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The Reflection of Covid-19 Distance Education in Health Profession in Czechia: Comparison of View of Higher Education Teachers and Students

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Abstract

The paper focuses on the perception of Covid-19 Distance Education in health care profession in Czechia from perspective of higher education teachers and students. The study answers two research questions: 1) How satisfied were health profession students and teachers with their education during the COVID-19 pandemic? and 2) How did the perspectives on education in terms of methods differ between health professions teachers and students with education during the COVID-19 pandemic? The research used mixed methods research (quantitative survey and focus groups). There is a significant distance between students' and teachers' perceptions of online education and its forms. Teachers see online education less negatively (29%) than students (51,1%). One of the reasons, it was the lack of communication and support from HEIs. Teachers have didactic problems in managing their teaching, especially when they try to activate students. On the contrary students perceive themselves as active, but this does not entirely correspond to the view of their teachers. Students remain more conservative in their perception of online learning. However, student do not perceive any teaching method simple negatively. An exercise followed by simulation teaching and demonstration teaching and lecture are the best rate the form of teaching by students. Teachers rate demonstration and simulation teaching, discussions and exercises the best.

Keywords: covid-19; higher education; health care, online learning

1. Introduction

This paper focuses on the education process of health professional students, specifically general nurses (Quinn, 2000; Freshwater, 1999; Jack et al., 2017) and paramedics (Xue-man, 2006; De Luca et al., 2017) and their teachers (Gillespie & McFetridge, 2006). These professions are classified as health professions (Gelfand, 2013; Kienle & Kiene, 2011) having their place in university education (Pursell & McCrae, 2021). The most common form of graduation is a bachelor's degree, but there is also postgraduate education for general nurses (Gerrish et al., 2003). These professions are undergoing a process of gradual professionalization not only in

the Czech Republic (Swick, 2000; Švec, 2019). Therefore, their education in the university setting is given increased attention and social importance (Board, 1999).

Looking into the research discourse, we can say that the field of health professions education is strongly practice-oriented (Biley & Smith, 1998; Freshwater, 1999; Alinier et al., 2004; Ankers et al., 2018; Bergström & Lindh, 2018). That is, their education can be described as one that is directed towards the realisation of specific skills, a practically oriented helping profession (White & Winstanley, 2014; Svec, 2019)

The situation with the advent of COVID-19 and the closure of universities to teaching has significantly reduced the practical training, simulations and demonstrations in teaching and posed new challenges to the education of the profession. This topic is widely reflected in the literature (Carolan et al., 2020; Dewart et al., 2020; Aslan & Pekince, 2021; Ramos-Morcillo et al., 2020). Our research, however, does not focus on describing best practices or recommendations, nor on issues related to stress, but follows the reflection of student and teacher perspectives on the whole process of transformation and move to online teaching (Subedi et al., 2020; Olum et al., 2020).

What is missing in the research field is not only a view of the national situation associated with the Czech Republic, but also some aspects of the different perspectives on teaching by students and teachers are not sufficiently reflected in the literature. Our study will therefore aim to fill this missing knowledge. The study answers two research questions:

- 1) How satisfied were health profession students and teachers with their education during the COVID-19 pandemic?
- 2) How did the perspectives on education in terms of methods differ between health professions teachers and students with education during the COVID-19 pandemic?

1.1. Health Professions Education in the Czech Republic

The first Czech nursing school was founded in 1874 in Prague and offered mainly short-term, free courses for nurses. In 1881, however, it had to close its activities. Nursing was (until the World War) largely linked to the work of religious sisters, who were educated within religious education systems and mainly by practice. In 1916, the Czech Provincial School for Nursing of the Sick was established at the General Hospital in Prague, combining theoretical studies (first year) and practical training in the hospital (second year). The study is completed by a state final examination. After 1948, the study was conceived as a secondary school course, after 1989 it

was professionalised and specialised within the framework of secondary education. In parallel, there is university study (since 1960 at Charles University). Since 1992, a three-year bachelor's degree has been formed, which has been the basic axis of education until the present day (Kutnohorská, 2010; Vaňková & Bártlová, 2015; Habermann & Uys, 2006). The number of study programmes and places where the field of nursing can be studied is also gradually expanding (currently 13 universities). At seven of them it is also possible to pursue a follow-up master's degree. There are also doctoral programmes linked to nursing or partly corresponding to the nursing profile.

