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CHAPTER 33

HEALTHCARE TEACHING ONLINE - EXPERIENCES AND PERSPECTIVES

Abstract: The COVID-19 pandemic has affected almost all countries of the world. The closure of educational institutions, as a measure to reduce the risk of disease transmission, brought about a change in the implementation of classes by switching to the online mode.

The technical difficulties, in the first weeks of distance learning, were only the beginning of the difficulties faced by practical teaching teachers during the Pandemic. Realization of teaching in the field of health care, without the possibility of active participation of students, is a great deficiency and a necessary evil. The authors were motivated to find out the views of students and teachers on the application of online teaching in the subject Health Care, which they set as the goal of the work.

The respondents were students of the Medical School “7. april” Novi Sad, a total of 104 students and 35 teachers of the Health Care course. Questionnaires specially designed for the needs of this research were used for both groups of respondents, and the survey was carried out in June 2022. An observational descriptive method was used in the preparation of the paper.

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The results we reached confirm that teachers and students agree that online teaching has its advantages when it comes to theoretical teaching. The application of traditional teaching, especially in the practical teaching of Health Care, however, plays a key role. We conclude that the implementation of classes in hospital wards or in Health Care offices at school is the only sustainable form when it comes to the training of future health workers.

Keywords: *Online teaching, practical teaching, health care, student, teacher.*

THE “PANDEMIC” CONTEXT OF EDUCATION

COVID-19 is the biggest pandemic in recent history, bringing with it a high degree of morbidity and mortality. In December 2019, a new respiratory disease emerged in Wuhan, China. The World Health Organization (WHO) named the disease “COVID-19” after determining the potential pandemic level of infection. According to WHO reports, already in April 2020, the number of infected people was more than 2164 111 people, and more than 146 198 people died in more than 200 countries around the world (Cooke, Eirich et al. 2020). People usually spread the virus through physical contact, handling or touching an infected surface. Countries have been searching for vaccines and treatment protocols for Covid vaccines and treatments, amid various measures to contain the spread of the disease around the world. Measures included closing public places, schools, universities, curfews and other physical distancing measures (Chakraborty & Maity 2020). The biggest “victims” of the Pandemic were certainly the health workers, and the topic of their education and motivation for further education is certainly a topic for research both today and in the future (Vasiljević Blagojević, Stojanović, Trbović 2023.)

Due to the epidemiological situation in Serbia caused by COVID-19, the Government of the Republic of Serbia issued a Decision on the suspension of teaching in higher education institutions, secondary and primary schools and the regular work of preschool education institutions (“Official Gazette of RS”, No. 30/2020 dated March 15 2020), in accordance with the Decision on declaring a state of emergency (“Official Gazette of the RS”, no. 29/2020, dated March 15 2020) and the Decree on measures during a state of emergency (“Official Gazette of the RS”, no. 31/2020, dated March 16, 2020). Educational and direct teaching work has been temporarily suspended in all primary and secondary schools, as well as in higher education institutions. The closure of educational institutions brought about a change in the course of the teaching process. Online teaching was the most prevalent during 2020 and part of 2021, and was applied at all levels of education. Accordingly, a different approach is expected from educational institutions and teachers, adapted to the conditions of the new information society (Stepanović 2020).

Blended learning, the integration of online with face-to-face teaching, has been established in secondary health education (Keskin & Yurdugül 2020). Student readiness for online learning mode is important in designing and realizing planned outcomes. In addition to knowledge and skills, medical school students require expertise in interpersonal relations and social interaction (Jurić, Marković, Lulić et al. 2014), which makes it even more difficult to fulfill the set outcomes in the new work regime under the conditions of the COVID-19 pandemic.

In order for the student to get to know the content through the teacher, didactics has developed a number of different approaches to learning and teaching since its beginnings, with the aim of mastering the material as best as possible in accordance with the student's individual development and receptive abilities (Arkorful & Abaidoo 2015). The Internet offers a space for online teaching, and teachers are the creators of ways to implement the teaching process, now in a new online environment. Web tools and work software are used for the successful implementation of online classes.

