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Teaching medical interns during Covid-19 pandemic: Explaining the lived experiences of clinical instructors

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Abstract--Background The corona virus pandemic not only endangered the lives of many people, but also affected many organizations, including medical education. One of the challenges has been maintaining the quality of clinical education. Depending on the situation clinical educator adopted different strategies. Education changed from the patient bed to virtual training and blended education. Objective The purpose was to explain the lived experiences of clinical educator from education to interns in corona virus pandemic. Method Study was using phenomenological method. The participants were clinical educator who taught interns during the Covid 19 pandemic. Sampling was done purposefully and ended with data saturation. The data were obtained through semi-structured telephone interviews with 11 male and female participants with different specialties. Data were analyzed by Colaizzi descriptive phenomenology. Result Five final themes were created to describe the phenomenon of clinical education during the pandemic, focusing on virtual or combined training. These final themes were "Virtual education is an inadequate prerequisite", "Education tensions in

crisis", "Platform for progress crisis", "The shadow of organization and structure affecting crisis education" and "Transformed educational beliefs and attitudes ". Conclusion The results showed that education during the pandemic has been experienced positively and negatively. The instructors were faced with the stressful situation. They considered virtual education as a useful solution only in the case of necessity. This study can help to develop flexible programs for dealing with similar situations in the future.

Keywords---Covid 19, Clinical Education, Virtual Education, Interns, Lived experience.

Introduction

The Covid-19 pandemic not only endangered the lives of many people, but also affected many organizations by limiting social activities [1]. Different social systems were challenged by the pandemic and medical education was not an exception. Universities around the world were involved in offering various services [2, 3]. Recent studies show that covid pandemic has caused significant problems in the implementation of medical education. In a pandemic, providing quality education is a challenge and maintaining quality of education in such a stressful period is a necessity [4, 5]. Clinical settings are one of the important strongholds of medical education, so providing quality education in these settings is one of the main concerns of universities and teachers [6]. Obviously, at this point in time, educators need to think about innovative ways to qualify medical students. Problems in clinical education impair its effectiveness [7]. The onset of Covid-19 and the increase in the number of patients created many challenges for medical students and limited their attendance at medical centers. This issue promoted the virtual forms of education and other integrated methods [6]. Faced with such conditions, clinical instructors underwent changes that require analysis. Many medical faculty members still believe that attending face-to-face classes cannot be replaced by virtual classes. What is certain is that in this pandemic it is essential for medical schools and instructors to share their educational experiences and best practices [8, 9]. Many colleges and institutions were looking for quick and innovative solutions to reduce their instructors' stress. Those involved in such programs believe that paying attention to educators and supporting and understanding them play a vital role in promoting effective education in the current situation [10]. Use of others' experiences, as well as experiences gained from similar crises in the past, can be helpful in pandemic situations. Medical educators can offer appropriate solutions by adapting themselves and gaining experience in this regard [3, 11].

Recent studies show that although many instructors have shown interest in providing solutions and applying new teaching methods, some have reported it as a stressful issue. These days, the challenges of medical education are very unique in terms of environments and situations [10]. Therefore, the purpose of this study was to investigate the teaching conditions of medical instructors by explaining their lived experiences of teaching medical interns.

