

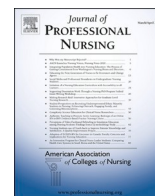


Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

## Journal of Professional Nursing

journal homepage: [www.elsevier.com/locate/jpnu](http://www.elsevier.com/locate/jpnu)

## Nursing Faculty Experience With Online Distance Education During COVID-19 Crisis: A Qualitative Study

Manar Nabolsi<sup>a,\*</sup>, Fathieh Abu-Moghli<sup>b</sup>, Inaam Khalaf<sup>c</sup>, Arwa Zumot<sup>b</sup>, Wafika Suliman<sup>d</sup><sup>a</sup> Clinical Nursing Department, School of Nursing, The University of Jordan, Jordan<sup>b</sup> Community Nursing Department, School of Nursing, The University of Jordan, Jordan<sup>c</sup> Maternal and Child Health Department, School of Nursing, The University of Jordan, Jordan<sup>d</sup> Dean School of Science, Al Israá University, Jordan

## ARTICLE INFO

**Keywords:**  
 COVID-19  
 Nursing  
 Faculty  
 Online education  
 Qualitative

## ABSTRACT

**Background:** COVID-19 pandemic influenced education and forced universities to shift from face-to-face teaching to remote online teaching. This sudden shift in educational pedagogy provoked several challenges to educators. **Purpose:** The purpose of this study is to explore the first experience of nursing faculty members with online distant education (ODE) within the context of COVID-19 national curfew.

**Methods:** A qualitative descriptive design guided by a phenomenological approach was used utilizing purposive sampling for exploring the experiences of fifteen nursing faculty members by two focus group discussions through Zoom.

**Results:** Qualitative analysis, using Colaizzi's method revealed four major themes including: (1) resolving immediate reaction toward abrupt compulsory online teaching; fulfilling teaching responsibilities; managing the challenges of ODE, (2) struggling with available resources and capabilities; (3) ODE defeated geographic and time boundaries, and interrupted personal time management: yet a new learning experience; insufficiency of ODE; and (4) achieving clinical competencies and learning outcomes.

**Conclusions:** This study provides evidence on the importance of preparing and training faculty to embrace and sustain the mastery of ODE to ensure the success of ODE. It also emphasizes the institutional and infrastructure readiness to enhance the transition from traditional teaching and learning to ODE.

## Introduction

COVID-19 is a pandemic infectious disease, a major source of mortality and morbidity, which affected millions of people all over the world. To date (May 11, 2021) over 5.5 million cases and over 90,000 deaths have been reported (WHO, 2021). Concerns over peoples' safety enforced most countries to lockdown. In Jordan, Suliman, Abu-Moghli, Khalaf, Zumot, and Nabolsi (2021) noted that a complete national lockdown was enforced between March 18 to May 25, 2020 which has contributed to drastic changes in education as online distance education (ODE) became inevitable to ensure the continuity of education but without adequate planning and preparation. Faculty members and students have been suspended from face-to-face contact, and have been obliged abruptly to shift from the traditional teaching/learning strategy to an unprecedented ODE.

Most previous studies on ODE focused primarily on online teaching and or learning within a hybrid model in normal situations while maintaining face-to-face in class and clinical placement training. However, not much is known about remote abrupt and unprecedented experience in ODE among faculty members within the context of COVID-19 pandemic, which prompted the researchers to conduct this study. The researchers believed that this study is significant in gaining insight into the unique experiences of nursing faculty members who use ODE, for the first time, from homes within COVID-19 context. ODE is expected to maintain balance between nursing students' intended learning outcomes (i.e., being theoretical knowledge and or clinical practice competencies) and their safety.

\* Corresponding author at: The University of Jordan, School of Nursing, Queen Rania Street, Amman 11942, Jordan.

E-mail addresses: [manarn@ju.edu.jo](mailto:manarn@ju.edu.jo) (M. Nabolsi), [fathieh@ju.edu.jo](mailto:fathieh@ju.edu.jo) (F. Abu-Moghli), [khalafd@ju.edu.jo](mailto:khalafd@ju.edu.jo) (I. Khalaf), [arwazu@ju.edu.jo](mailto:arwazu@ju.edu.jo) (A. Zumot), [thaher.w@iu.edu.jo](mailto:thaher.w@iu.edu.jo) (W. Suliman).

<https://doi.org/10.1016/j.profnurs.2021.06.002>

Received 9 February 2021;

Available online 9 June 2021

8755-7223/© 2021 Elsevier Inc. All rights reserved.