Thus, it can be claimed that the study of nurses in the Czech Republic is developed at the level of secondary and tertiary education (in all three phases of study), we can talk about full professionalization and gradual academic emancipation of the study and its gradual development. There is a long-term trend of professionalization consisting in the gradual replacement of secondary-educated staff by university-educated staff, a tendency that can also be seen in the world (Smith, 2015; Miers, 2002; Sztembis, 2006).

The paramedic education is younger. Since 1991 it has been possible to study it as a two-year post-secondary course. In the following period, students had the choice between a three-year higher vocational education and a bachelor's degree. As of 2019, we can speak of full academic professionalization, as the study is linked to the bachelor's degree and can be followed at 9 universities.

2. Methodology

The research used mixed methods research (Creswell et al., 2003), i.e. a mix of quantitative and qualitative research. First, a quantitative questionnaire survey was conducted and sent to all Czech HEIs offering general nursing and paramedicine degree programmes. The questionnaire was distributed in cooperation with the schools to teachers and students of master

A quantitative survey was conducted at the turn of 2020/21. Two questionnaires were prepared. One for students and one for teachers. Most of the questions were comparable to each other. The questionnaires contained a mix of opened and closed questions, and it were filled by 294 students and 76 teachers (Table 1). The table shows the distribution of gender in the research sample. In both surveyed populations, the ratio of women to men is comparable - 29% for teachers and 28% for students are men. The responses of both groups are therefore equal in terms of gender.

Following the questionnaire survey, focus groups were conducted with students and teachers in the spring of 2021 to gain a deeper understanding of the questionnaire data. Quantitative data was analysed by basic descriptive statistics (Satake, 2015). We used open, axial and selective coding for analysing focus groups results.

Table 1. Gender of the sample

	Men	Women	Total
Students	81	213	294
Teachers	22	54	76

3. Results

For the sake of clarity, we will divide the results section into two parts. In the first we will focus on the students' questionnaire responses, in the second on the teachers' responses. The discussion will then compare the responses and place them into the broader context of other research findings from the Czech Republic and the world.

3.1. Students

If we analyse the evaluation of student learning during the closure of universities during the state of emergency, we can say that a slight scepticism prevails. On the one hand, we can see that 21.7% evaluate online teaching as a good substitute for face-to-face teaching, but the opposite opinion is held by 51.1% of respondents. The remaining 27.2% hold a neutral opinion.

In this context, the students' perspective on the work of their teachers is interesting. 34% of the students have a positive opinion of them, 37.4% have a negative opinion, which can be considered as almost balanced figures given the sample size. Another 28.6% are neutral. Thus, it can be said that students evaluate more positively the efforts of their teachers than the outcome of their educational process. Meanwhile, there is a strong central neutral value in both questions.

The next question shows that students themselves are not used to critical reflection on their own education, that their approach to teaching is in some ways ambivalent. 35.7% of the students rate themselves as active (28.5% rate themselves as such in regular teaching) and 25.8% as passive (30.1% in regular teaching). The neutral value of 38.4% (41.4%) indicates a reluctance or inability to self-evaluate rather than a truly representative figure. At the same time, it appears that **the online environment leads to activation** – increasing the proportion of active and

slightly decreasing the proportion of passive. But the problem with this item is its large neutral value.

Yet, it can be argued that students perceive themselves as active, which in the context of struggling teachers and rather negative evaluations of online learning points to deeper or systemic problems than perhaps the commonly available categories of "bad and overworked teachers" and "lazy passive students".

Interesting data can be seen in student evaluations of teaching methods (Figure 1). Figure 1 shows Evaluation of individual teaching methods by students on a scale from 1 to 5 (evaluation is like in school - 1 indicates the best grade, 5 the worst). If, as in the previous one, we consider the sums of the two most positive answers, it can be argued that the most highly rated form of teaching is the tutorial (87.0%), followed by simulation (83.3), demonstration (73.1) lecture (72.1) and discussion (67.7%). These results are surprising for several reasons. First, it can be said that students prefer active forms of learning with the teacher, and as whole self-contained thoughtful blocks. Discussion is rated significantly lower than exercises, indicating a certain conservative element to the approach to teaching.