Method

The present study was conducted with a qualitative approach and descriptive phenomenological method with emphasis on Colaizzi's method. According to the purpose of this study, general medicine instructors who train interns in hospitals were selected as participants. Purposeful sampling was performed with maximum variation to cover a wide range of experiences. The researcher continued sampling until the data were saturated, which means that no new data was produced by further analysis. Finally, 11 participants [4 females and 7 males], who had the minimum 1 and maximum 27 years of experience in teaching medical students, were entered into the study. They were selected from different universities of medical sciences in the country and had different specialties such as anesthesia, internal medicine, surgical medicine, gynecology, infectious diseases, emergency medicine, social medicine and urology. In-depth and semi-structured interview was used as data collection method, which was conducted by telephone due to pandemic conditions. Before conducting interview, informed consent was obtained from the participants. Before the start of main interview, the researcher, after introducing himself, determined the time of interview with the agreement of participants. In addition to interview questions, constructive and reflective questions were also used to clarify the subject and help to better understand the experiences. To complete the data collection process, the interviews were recorded after obtaining permission from the participants. The focus of interviews was on what participants experienced and felt in their training of medical interns during the Covid-19 epidemic. The analysis was performed using Colaizzi's descriptive phenomenology method. In the first step, after recording each interview, the researchers listened to the interview at the first opportunity. After hearing and understanding each interview, the interview text was transcribed verbatim and re-listened to in order to get a general sense of understanding. At this stage, the researcher tried to understand the main interview descriptions with an open mind without bias or any preconceived feelings. In the next step, important sentences related to the experiences of medical instructors during the pandemic were extracted and identified by drawing a line under them. These sentences and statements were organized in the form of a table with the participant's number, his or her interview, the text's page number, in which the sentences were, and the line number. In the next step, the meanings behind the important sentences were identified and the original meanings were coded and formulated using abstraction. After extracting the themes, they were conceptually categorized and finally the main themes were obtained. In this section, the final themes were carefully described and a comprehensive explanation was given to them in relation to each other. At the end of the work, a comprehensive and unambiguous description of the phenomenon was developed. Finally, the result was given to some participants for confirmation.

In this study, the criteria of credibility, transferability, dependability and confirmability were used to check the data trustworthiness. The researcher tried to gain a deeper understanding of the phenomenon by conducting in-depth interview with the participants. Also, the main themes and description of the phenomenon were checked and approved by the participants. Findings and stages of analysis were discussed by the research team. To ensure credibility, the researcher gave the data analysis to other researchers to see if they agree with the

results. In addition, in order to achieve conformability, an attempt was made to record all stages of the research. The researcher examined the transferability of results by providing the findings to some readers and receiving their confirmation. In addition, sampling was performed with maximum variation in the present study. This research was carried out after receiving the code of ethics [ID IR.VUMS.REC.1399.013] from the ethics committee of Virtual University of Medical Sciences.

Findings

A total of 398 sentences or phrases containing semantic units related to the study objective were separated from the interviews' texts, and after examining and understanding the latent meanings in them, 362 meanings were obtained. This resulted in the formation of 118 primary themes, which were again categorized and subcategorized in order to describe the participants' experiences, while retaining the original meaning. The data analysis resulted in the formation of 11 sub-themes and 5 main themes [Table 2].

Table 2: Sub-theme and final themes

Virtual education is required but it is not sufficient	Virtual training is useful training aid in clinical education
	Virtual training is a temporary but insufficient solution
Educational tensions in crisis	Tensions caused by entering an unfamiliar space without the experience of virtual education
	Educational tensions caused by crisis
Crisis of progress platform	Crisis of in-service educator
	Crisis of progress platform towards modern e-learning
The shadow of organization and structure affecting education during crisis	The role of colleagues in education during critical situations
	Lack of systemic support and freedom of action
Altered educational beliefs and attitudes	Understanding the possibility of continues education in any situation
	Efforts to sustain education

In the follow, the emerging themes are described and examples of participants' statements are given:

Virtual education is required but it is not sufficient:

The experiences of clinical instructors regarding the application of e-learning in their teaching process varied from not accepting to being interested and having positive experience in e-learning in clinical education.

"Virtual space does not feel good to me. The training I provide for students is usually up close, especially when we examine the patient".

A participant expressed his disinterest in e-learning and stated:

"In the sky room you can only see the attendees' names. I do not have their voices either. There is no one to look at. I am sitting in a virtual room in front of a computer talking to myself. I personally do not like this method of education." [P-9]

In contrast, there were participants who considered the entry of e-learning into clinical education during the crisis as a pleasant phenomenon. "I'm very interested. Following the crisis, we start our morning reports through WhatsApp.