## Literature review

The reviewed literature presented a distinction between traditional face-to-face methods of teaching, (i.e., focusing on the role of faculty members away from students) and transformational methods of online teaching (i.e., focusing on teaching as an interactive process between faculty and students and advocating student-centered approach to learning) (Budhai & Williams, 2016; Taylor, Grant, Hamdy, Marei, & Venkatramana, 2020). Some studies indicated that if managed well, ODE would be equivalent, if not superior, to traditional education (George et al., 2014; Marshall & Wolanskyj-Spinner, 2020). ODE is transformative in optimizing the delivery of education while saving plenty of time in commuting between home and academic institutions and reaches students on any electronic devices even on their mobile phones wherever they are, and whenever they want (Bowen, 2020; Hodges, Moore, Locke, Trust, & Bond, 2020; Rose, 2020; Sinclair, Kable, Levett-Jones, & Booth, 2016). ODE universal characteristics defies time and geographical barriers upon the availability of reliable electronic technology such as internet as a delivery system (Hodges, Moore, Locke, Trust, & Bond, 2020; Li et al., 2020).

Worldwide higher education has been confronted with intriguing challenges with ODE within the context of COVID-19 pandemic, primarily in providing faculty and students with required ODE virtual resources and infrastructure (Bowen, 2020; Crawford et al., 2020; Longhurst et al., 2020; Rumbley, 2020) because many universities were forced to switch from face-to-face teaching to abrupt unprecedented online teaching from homes. Nursing education globally was affected and schools were challenged in preparing competent nurses under these new circumstances especially as clinical training was interrupted (Ahmed, Allaf, & Elghazaly, 2020; Farooq, Rathore, & Mansoor, 2020; Rose, 2020; Taylor, Grant, Hamdy, Marei, & Venkatramana, 2020).

Academics experiences and perceptions of ODE have been studied qualitatively and quantitatively before and during the COVID19 pandemic. Themes that emerged from several studies on online education encompass: teaching effectiveness, indicators of quality, students' success (Farooq, Rathore, & Mansoor, 2020; Frazer, Sullivan, Weatherspoon, & Hussey, 2017) work intensity, role changes, teaching strategies and professional development (Al-Balas et al., 2020; De Gagne & Walters, 2009), time management, faculty support, emotional aspects, and differences in course delivery (Macy, 2007). ODE has caused conflicting experiences, among faculty members, with positive workplace related outcomes such as flexibility and balance, academic freedom and autonomy, professional relationships, and professional growth (Mansbach & Austin, 2018).

The literature presented several roles of academics to assume when engaged in online education including: instructional designers, facilitators, assessors, technology integrators, administrative managers, content experts, and pedagogical researchers and evaluators (Chang, Shen, & Liu, 2014; Ní Shé et al., 2019). Competent online educators need to be skillful in their social and cognitive presence in addition to technical/managerial presence (Chick, Clifton, Peace, & Propper, 2020; Ruarte, 2019). However, distance online technological presence is considered a substantial issue to online faculty members due to lack of mentorship and training in e-technology operation and repair (Chapman, 2010; Martins & Ungerer, 2017; Nguyen, Zierler, & Nguyen, 2011; Portera et al., 2020). In other words, faculty members should be competent in making their teaching and cognitive presence recognized while interacting knowledgably with their students, able to access digital technology and reliable internet, otherwise, lack of any of these essential elements may defeat the purpose of using ODE.

According to Marek, Chew, and Wu (2021) few studies explored the experiences of higher education faculty as they responded to the COVID-19 pandemic and little is known about their experiences and perspectives of transitioning nursing education into online distance learning approach as a response to COVID-19 lockdown. In Jordan, the specific experience of nursing faculty members with the unprecedented adoption

of ODE, due to the impact of the COVID-19 pandemic, remains undetermined. Whether ODE was welcomed is unknown and perhaps faculty members may have found it stressful. In addition, this change is ironical and intriguing as online education provided in normal circumstances has not been accredited until then by the Jordanian Ministry of Higher Education, though it has been increasingly popular in Western countries since the mid-1990s (Sinclair, Kable, Levett-Jones, & Booth, 2016).

Therefore, this study aimed at exploring the lived experience of faculty members who were involved in teaching nursing courses to undergraduate nursing students within the unprecedented online distance learning context which was imposed by the emerging nationwide lockdown due to COVID-19.

## Methods

### Design

We utilized a descriptive qualitative design guided by a phenomenological approach, as this approach is congruent with the aim of this study, which was to describe in-depth the participants' lived experience in using ODE approach.

### Setting and participants

We collected the data from 15 faculty members working at two universities offers a nursing baccalaureate program; one public and one private. The two universities were selected purposively to ensure the maximum variation of perspectives of the experience, if any. The inclusion criteria were full time faculty members working at the selected universities and currently teaching undergraduate nursing students online. Faculty members teaching graduate nursing students only or working part-time, have no teaching load, and those with less than one-year experience, on leave or unwilling to be audiotaped for the focus group sessions were excluded. The participants were recruited purposively through different online media. The total number of participants was 15.