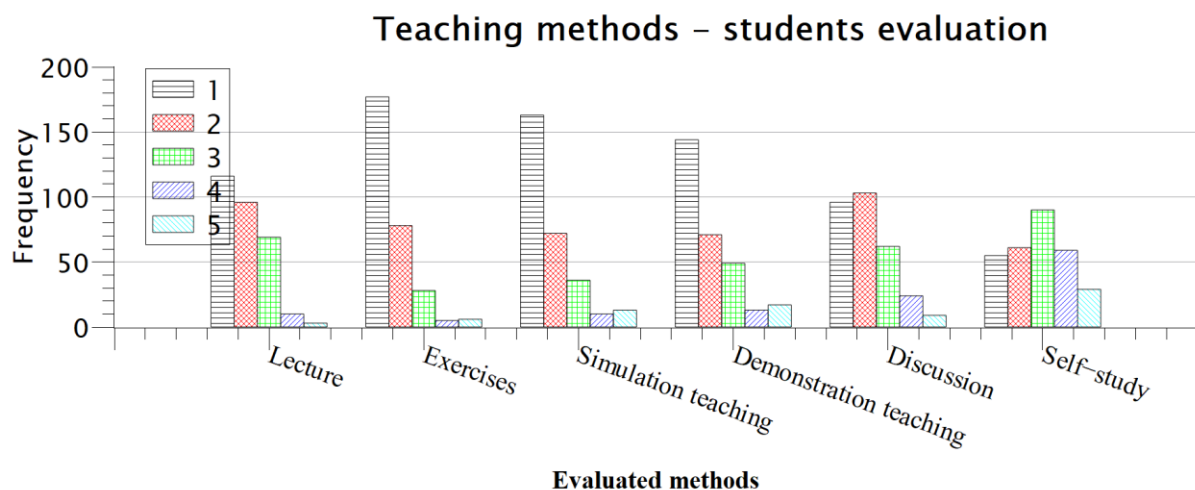


Fig. 1. Teaching methods – students' evaluation

In terms of forms, self-study is the most balanced (39.5% positive and 30.0% negative ratings), which can be seen as an interesting impulse towards the quality of education and a gradual reduction of this form. Besides being the most varied, it is rated as the least preferred.

In the Czech academic environment, lectures are perceived as a more prestigious form of teaching, and are therefore evaluated separately, for example in habilitation procedures, and by

law the best qualified academics participate in them. However, students are more likely to evaluate exercises, simulations and demonstrations, forms in which junior teachers or PhD students are primarily involved. We consider this information to be crucial towards further curriculum development in health professional study programmes.

3.2. Teachers

When asked to what extent teachers try to include activation elements in their teaching, 48.6% of the teachers answered positively and 27.1% negatively. Thus, it can be argued that through the teachers' lens, activation elements are included, and students have the space to be active.

Positive responses to students' activity can be seen in 32.9% of the responses, while passivity can be seen in 28.8% of the responses, that is, according to the teachers, the students are moderately active, which in the context of the previous response leads to the finding that the students are responding with their activity to the creation of activation elements in the classroom.

It is interesting to compare this with traditional teaching, where students have admitted activity at 53.4% and passivity at 20.5%. Thus, according to the teachers, both the proportion of passive students and (much more significantly) the proportion of active ones drop significantly. The comparison with the students' reflection is interesting here. The neutral position is significantly smaller (38.4% and 26%), teachers are optimistic about activity in regular classes (fundamentally disproportionate with students) and essentially correlated with students' perceptions of passivity. There is also a difference in that while teachers believe student activity in online instruction has decreased, they themselves believe it has increased. There may be several reasons for this disproportion - a degree of subjective evaluation, experience with a different target group, sampling error, etc.

To what extent did your distance learning replace the quality of full-time teaching in the past semester? We can see a strong neutral rating of 47.4% (here teachers seem to be undecided or less able to self-reflect), a positive rating of 23.7%, which is very similar to the students, and a negative rating of 29%, which is much lower than the students. Teachers are therefore more optimistic than students in evaluating their own teaching.

Teachers believe (Figure 2, same scale as Figure 1) that their students are most comfortable with demonstration teaching (86.7%), simulation teaching (85.3%), discussion (81.3%) and exercises (80%). What is particularly interesting about these data is the significant

overestimation of discussion, underestimation of exercises and especially lectures (54.7%). These results show that teachers have little idea of how the exercises are conducted (underestimating them) and are significantly more progressive than their students. A look at the selected forms clearly shows that teachers want the lessons to be practical, illustrative and interactive, while students seem to be more conservative.