.... This way is much more interesting for students. We send voice message and students send voices back to us, and then we conduct a search." [P-7]

Despite accepting the use of this type of education, participants were not satisfied with its sufficiency, especially in terms of practical and communicational education, as well as graduating competent students.

"My main problem is that we cannot train the student up close next to the patient's bedside, especially in the areas where close contact is needed, such as physical examination It is really difficult to teach students, because the learning environment and being in front of a human being is vastly different than watching a film about physical examination. Doing a procedure that must be done with the hands, thoughts and support of the whole body is not something that can be done in cyberspace". [P-1]

An instructor expressed his dissatisfaction with the skills of his students as follows:

"It is completely my personal experience. I was in the emergency room from the beginning of covid pandemic. It is like a movie in front of me. I can safely say that, the last 50 interns I had with other 50 interns that I had a year and a half ago have been suffering from inadequate education. A simple MI cause used to be probably managed by my intern in 2018, but now my interns panic we they see a simple case of MI, because they have only seen two MIs so far". [P-3]

The participants were seeing some basic competencies such as physical examination and interpersonal communication skills to be at risk.

"Virtual education has started, but medicine is a field that heavily relies on patient visit, which we seem to have missed. Patient visit and physical examination are among actions that must be done on real patients. These two areas are still a problem for me". [P-11]

On the other hand, in response to the question of whether this type of education will be used in a crisis-free future, the majority of participants agreed with its relative use in clinical education and the use of features such as time and money saving, keeping up with the world of learners, and ability to communicate with learners at any time and place.

A participant stated:

"This type of education is efficient, because there are a series of conferences right now that are held at night outside the crowded environment where sick patients are present ... I hope we can institutionalize this type of education and do not forget to use its positive aspects." [P-11]

In addition to the above statements, the participants mentioned other experiences regarding the advantages of e-learning in pandemic situation:

"..The advantages of e-learning include the ability to go online any time or watch educational films offline, and also access the educational content and repeat it for many times. Another issue is the feedbacks that we can answer in the evening.... In the past, we had certain time to go to classes and teach certain topics, but now we can do that at any time. Before our teaching could be interrupted by a critically ill patient, and our teaching sessions were irregular, not allowing students to ask their questions." [P-5]

These positive points led to the acceptance of e-learning as part of training process by the instructors, allowing them to continue their training in a more stable environment using a combination of face-to-face training as the basis of clinical training and virtual training. Participants described e-learning as complementary to face-to-face and clinical training.

"... A combination of virtual and face-to-face training allowed us to learn what to do with the virtual training process to make it more practical for our students" [P-9]

A participant described his successful experience as follows:

"In education, we had to use solutions, such as zoom application or virtual groups. We also tried not to just use PowerPoint, but to discuss and read articles. I used to take small number of students in a large room with safe conditions and teach them, then record the session and show it to other students to see in groups. Sometimes we used audio files and gave them to students. These were good experiences." [P-2]

However, virtual evaluations were one of the participants' unfavorable experiences. In his experience, it was a weakness that facilitated the graduation of incompetent students in the current situation.

"Well, the evaluations are one of the weaknesses of virtual education, because we cannot be sure of the result, even though we tried. It is always a torment of conscience. It facilitates the graduation of incompetent students." [P-9]

Another participant stated: "Virtual education does not involve student, especially in the evaluation process. Our biggest challenge is how to evaluate student with this method of teaching. Students who are trained virtually expect their evaluation to be also done virtually. This is not just my concern but the concern

of all educators. Early on we were really not sure whether the student score was the real score. How can I get the student to feel that he/she needs to learn the lessons?" [P-9]

Education tensions in crisis

Participants in the role of clinical instructors experienced double the stress of being a therapist due to the unknown nature of the disease and the risk it poses to students. They considered themselves responsible for saving the lives of learners, but at the same time were concerned about delays in education.