### Measures

Based on comprehensive literature review we developed the interview guide, which was validated by an expert in qualitative design. The interview guide included an open general question "Tell me about your experiences in online teaching?", open-ended questions and probing questions to describe in depth participants' lived experiences with teaching utilizing distance online approach are presented in Table 1.

**Table 1**  
Focus group interview questions.

1. Tell me about your experiences in online distance education?
2. Tell me how did you feel when you were told that you have to teach online?
3. How teaching online affected you as a person and as a faculty member?
4. What did you do manage teaching online?
5. Did you receive any support for teaching online? What type of support?
6. During your work at the school of nursing, were you prepared to teach using the internet and the online learning? If yes, how was that done? Was that enough? Did this training help you to perform your role during the pandemic?
7. How did you manage to meet your teaching needs regarding e-learning considering the curfew imposed at the national level?
8. What are the positive aspects/opportunities of using ODE?
9. What are the negative aspects/challenges of using ODE?
10. How do you evaluate your experience in e-learning in terms of preparation for education and your skills to implement the educational process and its results in terms of achieving the required goals?
11. How would you rate your students' achievements' of the courses intended learning outcomes?
12. Do you recommend learning/teaching via e-learning as a teaching/learning strategy even after the curfew imposed in the country ends?

### Data collection

We obtained the approval to conduct this qualitative research from the Institutional Review Boards at the two universities. After gaining the IRB approval we collected the data through conducting two focus groups with the study participants. Focus group discussion is considered an efficient method in generating in-depth data from the participants in a short period of time. It is documented that focus group discussion is an effective approach that facilitates obtaining a thoughtful insight of participants' perceptions, enhanced by a dynamic interaction (Hollis, Openshaw, & Goble, 2002). Accordingly, one focus group discussion was conducted with each group, and each focus group interview lasted around 2 h. We started each focus group with an introduction, explanation of the research purposes, consent forms completion and obtaining approval on recording the session. Issues of confidentiality, identification of the issues to be discussed, and the group discussion process were explained. Next an open general question about their lived experiences with online teaching was presented to encourage participants' engagement in the interview. Two members of the research team conducted the focus groups one as a moderator and one as the note taker. Consistency in data collection was ensured having the same moderator and note taker collecting the data in both focus group interviews.

We conducted the focus groups through the online platform ZOOM, as the country was under complete lockdown and national curfew. According to Stewart and Shamdasani (2017), online focus group is as efficient as face-to-face focus-group in collecting data related to participants' experiences. The participants used tags with numbers, to be used by the note taker; when writing the transcriptions after completing the data collection. We used probing questions to guide the discussion and the moderator recorded the sessions. We conducted the focus group discussions and transcribed the video recorded interviews in Arabic. To ensure trustworthiness of the data, it was compared to the recorded notes.

### Data analysis

To analyze the data concerning the demographic variables of the study participants' descriptive statistics, mainly frequency was used. We analyzed the data simultaneously with data collection following Colaizzi's steps of analysis (Speziale & Carpenter, 2011) to uncover the in-depth meaning of the participants' experience with ODE. Independently, two of the researchers transcribed the audio recordings to text immediately after completing each focus group. The two researchers analyzed the transcript manually, coded significant words, statements, or phrases regarding the participants' ODE experiences. They used a coded color system to highlight the significant statements to conduct the preliminary analysis. Both researchers organized the significant statements into meaningful units, and these units were clustered into themes and meanings that uncover the authentic in-depth experience of the participants with ODE. All researchers read the transcribed data word for word several times to get sense of the participants' experience in ODE. They discussed and agreed on the final themes describing the experience of participants. To ensure trustworthiness of the results, the finalized themes were presented to five participants to ensure the themes reflect their experience with ODE. After completing the data analysis, we translated the themes and exemplars participants' quotes into English and back translated to Arabic based on WHO translation guidelines.

### Ethical considerations

All issues related to ethical considerations were considered throughout the study to protect the participants' privacy, confidentiality, and participants' comfort. We gained written and verbal informed consent from the participants at the commencement of the study for those who accepted to participate. Participants were assured that they

are free to withdraw from the study at any time. We kept all records and study transcripts confidential in a locked filing cabinet and all electronic data were password protected.