In the literature, we also find a lot of disagreements about possible terms for the same or similar forms of learning that are completely opposite to face-to-face oriented learning, that is, what is better known to us as traditional teaching. Some of these terms are used in the fields of distance education, computerized training, and health and medical training (Willis 1993; Dock & Helwig 1999; Kolshorn, 1998; American Medical Association 2000).

THE SPECIFIC PLACE OF THE SUBJECT HEALTH CARE IN NURSING EDUCATION

In the professional training of nurses, the most important subject is Health Care. This subject is studied theoretically and practically in medical schools. The goal of teaching Health Care is based on the fact that the general goal together with the outcomes determined by the curriculum are realized through the teaching process. Acquiring the necessary knowledge to understand the health care process and its application in practice, adopting the code of ethics, acquiring work skills and habits is the goal of the Health Care course. Some research shows that the decision on further education of nurses is influenced by several factors, but the acquisition of new knowledge stands out as the most important factor (Trbović & Vasiljević Blagojević 2017).

The Cabinet for Health Care is one of the basic teaching facilities necessary for successful teaching as well as professional training of all nurses (Radović Marković 2010; Ranković Vasiljević 2003). Clinical education is a fundamental part of education in nursing (Rahmani 2011), but also a path to achieving set learning outcomes in the segment of acquiring skills and habits (Karabuluta, 2015). Due to

the specificity of the teaching process, it is necessary that the hospital department fulfills all the requirements for the realization of practical teaching of health care (Terzić Marković & Vasiljević Blagojević 2018)

APPLICATION OF ONLINE TEACHING AND TOOLS - SERBIA 2020.

During the pandemic crisis, the “My Classroom TeslaEDU” platform was made available to secondary and primary schools in Serbia for conducting online classes. The platform is available at mojaucionica.gov.rs (Stojanović 2020).

During the crisis period, Microsoft provided free use of the Office 365 platform, which included a version of the Teams application, specially adapted for education. Access to the platform was provided for all students and teachers in primary and secondary schools, and they could access it from mobile devices and computers. This platform enables remote teaching over the Internet, so that through a group call the teacher can share the content of his screen with the students, as well as record the course of the lesson, which he can later share with all the students. In order to educate teachers, Microsoft organized free online trainings, in order to make the use of the platform more accessible in a short time. For students who could not access the Internet in a different way, free access to the Zoom application was provided. This application is intended for holding online meetings and is available in a free version, but with certain functional limitations, primarily in the number of participants and in the free duration of the class. Namely, the duration of the Zoom call is limited in the free format to 45 minutes, but the teachers coped by reconnecting after the break and continuing what was started.

Since some schools also used this application for distance learning, they were provided with free access to the application via mobile networks (Stojanović 2020). The already well-known and widely used application Viber, in the days of the transition to online teaching, enabled effective group communication and information exchange, and for those students who had no other access to the Internet, free access via mobile networks was also provided. Thanks to these applications, students and teachers were able to interact and exchange materials, but also to check the students’ acquired knowledge.

In the difficult conditions of the suspension of classical teaching in schools in Serbia due to the pandemic of the COVID-19 virus, a large number of different programs and alternative digital ways of teaching at all educational levels were organized, the most important of which was precisely distance learning. Although before that distance learning in Serbia was not at a particularly high level, the educational system in the newly created extraordinary circumstances applied a series of

measures and activities, which enabled the continuous and unhindered realization of the educational process in the newly created conditions (Stojanović 2020).

Rapid changes, in the way learning takes place and is realized, affected the satisfaction of students and teachers, their mental well-being and readiness to accept the “new normal” that was waiting for us all (Aristovnik, Keržič, Ravšelj et al. 2020)

RESEARCH METHODOLOGY

The aim of the research was defined by determining the attitudes of Health Care teachers and their students within the subject Health Care about the online mode of work. The research included 104 students of the 2nd, 3rd and 4th grades of the Secondary Medical School “7th April” Novi Sad, majoring in pediatric nurse technician and nurse technician and 35 Health Care teachers from the same school.