"To be honest, the feeling I had was that those who were being trained by me as students might be harmed. I was worried about them. ... It was a disease that we did not know much about. We had little information about it. Then we saw mortality and thought that those who are not proficient should protect themselves completely and not be harmed by the disease." [P-1]

The other challenge was the change of educational method and space caused by the crisis. Reducing the causes of inpatients [other illnesses than covid] and reducing learning opportunities for teachers to maintain adequate training was a concern for the participants.

"When covid came, my teaching changed significantly, because my work was based on clinical exposure. We once reduced the number of clinical exposure to interns by limiting their number. This in itself was a major psychological shock for us. It also caused hospitals to reduce their elective admissions and this caused a large part of our training, which was training of elective patient, to be negatively affected. The abundance of cases was also severely disrupted." [P-1]

As time went on and more patients were admitted, some educators who were directly involved in the treatment of Covid-19 patients experienced more unique challenges. They struggled to balance their educational and therapeutic activities and experienced tensions in education due to the importance and priority of saving patients' lives.

"Since I was an infectious disease specialist, the first bad thing that happened was that I became distanced from my students. Well, it was like a war. We were completely separated from the students. I just tried to connect with the students by sending podcasts and using WhatsApp groups. I had a bitter experience myself, because I had to work in the medical department." [P-6]

The experience of entering e-learning platforms was another tension that participants faced, because most of them have never had virtual training experience before and their experiences were limited to participating in webinars and virtual courses to update their knowledge and skills. Although there was a limited number of trainers who had the experience of virtual training, their experience was not comparable to the virtual training during this period as they used to have the support of technology team.

"At the beginning, we had no experience in distance teaching and virtual education, and shutting down education was not in the best interest of system

and students. Well, it was very challenging and we did not know how we could run virtual classes." [P-9]

Another experience:

"Look, it was not a virtual training that the experts had designed and delivered to us, but we suddenly had to use an ADC computer at home for teaching at morning, noon and night... It is true that I knew how to work with virtual training, but I really did not know how to manage some tasks. In the past, there was always an IT expert by our side. Now, there is a fear of technology and we are not computer experts." [P-11]

Other tensions that educators faced included the lack of serious training, especially by learners, irregularities and negligence, and valid excuse used by unmotivated students to escape from education.

"The Covid-19 has caused education and students to be neglected. The absent of students is not taken seriously today, because they can blame the covid. The pandemic has become an excuse for students. What I have experienced in the past year is that covid has caused education not be taken seriously. Well, when the learner is not serious, the teacher won't be serious either." [P-10]

Crisis of progress platform

Despite the tense and unfavorable conditions of clinical education following the covid crisis, other statements of the participants indicated different experiences. The last theme in this study [crisis of progress platform] is the result of participants' positive experiences. Most of the participants considered the current crisis as a facilitator and, in their own words, a catalyst for the introduction of new educational methods such as virtual education.

"Well, the fact is that from my point of view, my change has been significant and I have progressed, especially in the way I teach." [P-1]

An instructor talked about his fundamental changes:

"We updated ourselves with the students by using new technologies..... I cannot be the same person. Covid-19 pushed us. We had to reach the point that we normally would in ten years. We reached it in a year or two. It was quite a good opportunity for us to gain experience and to make ourselves different people." [P-7]

These positive and forward-looking changes have not only been seen in the individual dimension, but in the entire medical education process.

"One of the important things is that, this period really pushed the education system forward. I myself have been trying to virtualize the exams or parts of the lessons for a few years, but it did not go very well. However, this crisis made it possible." [P-3]

The shadow of organization and structure affecting education during crisis

Being an educator in educational system was a factor in creating organizational experiences. Instructors reported that organizational structure and conditions were influencing their training. Lack of pre-designed programs for such situations, and lack of consensus in educational decision-makings during the crisis were among such experiences.