## Results

### Faculty member's characteristics

The study participants were 15 faculty members; eight from a public university and seven from a private university, 6 were males and 9 were females aged 31 to 51 years. The participants' years of experience ranged from less than five to 30 years. Eight participants attended 2–4 online teaching/learning workshops, three attended only one workshop through their school of nursing while four of them did not attend any training. The analysis revealed four themes including:

1. Resolving immediate reaction toward abrupt compulsory online teaching: fulfilling teaching responsibilities, managing the challenges of ODE

The abrupt transition from traditional face-to-face classroom to online distance education was described as a dramatic change that provoked several emotional reactions. Nursing faculty participants were faced with this challenge and had to act accordingly. A participant expressed his first reaction when he learned that they had to move to distance online learning saying, "*It was a shocking news, and it was beyond our expectations*" (F6). Most participants described experiencing feelings of being anxious, stressed, confused and helpless toward this crisis and sudden shift from face-to-face teaching to online distance teaching. Mixed emotions and thoughts aroused questioning how to manage teaching under such circumstances without prior preparation, described by one participant:

*when I was informed about shifting to online teaching several thoughts came to my mind, how effective will I be in teaching and what are the best teaching modalities to employ? and are my students ready? it was a stressful day.* (F13)

All participants explained that it was not a choice, the decision to teach online was mandatory under the COVID-19 pandemic. They were also angry of not being involved in the decision to move to online teaching as it was a top-down decision. This lack of coordination between different administrative levels at the university according to participants added to their dissatisfaction with the decision. However, their sense of responsibility toward teaching facilitated accepting this situation and managing their stress and anxiety to be able to plan and prepare the instructional materials using a different didactic approach. A participant explained:

*Our commitment to our expected roles enforced us to overcome our stress and anxieties. However, to change the didactic approach to teaching requires planning and preparation and we were expected to do it overnight. But again, it is not a choice, and we should fulfil our duties and teaching responsibilities.* (F5)

Additionally, with experiencing the sense of mental and physical insecurity, the participants had to move on and to be able to prepare the digital instructional materials to promote the quality of education and facilitate students' learning as one of the participants stated:

*The burden of responsibility to enable students accomplish the learning outcomes in these unusual circumstances is enormous. Change always provokes fear and stress.* (F8)

After dealing with their anxiety, participants were overwhelmed with providing emotional support for their students to alleviate their fear of the pandemic and this shift to online distance teaching. According to most participants, it was an important step to alleviate their

students' negative attitudes toward the online learning. Another participant explained:

*We started with formulating groups on the social media to allow students to ventilate their worries of the pandemic and the transition to online learning and express their emotions toward this new situation to support them alleviate their fear and anxiety. (F1)*

## 2. Managing the challenges of ODE: struggling with available resources and capabilities

The emergent status of the COVID-19 and the lockdown imposed this unexpected and sudden shift to distance online learning. Online distance education provoked several challenges that were addressed by the participants. The first challenge was to learn about online digital teaching independently. Their expertise in online learning varied; Two had experience in online teaching while studying in the PhD program as students. Others received a training course in e-learning but never practiced it, and three practiced online by teaching hybrid courses. However, all participants reported that complete online and distance teaching was the first experience for them.

The participants discussed their struggling experience in learning independently how to design and implement online instructional materials within the limitations of the resources enforced by the lockdown. Most of the participants redesigned and implemented the students' learning modules and used available audiovisual materials on the internet and university e-library. They were frustrated of their institutions of not being prepared and not having crisis response plans. Being left without technical support from their institutions was physically and mentally stressful, they had to depend on themselves and on their colleagues' collaboration to manage their online teaching as one of the participants described:

*when designing the online course, I needed technical assistance that was not available, my university was not prepared to assign an IT technician during the lockdown of the country and with curfew it was difficult even to reach my office to get what I needed from my desktop, I had to work it out by collaborating with my colleagues. (F8)*

To overcome the challenge with the lack of expertise in online education, several hours daily were spent on surfing the internet for resources, consulting colleagues who had technical expertise and struggling to upload the courses on the e-learning platform. The participants asserted that the time they spent in ODE was double or triple the time they used to spend in traditional teaching. One participant said:

*I had to learn the technical skills of e-learning by myself, it took me long hours of hard work, day, and night to prepare the lessons and search for resources like videos on YouTube and upload to Moodle. I was physically and mentally drained. (F15)*

In addition to the time and hard work spent to prepare the lessons without technical support, lack of ODE clear policies raised the concern of participants of being teaching online without clear predetermined set of online education guidelines or regulations from the university administration. They objected on the crisis management by the Ministry of Higher Education and noted that on few occasions, contradictory rules were imposed guiding the remote online teaching adding to their stressful situation. Another participant explained:

*At the beginning of the crisis, we received instructions that no attendance, exams, or graded assignment were allowed by the Ministry of higher education, we had to abide by this, later, after several weeks it was allowed causing confusion to students and for us as faculty, how are we going to evaluate students in such short time left in the semester, it was very disruptive to education. (F3)*

Further, all participants in both public and private universities noted that their institutions infrastructure and technical support were not ready or prepared to this sudden shift to ODE. The capacity of the e-learning platform was overtaxed and could not accommodate the sudden increase in number of students accessing the system at one time. The participants and their students were passing through the stressful experience of recurrent interruption and failure in the e-learning system, which was described as time consuming, physically and mentally exhausting, energy draining and frustrating.