For the purposes of this research, two instruments were constructed: an instrument for teachers and an instrument for students. The content of the statements included in the instrument for teachers and students is based on empirical knowledge about the attitudes of respondents as well as on an insight into the available relevant literature on the subject of online teaching in the field of formal nursing education.

The constructed Instrument for teachers is organized in two parts. In addition to the general and demographic characteristics of teachers (gender, age, level of formal education, years of work experience), it also contained questions that examine teachers’ attitudes about the application of certain tools in online teaching, satisfaction with working in online teaching mode through individual teaching spheres, difficulties with which they met, about cooperation with colleagues during the implementation of online classes, as well as the scale for evaluating the overall satisfaction with the online mode of teaching, all related to the specifics of the Health Care subject that they teach.

The instrument for students, in addition to the general and demographic characteristics of the students (gender, educational profile and grade), also contained questions that examine students’ attitudes about the regularity of attending classes in the online mode, availability of technical tools for work, difficulties in work they encountered, time frame in which they attended online classes, the choice of the application that they evaluate as the best, attitudes about the relationship with the teacher during online classes, as well as the assessment of the difficulty of learning Healthcare in this mode of work. In the last part of the Instrument for students, the respondents were assessed for the level of satisfaction with the acquired knowledge as well as the overall satisfaction with the online teaching in the Health Care subject.

Simple statistical methods were used in the processing of the obtained data. The research was carried out during June 2022.

RESULTS

The student's perspective

The research included 104 students, of which 79.8% were girls, compared to 20.2% boys. This gender distribution of respondents is common for secondary health schools for the nurse and pediatric nurse profiles. A larger number of respondents attended the nursing course, 67.3% of them, while 32.7% were enrolled in the pediatric nursing course. The distribution of respondents according to classes is balanced. Second grade 34.6%, third grade 32.7% and fourth grade 32.7%.

The majority of respondents reported that they followed online classes regularly, 76% of them, while the remaining 24% stated that they did so partially regularly. Most of the surveyed students, 78.9%, declared that they had all the technical devices, while 3.8% of them had to buy the device/devices, and the rest borrowed or shared the technical devices with other students.

Out of the total number of respondents, 35 (33.6%) quickly adapted to the new way of working by switching to online classes, 27 (26%) of them reported that the change was difficult for them, while 42 of them (40.4%) estimated transition to a new way of working as partly difficult.

When it comes to evaluating the best tool for online teaching, opinions are divided. GoogleMeet was chosen by 36.5% of respondents, GoogleClassroom by 34.6%, Zoom by 20.3%, Viber by 6.7%, while only 2 students (1.9%) chose television.

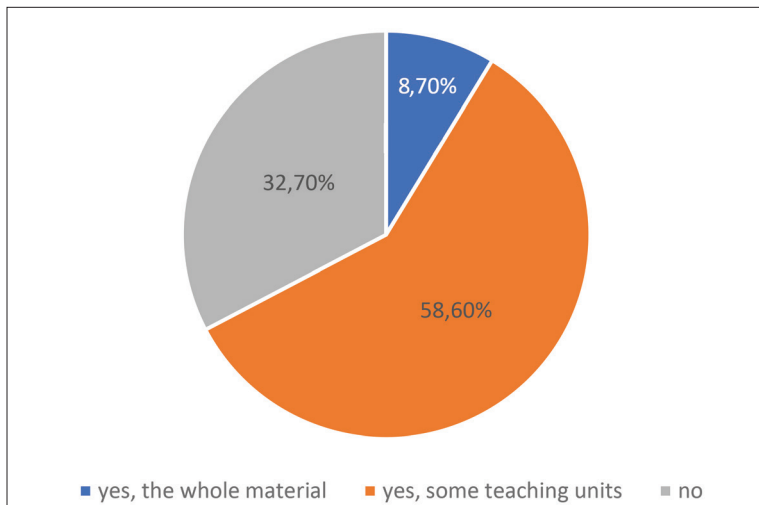


Chart 1: Distribution of respondents according to the attitude about the difficulty of mastering the content of the subject Health Care in the online teaching mode

A large number of students 61 (58.6%) agreed that some teaching units were difficult for them to master during their classes, 34 students (32.7%) had no problems with the material, while only 9 students (8.7%) replied that they had a problem with the entire material from the subject Health Care.