"Unfortunately, since there was no careful planning in this field, this process was very heterogeneous and unplanned all over the country. This was not a homogeneous process among all the instructors. One person insisted that everyone should participate in e-learning, and another person said that everyone should stay at home and education must be suspended. Everything was very one-dimensional, because there was no universal guideline. Education management was more of a crisis management, and we unfortunately could not handle it." [P-3]

Participants considered the existence of appropriate facilities and infrastructure for virtual training a necessity and referred to problems in this area that affected their training experiences.

"Virtual education can be used well, but it requires certain facilities. It means that I must be able to use my own laptop or mobile phone and hold classes, show slides and answer questions." [P-4]

Colleagues were also considered as experience-making factors for some participants. Lack of cooperation and unfamiliarity with the virtual trainings in some had caused some participants to bear a higher load of education.

"In virtual education, the problem we had was that the older teachers, who were more experienced, did not participate in virtual education at all, and did not show any interest. They were arguing that they are not familiar with virtual education. This put us under a lot of pressure. We had to go to the studio for two or three hours to make films... I told them I can put voice on your PowerPoint, but they refused and said that I must go there and make films according to their format. Well, it was very difficult. I was very annoyed. If all the faculty members were familiar with the virtual education, the topics could be evenly divided between us." [P-5]

The universities that have come to the aid of their instructors during the crisis were considered by the participants as positive experimenters.

"I attended an e-learning course provided by the university in order to update myself and be able to help more. This course was very useful for me. Many of my problems were solved in this way." [P-5]

Altered educational beliefs and attitudes

Participants believed that it is still possible to continue training in a crisis or any unusual situation. They abandoned the prejudice that we should always continue training as we have learned, and believed that training programs require flexibility.

"As a teacher, I was changed because we thought our planning was the only way it should be. We were sensitive towards face-to-face education, but we came to realize that students may need to be trained from distance and we should adopt ourselves to new condition." [P-1]

Changing methods and finding effective educational potentials in themselves was another change that the participants referred to.

"The change I had experienced was that, I wanted to make sure students have learned what I said. Because students had to do it right away and if they made a mistake I could see the effect a few days later. I thought how good it would be if I have used this method earlier in my teaching, making sure that students have learned the lesson." [P-2]

The use of virtual training and turning to cyberspace space to make education more productive and efficient were among other attitudes of the participants.

"As a person who studied medicine in the old days, I was a little pessimistic about virtual education. I used to say that it is not applicable in our country. Now it has changed my attitude towards it. I used to say that this type of education is not possible in medicine at all. I talk to student face-to-face, so how can I work with students virtually? But now my attitude has changed." [P-6]

Discussion

One of the important themes extracted from the data analysis was; "virtual education is necessary but it is not sufficient". In this regard, participants in the present study considered turning to virtual education and suspended clinical training as a useful solution in the absence of face-to-face training. In a study, Ahmed and his colleagues stated that turning to virtual education, not only in the current pandemic but also in the past epidemics such as SARS, has been able to help implement curricula [3]. Anazko also pointed out that in the covid pandemic, solutions such as simulations and virtual education have been used for some curricula that could not be continued as before [12]. In a similar study, some educators argued that while distancing medical students from clinical settings may have a significant impact on education, when students' presence is both risky for them and increases the spread of virus, new opportunities should be created by turning to online education [5]. In the participants' view, clinical education is an essential part of medical education, which virtual education cannot offer. In the study of pandemic and its effects on medical education, Arangelovik and colleagues noted that clinical education is a vital part of medical education, which has been negatively affected by the pandemic. Clinical education has been transferred from the patient's bedside to cyberspace. The results of this study emphasize that despite the importance of clinical education, in situations where face-to-face training is risky, virtual training should be

available and applicable [6]. Participants in our study emphasized on the inadequacy of e-learning in clinical education and teaching of clinical skills, as they did not have sufficient confidence in the clinical competencies of their graduates. In a study by Pennington and colleagues, one of the major challenges that educators faced was the inadequacy of video training [7]. Similar to this study, Patra and Chadhari by examining teachers' experience of teaching and evaluating in the covid pandemic found that, teachers considered virtual education as a useful method, but they never considered it a substitute for real clinical training and practice [13].