*On top of all the hard work and time spent preparing the instructional materials we faced sudden interruptions in the institutional platform and several times we had to redo uploading materials. What was worse is the interruptions during quizzes or exams. This was physically, psychologically frustrating for us and our students. (F11)*

Availability of fiscal and electronic resources to manage ODE were other challenges experienced by the participants. The enforced transition from face-to-face education to ODE used in all educational institutions in Jordan and working from home increased the families' demands for electronic devices. Unexpectedly, all family members had to stay at home during lockdown, teachers and school and university students needed to use laptops or smart phones in learning. The demand for electronic devices exceeded the availability for most families, they had to share what is available. The participants indicated that they had to share their laptops and smart mobile phones with family members to study or to work from home. One of the participants said:

*I have only one laptop at home and I have 4 children at school and needed to use the laptop, we had to share my laptop and 2 smart phones to manage in this crisis. The recurrent interruption in the internet connectivity, added difficulty to manage all these demands. (F9)*

The internet home subscription and availability of enough electronic devices to be used by all family members were difficult to overcome with complete country lockdown.

The hardest challenge facing the participants in this study was their students' inability to engage in online learning. The participants experienced difficulties in maintaining students' engagements in online learning because they were not prepared technically, psychologically and logistically. Most students do not have laptops and used their smart phones in ODE. Students' over expectations of their teacher's capability of solving their online educational difficulties was also frustrating to the participants. Several technical issues facing students expecting their faculty to solve it added to the burden of the participants as this added extra responsibility with lack of technical support from the institution. One participant gave an example:

*Sometimes the Power Point Presentations were not compatible with smart phone and students were unable to view it, so I had to send the presentation as document and students missed the audio explanation of the presentation. (F7)*

Lack of face-to face interaction that affected the quality of interaction was additional challenge discussed by the participants. Not all students open the devices' cameras and having more than 30 students in one session it is not possible to maintain eye contact. The participants felt they were talking to their laptops without receiving clues from their students or following up with them to ensure understanding. One participant explains:

*When uploading a video recorded lecture or presentation without face-to-face discussion or eye-to-eye contact, not having the students physically present in the class makes it difficult to judge if they were able to understand the lecture. (F4)*

The participants also raised the issue of peers' interaction and discussions during virtual classes as being a disadvantage in ODE. Participants addressed this issue as a cultural and social norms and explained

that few female students were embarrassed to have their pictures live on the screen or take part in virtual class discussion. This issue affected teacher's ability to encourage them to participate and also track their presence. Other participants interpret it as they were reluctant to take part in class discussion when family members being around them at home. Also noises at home did not allow students to take part in discussions and unmute the microphone, especially with large family living in small houses.

Online exams were also a major challenge. Two issues regarding exams were discussed, first the ability of the students to engage or complete the on-line exams, and the second issue is the validity of the exam grades. Poor internet connection and slow internet at home were difficulties experienced in administering online exams. Students, particularly in remote areas did not join exams, or they did not complete it due to disruption in the internet services. The second issue is losing control on the validity and reliability of the online exams and participants were annoyed of not being able to control cheating in exams.

3. ODE defeated geographic and time boundaries, and interrupted personal time management: yet provided a new learning experience.

Teaching online compared to the traditional teaching was beyond the participants' experience and expectations. Long hours were spent in communication with students in addition to the other teaching family responsibilities were taxing. Students had high expectations of the participants' ability to manage their struggle with e-learning. They also had no time boundaries to contact the participants and ask questions day and night. One of the participants stated:

*Teaching students how to use online learning step by step was consuming our time and effort, in addition to attending to their fears, worries and anxiety. (F10).*

To some participants and their students, lack of experience in online education made it a hard task and required extra-long working hours. What was annoying to them, was their inability to manage their time mainly because there were no boundaries between work time and rest time as was in traditional education, one of participant said:

*There are no working hours, I am working day and night, preparing materials, responding to students' messages, comforting and alleviating their fears of the learning and the pandemic crisis COVID-19. This is very different than what I am used to in the traditional education. I used to have specific hours for work at the university and at home for myself and my family. (F5).*

The participants explained that this experience was very demanding. In addition to the burden of online teaching, fear of the pandemic and family responsibilities with the lockdown were also overwhelming. They were busy seven days a week, working day and night and no weekends to rest. One participant expressed:

*In addition to my responsibilities towards my family, my students needed continuous support, but I was tired of the number of calls and messages, with no time boundaries, I received calls at night that I had to deal with in such crisis, it was exhausting to me. (F1).*

Female participants expressed their struggle in managing the ODE in addition to household responsibilities mainly with young children at home while attending to their teaching responsibilities. Working from home, closure of nurseries and schools added burden to them.