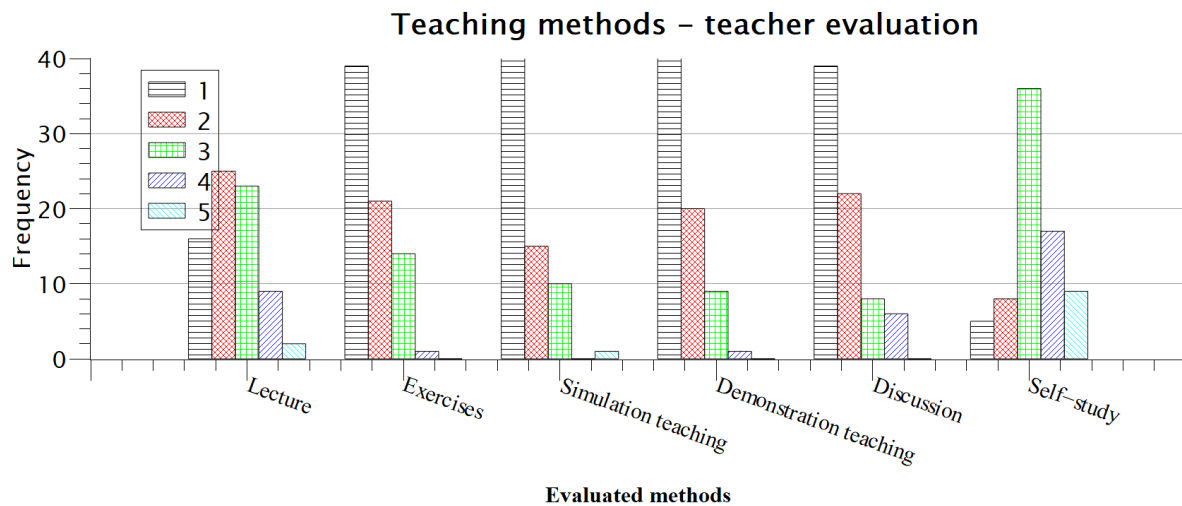


Fig. 1. Teaching methods – teachers' evaluation

3.3. Answers to the research questions

At this point we can provide a basic summary of the answers to our research questions.

- 1) How satisfied were health profession students and teachers with their education during the COVID-19 pandemic?

To sum up, a slight scepticism prevails among students and the absence of experience with any systematic self-evaluation in the field of education can be observed. They perceive themselves as active, but this does not entirely correspond to the view of their teachers. On the contrary, the teachers seem to have a desire to teach actively and to activate the students, but this effort is met with misunderstanding rather than acceptance by the students. Overall, the results point to a certain student apathy, which corresponds well with the results of earlier studies conducted abroad. Students are also more sceptical about substitution of full-time (off-line) learning by distance learning than teachers. As we found in focus groups, one of the reasons, it was the lack of communication and support from HEIs with students during distance learning.

- 2) How did the perspectives on education in terms of methods differ between health professions teachers and students with education during the COVID-19 pandemic?

An exercise followed by simulation teaching and demonstration teaching and lecture are the best rate the form of teaching by students. Teachers rate demonstration and simulation teaching, discussions and exercises the best. It can be said that a closer look at the results shows the importance of a variety of forms of education in the health professions, where one mode of teaching does not dominate over the others. The underestimation of lectures and the underestimation of exercises by teachers and, conversely, the overestimation of discussions is fundamental. It can be concluded that the view of Czech students is more conservative in relation to teaching methods than those of teachers. However, results show a relatively high level of satisfaction or at least a neutral attitude with all forms of teaching among students, while teachers are more divided in their opinions.

4. Discussion

The first area of research focus was student activation (Mason, 2000; Zhang et al., 2007) in online learning. The topic has been theoretically reflected by, for example, Anderson (2003) and Abrami et al. (2011), who point out that it is the interactivity and activity of students that is crucial for the actual online learning. Xiao (2017) highlights the important role of the teacher, as does Parker (2020). It appears that the level of student interactivity and activity will be closely related to the overall performance of the teacher (Sharp & Huett, 2006). Students themselves are neutral about their teachers' work, and teachers in our research emphasise their own willingness to work with interactive elements and tools (Shin & Eom, 2020; Gokbulut, 2020) of various kinds. We believe that this is where one of the key points of the evaluation of the whole educational process will be, because the role of the teacher is a crucial, though not the only parameter leading to the activation of students in online learning. In some respects, similar results are reported, for example, by Chen et al. (2020).