The educators in the present study, despite referring to virtual education as insufficient, believed that the combination of virtual and face-to-face education is useful and pointed to their experiences in using this educational method and its advantages in clinical setting. Similar to these experiences, Emmanuel is a study suggests that clinical education should be redesigned, and clinical training and practice should be integrated and used in hospital settings to ensure the competence of learners [9]. The participants in the present study also did not feel satisfied with the competence of their students following virtual education. In their study, Hall and colleagues emphasized on the importance of promoting medical students' learning and ensuring that they have adequate competences. They also referred to the need for strategies to maintain competence-based medical education during the pandemic [14].

Another conceptual theme in this study was; "educational tensions in crisis". Participants in the present study experienced educational environment during crisis to be tense and frightening, which put their learners at risk. Tabatabai in a study pointed out that, medical education in Iran has been affected by Covid-19 pandemic and this disease has had an important impact on clinical education, creating a wide range of challenges and forcing teachers and students to deliver services in the most difficult conditions in clinical settings. He believes that, the focus of medical education instructors should be on the health and safety of learners, and this is a requirement for decision making [15]. In this regard, the results of a study by Rezaei and colleagues show the high stress of teachers and students during the pandemic [16]. Arandjelovik and colleagues describe the impact of Covid-19 pandemic on medical education as an unprecedented challenge and argue that, studies conducted on previous epidemics have shown that students' knowledge and training on self-protection during crises was insufficient. Therefore, continuing education in the clinical environment should be accompanied by maximum safety standards [6]. This was evident in the statements of participants in the present study, who were concerned about the presence of learners in the clinical setting, and considered themselves responsible for their protection and safety, which caused them to experience high level of stress.

The participants in the present study faced different stresses, such as changes in the educational space and process, and some of them who were directly involved with the care of covid patients experienced a conflict between their therapeutic and educational duties, but they ultimately sacrificed education. In a study by Russell and colleagues conducted on the contradictions between balancing patient care and providing clinical education during the pandemic, the

experiences of several universities were examined in this regard. In this study, challenges such as being away from education due to the priority of clinical tasks and the risks of attending educational settings are some of the factors that are similar to the theme obtained from the participants' statements in the present study [11].

On the other hand, the change of educational spaces and models towards new educational methods, such as virtual trainings, had caused stressful experience in the majority of participants who had no previous experience in this regard. In this regard, Khalili in a study states that, following the pandemic virtual education has been widely used in universities and this change in teaching style has become a mystery for teachers and a challenge for some who lack sufficient knowledge in this regard [17]. In other countries, studies have reported similar experiences. For instance, in the studies of Rajab and colleagues in Saudi Arabia [18], and Faragh and colleagues in Pakistan, the participants referred to the fear of technology and lack of adequate experience in virtual education as the educational problems of this period. Patra and Chadhari in India [13] and Wilson and Shankar in Malaysia [19] referred to similar challenges of e-learning and its compatibility.