All participants agreed that it is more convenient for them to teach face-to-face in campus with designated timeframe for teaching and communicating with students. They emphasized the importance of setting timeframe boundaries to respond to students' communications and requests to allow free time away from teaching during weekends that was poorly managed during this experience.

The participants worked hard to manage ODE and adapting to this

new enforced situation, and at the same time learning from this experience. They agreed that time and practice enhanced their self-efficacy and lowered their fear and anxiety of the ODE experience. Learning by experience, learning by doing, trial and error were strategies employed to manage online teaching. They were determined to succeed in this enterprise. A participant explained:

*This experience was a response to a crisis we faced as faculty, our determination to succeed was our motivation to overcome obstacles and fulfill our expected roles as teachers, counsellors and supporters of our students even if it was on the expense of our personal and family time. (F2).*

This crisis obliged the participants to be involved in a new teaching model that they were hesitant or not confident to engage in. It was an opportunity to step out of their comfort zone. One participant explained:

*I was hesitant to introduce e-learning to my teaching, I was not confident in my abilities, although this experience was very hard for me, but it was an opportunity to enhance my expertise and confidence in online teaching and will integrate it in my courses in the future. (F15).*

Spouse and family support and their understanding of the demands of the online teaching, such as accepting the long time spent on the laptop and mobile phone day and night, were also emphasized. One participant explained:

*Most of my time I spent on my laptop working on my teaching, my family support, and understanding, and giving me the space to work helped me to cope in this stressful situation. (F14).*

The positive outcome of this experience is the participants' intention to give-up their complete integration in traditional teaching. They became interested and more confident to integrate in online teaching when the pandemic crisis is resolved and when students and teaching returned to the university campus. As one participant explained:

*I agree it was a stressful but also a learning experience. I never thought I will use online teaching before this crisis, I believe the positive outcome of this experience is breaking the ice of technology fear. (F11)*

4. Insufficiency of ODE: achieving clinical competencies and learning outcomes:

All participants worked hard and did their best to ensure students achieve the courses' learning outcomes, despite imposed learning limitations and difficulties. They explained that the intended learning outcomes of each course covers three domains: knowledge, skills, and attitudes. The participants agreed that the knowledge domain was manageable to teach online, however, the attitudes and skills learning outcomes and competencies were difficult to achieve with ODE. Clinical courses account for 50% of the baccalaureate nursing curriculum. Teaching clinical courses utilizing ODE were described as most difficult to accomplish. According to the participants, failure to attain the clinical courses' objectives is due to several factors such as; lack of faculty preparation, resources, and guidance on how to incorporate digital and virtual learning to teach clinical nursing skills and ensure students mastering nursing competencies. A participant explained:

*The core of nursing curriculum is clinical practice that prepares nursing students to their future career. Developing nursing competencies requires hands-on-training that is difficult to accomplish virtually. (F8).*

Most participants agreed that developing psychomotor skills in clinical training requires hands-on-training and cannot be achieved in ODE. This issue affected students' learning experience in the different years of the nursing program. Additionally, the outcome of their experience in ODE conclude that student' communication skills, affective



skills, and professional values cannot be developed or nurtured in virtual learning. Accordingly, students will not nurture their professional caring attitudes that is considered the essence of nursing care. A participant emphasized the importance of social interaction of students with faculty, peers, and clients in polishing the student's personality and communication skills, and professional and caring attitudes. He commented:

*We lost the role model in online teaching...Students gain not only knowledge in the face-to-face classes but also attitudes, discipline, teamwork, and morals. Students and teachers exchange thoughts, worries and fears. The online teaching lacks the human touch and caring. We were talking to a laptop screen.* (F12).

Another participant added:

*Not achieving the clinical ILOs adequately was frustrating to us. It is very important for students to interact with real patients to nurture their caring attitudes and their competencies. The outcome should be safe and competent nursing graduates that cannot be achieved by complete ODE.* (F4).

The participants agreed that their limited experience in e-learning and digital instructional design contributed to the ODE major drawback of developing and nurturing students' clinical skills and attitudes. They all agreed that they need further education and training in online education particularly on planning and implementing virtual learning strategies to facilitate the students achieving the intended learning outcomes in the three domains: knowledge, skills, and attitudes.

