropriate location was identified as one of the main obstacles to the learning process that directly impacts the academic training of students. The fusion of the home environment with the academic environment is responsible for causing certain types of disturbances in the mood, concentration, appetite and sleep of students during online classes. The home environment is reminiscent of rest and pleasure, in addition to household noises such as the noise of television and family members talking. In addition, the computer is often shared by the family, which makes it difficult to continue the study.¹⁵

Given all the experiences lived during remote education, students recognize the potential it provided. Initially, the use of new technologies to provide remote learning provided a more motivating, reflective, dynamic and flexible teaching with regard to times and geographic spaces.¹⁴

Remote learning incorporates active learning activities, thus allowing students to enjoy interactive activities and autonomy. In some institutions, classes held online are recorded and available for students to revisit this content, which is also beneficial for students who have a necessary absence. As a result, HEIs ended up leaving classes that use this resource more didactic and attractive to students.¹⁶

It is undeniable that some activities do not need to take place in person to be successfully carried out, thus allowing students who live in another city to enjoy more time with their family and also save time by not having to travel to the institution to attend class. Furthermore, the dynamism of online technologies, with the use of virtual teaching platforms, such as the “Mentimeter”, provided greater interaction between students and teachers, and greater adherence to classes by students.¹⁴ The inclusion of new ICTs resulting from the ERE is a way of stimulating, enhancing and improving their use and opening up to new teaching methods.¹⁷

Finally, another positive aspect that it was possible to identify in the transition

from remote to face-to-face teaching was that education, in the general sense, has resilience. It is not always the same in all locations, but little by little, most Brazilian institutions have returned to activities, at least partially. Thus, this form of adaptation validates the definition of resilience, which is both the mental and physical capacity to deal with problems, adapt to changes, overcome obstacles or resist the pressure of adverse situations. 18

CONCLUSION

The state of calamity caused by the new coronavirus (SARS COV 2) changed the Brazilian educational scenario, changing the academic journey of study in an unex-

pected and unprecedented way, but necessary so that the academic year of thousands of higher education students was not compromised. Thus, it was possible to conclude that the changes that have occurred in recent times due to the implementation of Remote Emergency Teaching, ended up emerging in turn negative aspects (weaknesses) and positive aspects (potential) for academic-professional training of students.

Simultaneously, the student-teacher interaction was impacted, there was a need to purchase new equipment to continue the school year, academic performance decreases due to distractions from the home environment and changes in concentration, mood, appetite and sleep were observed on

students during this period. On the other hand, the recorded lessons and the flexibility that this teaching provides were one of the factors that facilitated adaptation and learning during the pandemic.

As a limitation of the study, we have the fact that the pandemic has not come to an end. However, the growing studies in this area reflect the need to develop more studies in this context, so that there is a greater improvement in knowledge about student resilience during educational changes during the pandemic

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