The crisis of progress platform was another theme extracted from the participants' statements. Despite experiencing stressful educational conditions during the pandemic, the participants considered crisis as a favorable opportunity for their progress. The crisis had facilitated the adaptation of virtual education and the application of new teaching methods for educators. In a study, Tabatabai identified pandemic in Iran as a factor that affected the development of virtual education in medical schools [15]. Khalili in another study predicted that virtual education will be a normal teaching method in universities in near future [17]. Participants in the study of Lasilla and Cairo, in response to their understanding of virtual education, referred to it as a completely unknown leap. They believed that they had learned new skills in distance learning [20]. Participants in the present study also described the pandemic condition as a facilitator of progress in the new educational method, which has been delayed for years. The final theme of present study was the shadow of organization and structure affecting education during the crisis. The participants considered their colleagues to be effective in their educational experiences. Lack of cooperation of some faculty members who were not interested in the virtual world has caused the participants to experience higher level of stress in providing educational contents on their own. In their experiences, they referred to the need for organizational planning and supervision. Rezaei and his colleagues in their study examined the participants' experiences and concluded that teacher's lack of cooperation, death or illness is one of the important factors that affect the shortage of educational workforce, and educational organizations should try to address this issue [16]. On the other hand, the participants in the present study considered the lack of planning and irregularities by organization and educational group as factors that cause problems in education. In their experience, whenever there was support and adequate facilities, the education process was going well and in the absence of support and facilities [such as infrastructure, internet, system, etc.], the education has been faced with many problems. Proper planning and its important role in education during crisis is one of the concepts mentioned in the study of

Farsi and colleagues, which examined the experiences of students, teachers and administrators during the Covid-19 pandemic [21]. One of the important themes in the study of Noel and colleagues also refers to the need for organizational support and recognized it as an effective factor in advancing educational goals [22]. In a similar study, Farough and colleagues showed that challenges such as inadequate training of tutors, lack of institutional support, and internet problems have negatively affected the provision of education [23]. In the present study, in addition to the systemic structural problems, one of the issues addressed by the participants was the limitations that had tightened their hands and deprived them of flexibility to express themselves. Restrictions on the use of physical spaces on campus or defined systems, as well as provision of content and teaching in accordance with mandatory protocols and at pre-determined times, were among the participants' most unfavorable experiences, which discouraged them from teaching effectively. This issue has been considered in some studies, but slightly in a different way. For example, Wilson and Shankar, in reviewing the experiences of other countries in regard to education during crisis, stated that many countries with clinical instructors who had little experience in virtual education found it difficult to adapt to crisis condition [19]. Altered educational beliefs and attitudes was another theme extracted from the participants' experiences. From another dimension, they described different experiences that indicated fundamental changes in them as educators. They argued that, they have found a completely different attitude towards the subject of e-learning and now, they can continue teaching in any situation, as they have abounded their old beliefs about the educational methods in medicine. In the study of Gopalan, Awooda & Elmardi, the effect of virtual training classes for teachers was investigated and the results showed a change in the attitudes of participants towards the use of virtual training [24]. Review of teachers' perception of work and virtual education during Covid-19 crisis in a study of Lasila and Cairico showed that teachers accepted themselves as an experienced online instructor and believed that when there is no other choice they should change and do their job efficiently [51].

Final conclusion

The experiences of participants in this study showed that education during the pandemic has been experienced positively and negatively by the participants. At the beginning of the crisis, the instructors were faced with the stressful situation, which made them committed to maintain the safety of their students. On the other hand, due to their sense of responsibility towards the continuity of education, the participants approved the use of new educational methods, which in turn helped them to gain positive experiences and skills. The participants' belief in the consistency of educational process and the provision of pre-planned training programs had changed to the understanding of flexibility in teaching methods. The pandemic situation has led the participants to turn to e-learning, which for some is very pleasant and for some is quite inappropriate. Educators with positive experiences of e-learning believed that it will save time while being flexible, and provide appropriate content and feedback, so they named it an important teaching aid alongside conventional clinical education that should continue even after the pandemic. However, educators with negative experience of e-learning considered virtual education as a useful solution only in the case of

necessity, where it would not be possible to use other educational methods. In other words, they argued that it is better to use this method than shutting down the whole education process. Both groups perceived this training as insufficient to develop practical, skills, and communication competencies. However, they believed that its use alongside face-to-face training is a useful combination method during the pandemic, when education has been affected by organizational programs and decisions, as well as the cooperation of peers. Overall, this study can be an introduction to the review of continues clinical education processes in order to develop new and flexible training programs that are capable of dealing with similar situations in the future.

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