## Discussion

The world has experienced an unprecedented social, economic, and educational change because of COVID-19 crisis. To help in preventing the spread of COVID-19 virus a total lockdown of the country was instituted. Educational institutions had to take actions to overcome the impact of the crisis and adapt to the unusual circumstances without disrupting the students' learning through cancelling face-to-face classes, including labs and other clinical training experiences and the transition to ODE. Faculty, students, medical education, and professional development were negatively affected by COVID-19 pandemic because of the lockdown, social distancing, closure of schools, colleges and universities, and studying and working from home (Ahmed et al., 2020; Murphy, 2020). Nursing education was no exception. This study provides an insight on the experience of nursing faculty members in an abrupt transitional change from traditional face-to-face teaching to ODE enforced by the consequences of COVID-19 crisis.

In response to such quick decision, faculty faced several challenges shifting to ODE utilizing the available technology to ensure the students' achievement of the courses intended learning outcomes in this unusual circumstance. Crawford et al. (2020) analyzed the response of higher education to COVID-19 crisis across 20 countries. They found that several countries adopted similar approach of shifting the traditional teaching and learning strategies to ODE using the available technologies and facing similar challenges reported in the current study. These challenges are related to resources, infrastructure, internet and equipment's availability to faculty and students at home, and faculty and students' technical skills to fully engage in ODE. The educational institutions due to lack of planning and foreseeing the situation, were learning, improvising, and dealing with the crisis day by day (Rumbley, 2020). All these challenges were reported by the participants in the current study in addition to lack of technical support from their institutions, and the administrative issues of lack of clear policies and guidelines for ODE to follow. In congruence with the literature (Ahmed et al., 2020; Button, Harrington, & Belan, 2013; Farooq, Rathore, & Mansoor, 2020; Taylor, Grant, Hamdy, Marei, & Venkatramana, 2020), the results of the current study revealed that nursing faculty were challenged with ODE literacy skills, lack of resources and time to

prepare digital teaching courses necessary to achieve quality ODE.

Most of the participants in the current study had their first experience in ODE and agreed they lack technology skills to effectively manage a quality ODE that is also a substantial issue discussed in the literature (Chapman, 2010; Nguyen, Zierler, & Nguyen, 2011). Several challenges to provide effective e-learning experienced by the participants in this study were congruent with the literature. These challenges were: physical, psychological, and financial burden, lack of training and time to design quality courses, the amount of time consumed in e-learning, and lack of faculty members and students' experience in online education (Farooq, Rathore, & Mansoor, 2020; Nguyen, Zierler, & Nguyen, 2011). Other challenges facing the participants in implementing the ODE were lack of fiscal and electronic e-learning resources, infrastructure, and internet quality and accessibility (Al-Balas et al., 2020; Mansbach & Austin, 2018; Marek, Chew, & Wu, 2021).

Alongside digital technical concerns, faculty's psychological and emotional responses to ODE were reported in the literature. Rumbley (2020) examined several impacts of COVID-19 pandemic on individuals working in higher education institutions (HEIs) including emotional responses that were also reported by the participants in the current study including: fear, worry, uncertainty and inconvenience. The rapid and unplanned change in their roles and teaching plans have introduced a feeling highly tenuous circumstance. However, these responses are not unusual, and they were also caused by online teaching under usual circumstances. According to Macy (2007) faculty members' responses to online teaching varied and ranged between fears, lack of confidence and frustration to patience. Change often provokes fear of the unknown, fear of change and fear of failure. However, with time the study participants started to adapt to this new change and reported being more relaxed and comfortable with online distance learning. Their emotions were redirected to supporting the students and alleviating their fears of online education.

Lack of faculty members' motivation to engage in online distance teaching is an issue discussed in the literature (Hoffmann & Dudjak, 2012; O'Doherty et al., 2018). In the current study, the participants were forced due to the COVID crisis to adopt e-learning pedagogy. However, due to the urgency of the situation, faculty had to utilize the available and most feasible and accessible internet conference platforms to replace the traditional face-to-face classroom settings. The availability of smartphones to most students made it easier for faculty members to involve students on ODE and support their online learning. Similar findings were reported by Goh and Sandars (2020). Although it was a challenging experience, yet it was a good opportunity for faculty to be involved in ODE. They were able to dispel their fears and overcome barriers of using technology in education.

Work intensity appears frequently as a common theme in the literature on online teaching (De Gagne & Walters, 2009; Marek, Chew, & Wu, 2021). In the current study, the participants described ODE as defeating geographical and time boundaries and was exhausting physically, mentally, and psychologically. Time spent interacting with students and teaching online was double the time they spent in face-to-face teaching. Often students work on their online course content at their convenient time day or night and need answers to their questions during that time. According to Hoffmann and Dudjak (2012), students assume that the faculty members must be available to them all the times to provide feedback without time boundaries. In addition, the transition from the workplace at the school of nursing to home results in undefined working hours to working day and night with increased correspondence with students using social media, constant messaging and emails described as being time consuming and were on the expense of their rest and family time particularly for female faculty (Blake, 2009; Farooq, Rathore, & Mansoor, 2020). According to Rose (2020), faculty members had to struggle to establish boundaries between work and home that negatively affected their experience.