When asked about the advantages of this way of working compared to traditional teaching, the largest number of respondents point out availability in the sense of anytime and anywhere (50% of them). 38.4% believe that the advantage of online teaching is the use of various tools that make lectures more interesting. 11.6% of them do not think that online teaching has advantages.

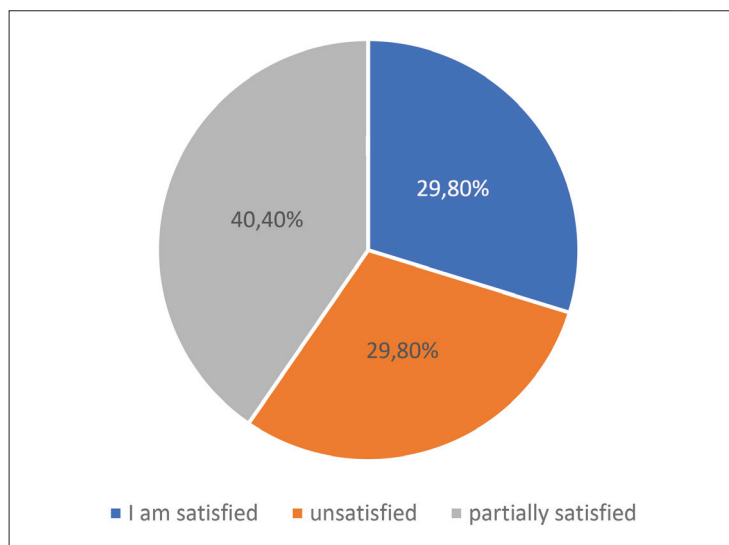


Chart 2: Distribution of respondents according to satisfaction with the knowledge gained in the subject Health Care in the online teaching mode

From Chart 2. we can see that students are mostly partially satisfied with the knowledge they have acquired from the subject Healthcare in online mode (40.4%), while the percentage of satisfied and dissatisfied is equal, 29.8% each.

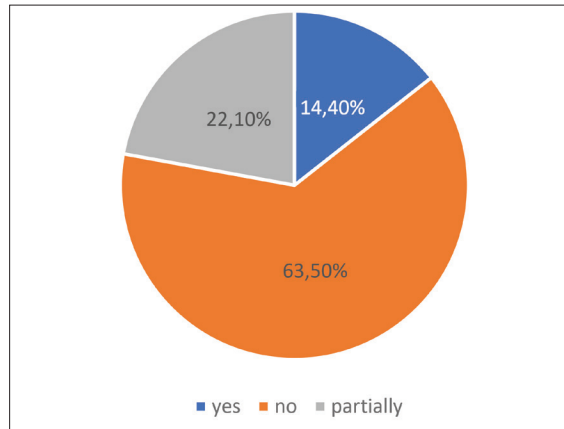


Chart 3: Distribution of respondents based on their views on the sustainability of studying the subject Healthcare in online teaching mode

The students are explicit here, 66 of them (63.5%) think that the subject of Health Care cannot be studied online, 23 of them (22.1%) think that it can be partially studied, while 15 students (14.4 %) believes that Health Care can be studied using online classes.

When it comes to the use of digital tools by Health Care teachers, students estimate (66.3%) that teachers need additional training.