A rather complicated issue is the quality and potential of online learning as a substitute for traditional face-to-face teaching in a university setting (Bao, 2020; Rashid & Yadav, 2020). Duraku and Hoxha (2020) point out that the whole issue needs to be viewed in the broader context of digital wellbeing (Blake et al., 2021; Burns et al., 2020), which is fundamental to the quality of education. It turns out that content or formats alone are not the only determinant and that it is the emphasis on making both students (Sahu, 2020; Burns et al., 2020) and teachers (Passey, 2021) feel good during learning that is critical to educational outcomes. This theme

was also partly mentioned by teachers and students in our research (in the qualitative part), but it was clear that it does not have a sufficient tradition in the Czech environment. The prevailing paradigm in the Czech environment is still not pragmatist or body-emphasizing enough (Johnson, 2015; 2018).

At the same time, we have to point out that the topic of online quality of teaching is specifically strongly reflected in medical or health-oriented literature (Halcomb et al., 2020; Rosa et al., 2020; Halcomb et al., 2020b; Oducado & Estoque, 2021). A positive discourse can be traced in it (Carolan et al., 2020) that highlights the importance of the pandemic as a catalyst for change in not very flexible education, while also drawing attention to the fact that the pandemic created many new situations in which practice development and value-based learning occurred. It would be a mistake, therefore, to work with a model of a return to the pre-Covid-19 era. In contrast, the literature focusing on general nurses seeks transformative change. This is despite some research documenting fewer positive experiences (Li et al., 2021; Guillasper et al., 2021; Nemati et al., 2020). This highlights the fact that not every change is necessarily positive and that we need to look for systematic examples of good innovative practice.

Didactic methods or forms of education are an important topic of our research (Butler, 1992; Hussain et al., 2011; Mangram et al., 2015). A fundamental question is whether lecture forms are dead or still functional (DiPiro, 2009; Kassebaum, 1991). Zinski et al. (2017) point out that there are differences in responses by year. Our results show that lectures are still a demanded, though not the only, form of appropriate college education. However, in contrast to DiPiro (2009), didactic nostalgia for lectures does not prevail in our sample, but rather a desire for activation and discussion (Sadeghi et al., 2014; Ghotbi et al., 2013; Chilwant, 2012). Thus, it can be argued that lectures will be maintained in the future, as an integral part of academic education, but new proportions to other forms of teaching will have to be sought (Zinski et al., 2017) and a rethinking of how lectures should be designed (Zeraati et al., 2015; Kermaniyan et al., 2013). Both the analysed studies and the outcome of our research suggest that the design of lectures will have to change intensively as Covid-19 is likely to emphasize the modernization of the entire curriculum (Kang, 2021; Gomez et al., 2020). At the same time, we have to emphasize that this change is a hotly debated topic in the literature, both in the general education literature and that focused on medical disciplines. It is therefore possible to identify a certain discourse of change focused on appropriate educational forms, which corresponds well with the results of research among teachers and students.

A fundamental question focuses on student and academic satisfaction with teaching in a pandemic. It can be said this is a topic relatively saturated by research (García-González et al., 2021; Mechili et al., 2021; Hussien et al., 2020; Oducado & Estoque, 2021). In general, there is a consensus that the pandemic situation has had a negative impact on students' psychological well-being and that the transition to online education has been associated with a high burden, stress and demands on the environment in which education occurs, which, in the context of restrictions on personal movement and travel, closure of study rooms and libraries, has had a negative impact on the well-being of both students and academics (Lowman et al., 2020).

5. Conclusion

In the context of the international research field, our study makes several important points that are crucial in relation to health professions education:

- Our research has shown that there is a significant distance between students' and teachers' perceptions of (online) education and its forms. While teachers are more inclined towards modern, literature-supported forms of education, students remain more conservative but at the same time critical of teaching as such.
- For students, there is no method of teaching that has been tested in a questionnaire that has a clearly negative reception. Self-study is the most problematic, but otherwise it can be said that students perceive a variety of educational forms as functional, which is an important finding for the future development of education.
- Online education in the Covid-19 era has brought a certain passivity or scepticism among students in health professions education. From the results, they seem to lack developed competencies for learning, the ability to work with their own progress and self-assessment. This is a topic that should be addressed in the training of these professions, also in view of the importance of lifelong learning in them.
- Teachers have didactic problems in managing their teaching - even though they try to activate students, a certain systematic failure can be seen. In this area, new practices and approaches should be sought to improve the quality of online education in health professions in the country.
- Students need systematic support during distance education from their higher education institution.

At the same time, it has become clear that topics and emphases addressed in our research are very similar to those addressed in the literature and in the mainstream research field. We believe

this is a sign of a certain professional stability and quality of the professionalization of education, which is perceived by these professions as an essential prerequisite for the long-term maintenance of university and professional development.

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