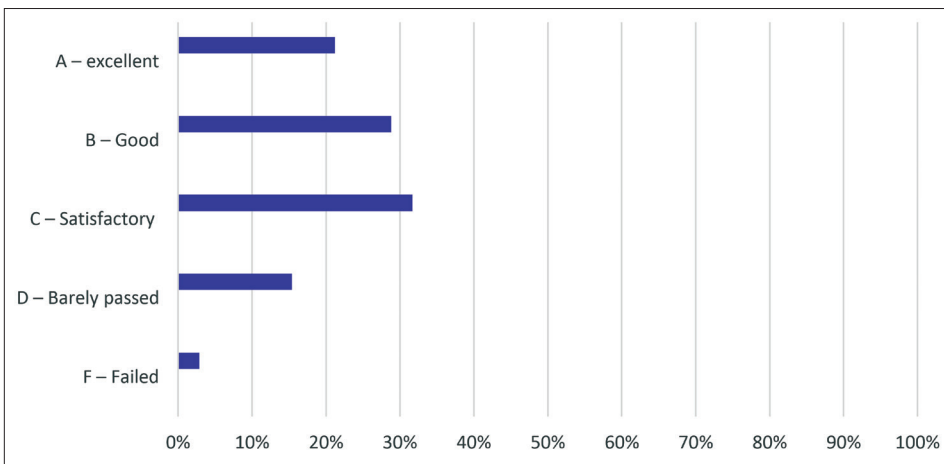


Chart 4: Distribution of respondents based on the assessment of the quality of online teaching in the subject Health Care

And finally, we see that the highest percentage of students rated the quality of teaching as good 3 (31%), followed by very good 4 (28.8%), while excellent 5 is in third place (21.2), some students rated it as sufficient 2 (15.4%), but there were students who considered that the grade for quality was insufficient 1 (2.9%). The average grade obtained is 3.45 (good).

The teacher's perspective

Of the total sample of Health Care teachers, 37.1% are between 31 and 40 years old, 28.6% are over 50 years old, 22.9% are under 30, while the smallest number are between 41 and 50 years old.

Regarding the years of work experience, the largest number of respondents have between 11 and 20 years of work experience (31.4% of them), followed by up to 5 and between 6 and 10, 25.7% each, and the least number of those with work experience from 21 to 35 years (17.1%).

A high percentage of 62.9% of our respondents declared that they had difficulties when switching to the new, online mode of work. They also report that they adapted quickly (51.4%) or after some time (48.6%).

The analysis of the results showed that online teaching in the examined school was organized through the Google platform - Google Classroom, as well as video conference platforms (Zoom, Skype, Google Meet, etc.), while messenger and call applications are used to a lesser extent (Viber, WhatsApp, Facebook Messenger, etc.). Such findings are expected given that Google has a free and language-localized system for educational institutions, where each school has access to all Google applications with one account. On the other hand, messenger and call applications as communication tools are well known to both students and teachers because they use them in everyday life. It can be concluded that these three categories of platforms/applications are used mixed, depending on the specific needs of the teaching process.

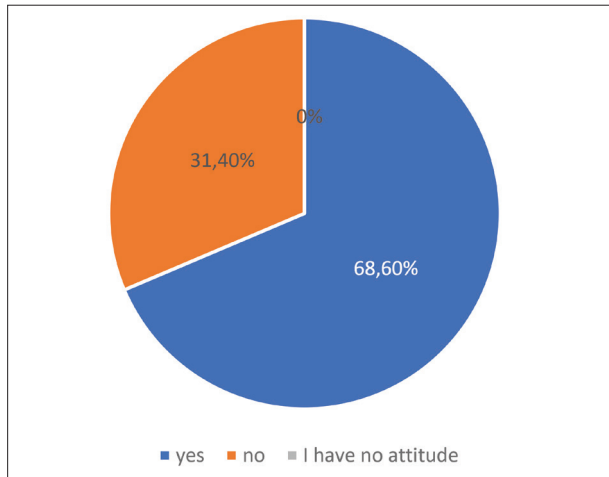


Chart 5: Distribution of respondents in relation to the need for additional education on digital tools

From the respondents' answers, we see that 68.6% of teachers think they need additional education on digital tools, while 31.40% think they don't need it.

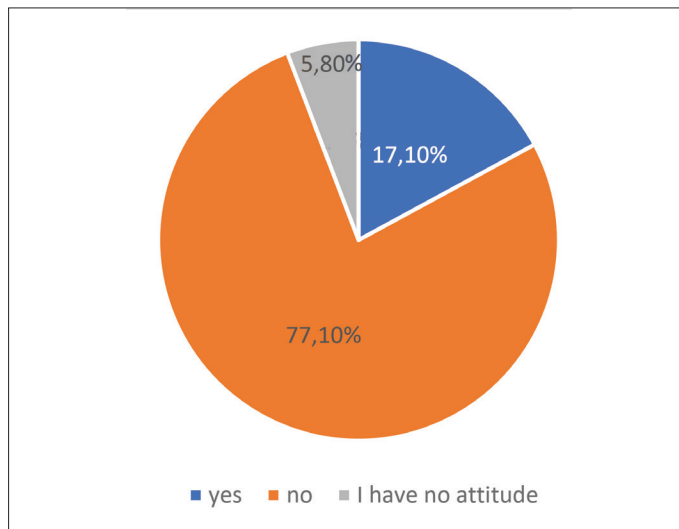


Chart 6: Distribution of respondents according to the attitude about the sustainability of the online mode of teaching in the subject Health Care

A total of 77.1% of respondents believe that they do not see online teaching as a sustainable model in the subject of Health Care, 17.1% respond positively, while 5.8% of respondents do not have an opinion on this issue.

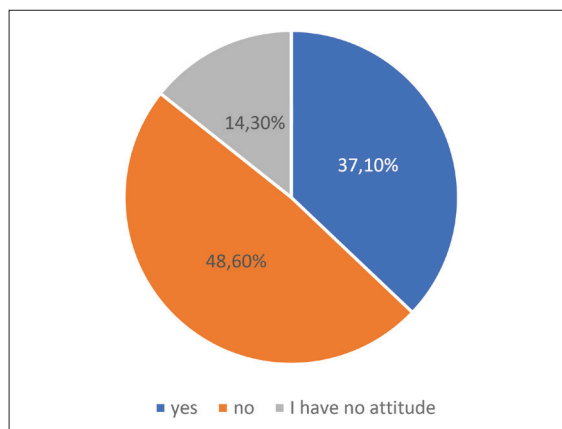


Chart 7: Distribution of respondents according to satisfaction with the quality of acquired knowledge of their students in the subject Health Care during online classes

Teachers in the largest percentage are not satisfied with the quality of acquired knowledge of students during distance learning, 48.6% of them, 37.1% of them are satisfied, while 14.3% of respondents do not have an opinion on this issue.

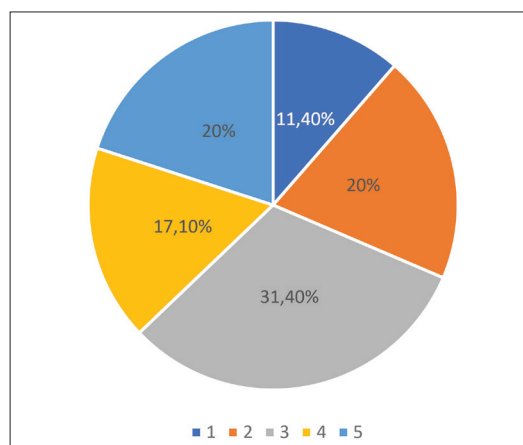


Chart 8: Distribution according to the answer to the question How would you rate the expediency of distance learning for the subject Health Care? (1- not purposeful at all, 5 - very purposeful)

As well as students and teachers, rated 3 with the highest percentage of 31.40% as an answer to this question about the usefulness of distance learning for the subject of Health Care, while 11.40% of teachers gave an insufficient 1 as an answer. The average grade obtained is about 3 (good).

DISCUSSION

The aim of the research of our work is to determine the attitudes of students and teachers about the application of online teaching in the subject Health Care during the period of the COVID-19 Pandemic. Based on the theoretical analysis and the results obtained from the research, we can conclude that students and teachers have same opinion that online teaching is good, but that traditional teaching is still inviolable when it comes to professional training.

The authors Vučetić, Vasojević and Kirin, as part of a research conducted during April 2020, among students of vocational and grammar schools in Belgrade, Kragujevac, Šabac, Kraljevo, Užice, Bajina Bašta and Sombor, determined the advantages of online teaching in the opinion of students and which segments of online classes they value most. It was found that the majority of respondents have technical equipment for monitoring online classes, which includes a smartphone, the ability to watch TV content on a delayed basis and a computer with an Internet connection. Out of the total number of respondents, the majority pointed out that they do not follow the lessons that are broadcast through TV programs, but also the majority thinks that the lessons are well organized. Our interviewees report on this topic in an identical manner. In mutual communication and communication with professors, the majority of students use mobile applications for the exchange of teaching content (Viber, Skype), while a small number of students use digital learning platforms (Google classroom, Google chat, Zoom, e-mail) (3), which is determined by the results of our research.

Research also conducted in Serbia in 2020 by the author Stepanović (Stepanović, 2020) showed that online teaching most often took place via Google platforms (Google classroom, Google Expeditions, Google Forms), as well as video conference platforms (Zoom, Skype, Google Meet, etc.). In the research, it was stated that such results were expected considering that Google has a free account and is a linguistically localized system for educational institutions, where each with one account has access to all Google applications. When it comes to student satisfaction with online teaching, research shows that students are relatively satisfied. It is interesting that although the research included high school students as well as vocational school students, the results of satisfaction are identical to the ones we obtained.

Authors Chadwick and McLoughlin (2020), conducted research in Ireland, examining the impact of COVID-19 on learning, studying and enabling practical

teaching skills following the re-opening of schools. Their research showed that measures to prevent the transmission of viruses and online teaching had a very negative impact on teaching, learning and assessment of materials, they pointed out that more than 90% of teachers pointed out that online teaching had a negative impact on the practical activity of students (Kolshom 1998). We found very similar attitudes when examining the teachers of Health Care in our research.

Saqr, Raspopovic Milic, Pancheva et al. (2023) analyze papers published on the subject of the COVID-19 pandemic in the context of education and come to the conclusion that medical education (including dental and nursing education) was among the most discussed topics, and medical education journals dominated the list of our top venues. Several articles discussed the dilemma of the need to train future healthcare professionals in hospitals (where the risk of infection is high) while still protecting the students, teachers and patients (Iyer, Aziz & Ojcius 2020; Dewart, Corcoran, Thirsk et al. 2020). The issue was discussed widely across the world. Other articles discussed medical students' contributions to the delivery of care where healthcare services were restrained (Klasen, Vithyapathy, Zante et al. 2020).

Unfortunately, there is no data on research in the field of teaching Health Care at the secondary school level in online mode. The reasons for the absence of this type of data lie, as the authors believe, primarily in the specificity of our educational system, which foresees the beginning of education for nurses already within secondary medical schools, while the rest of the world begins education at an older age, i.e. within higher education. On the other hand, the available research from our area did not deal with the specifics of the professional subject Health Care, but more with the analysis of attitudes and the implementation of general education subjects both in grammar schools and within the framework of research in vocational schools (Stojanovic, 2020; Attitudes of young people about online teaching in Serbia: research results; Stepanovic 2020; Vučetić, Vasojević & Kirin 2020; etc).

CONCLUSION AND PROPOSED MEASURES

The contribution of this paper is in the specificity and uniqueness of the topic it deals with in the context of the subject Health Care as the main subject of the nursing technician profession and the initial analysis of the views of students and teachers of the profession about the justification and possibilities of learning the subject in online mode.

The conclusions we reached by analyzing the available literature and our research open the possibility for the improvement of teachers and their digital competences, which would ultimately improve the teaching practice itself, leading to a higher level of student satisfaction with the offered and transmitted knowledge. The specificity of the Health Care subject, as well as the competencies that students

should acquire through the development of empathy, communication skills, altruism, health care skills, etc. it is certainly not possible to realize it exclusively in the online mode of teaching.

Analyzing the existing literature and once again establishing that there is no teaching practice of the nursing profession at the secondary level of education, they again impose new topics for research on the importance of deciding to pursue this profession in the later period of life, as is the practice of other countries in the surrounding and developed world.

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