Lack of face-to-face interaction in online education do not allow faculty members to know the level of students' engagement in the class

and do not allow for instant feedback (Portera et al., 2020; Taylor, Grant, Hamdy, Marei, & Venkatramana, 2020). Reduced students' engagement was a frustrating issue to faculty in this study and is considered an “environmental threat” as reported by Longhurst et al. (2020, p. 303). Teacher-student relationship and peer social interaction are important aspects to enhance student's skills in teamwork, positive attitudes, collaboration that is not accomplished in ODE.

A major challenge in nursing education which is like other medical specialties is clinical training (Bowen, 2020). Online distance education is purely virtual and observational, lacks interactive and demonstration in real situations. Approaches used by faculty in this study were similar to those mentioned in the literature including different platforms, videos, case discussions, case scenarios and discussion forums, but they all agreed they lack experiential learning. The deficit in e-learning resources to translate knowledge into clinical skills and competencies was frustrating. Using available digital technology to demonstrate clinical skills do not provide the opportunity to assess and evaluate students' competencies in nursing procedures and clinical skills. This issue is a common challenge in medical education discussed in the literature (Gardner et al., 2016; Potts, 2020). Rose (2020) suggests, clinical rotations can be postponed to later, however the future of COVID-19 pandemic and its impact on education is not clear. It is uncertain how long the pandemic crisis will last or if it will recur, and quarantines and social distancing be enforced again. The challenge under such circumstances is in providing hands-on clinical patient care experiences for nursing students as it is a core component of nursing education. Accordingly, this raises the issue of the importance of including educational technology in faculty development programs (De Gagne & Walters, 2009) to support its integration with nursing education.

### Strengths and limitations

Although the researchers assured the credibility and confirmability of the findings, in qualitative studies, transferability might be limited. However, most of the findings support or are supported by the literature which makes the results applicable to institutions of higher education, specifically nursing education, worldwide. This type of qualitative studies provides in-depth data rich in contextual information that can offer guidance to nursing educators and higher education administrators to plan for better online educational experiences.

### Conclusions

This study provided an insight and in-depth information related to the lived experience of nursing faculty members to teaching during the emerged COVID-19 crisis and complete lockdown of the country using online distance education. The findings addressed opportunities and challenges facing faculty members in guiding and supporting students to achieve the course intended learning outcomes under the difficult circumstances.

The experience of ODE during the COVID-19 was challenging and created a new vision incorporating digital nursing education and motivated faculty to change their educational approach and adopt innovative didactic approach. The achievement of the intended learning outcomes and developing nursing competencies call for innovative curriculum integrating advanced technologies. Transformation of education in nursing and medical disciplines to provide virtual practical and relevant clinical experiences becomes a mandate, hence improves nursing schools' ability to face similar crises in the future.

### Implications for nursing education

Teaching has been maintained in this new reality, under unusual and unplanned circumstances utilizing the available resources. It provided an opportunity for faculty members to incorporate digital technology ‘e-learning’ in education. To ensure the quality of online nursing

education, instituting e-learning in faculty members training and development programs is recommended. It is recommended that nursing education administrators support and provide sufficient time for faculty to develop effective courses and appropriate assessment and evaluation exams. Implications for nursing education also include preparing nurse educators for ODE, creating environments and providing needed technological support that foster digital teaching and learning. All undergraduate-nursing programs should include health informatics as part of the core curriculum and information technology should be integrated throughout the entire program.

Introducing ODE to an educational institution requires good planning, management, policy, and guidelines development by the institution. This study informs higher education administration to invest in online education and to develop crisis response plans to strengthen efficient future response to similar crisis. Moreover, cooperation between institutions of higher education on the national and even regional levels, in the form of educational teleconferences and sharing access to available resources is encouraged to ensure high quality education during these difficult times. Finally, further studies are recommended to evaluate the online distance learning outcomes.

### Take home messages

The COVID-19 pandemic influenced education and forced universities to shift to remote online teaching provoking several challenges to educators and technology has been rapidly and innovatively used to maintain teaching and learning. Nurse educators need to know that this transformative change is expected to be normalized soon with no revert to the good old days of exclusive face-to-face learning and teaching. Online education will be embedded in the educational system and routinely incorporated in the learning-teaching process in various ways including pure remote/distant learning and hybrid forms. Equipping ourselves with the needed knowledge and skills as well as building appropriate platforms and facilitative environments are the building stones for future educational systems.

### Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

### Ethical approval

Ethical approval was sought through The University of Jordan, School of Nursing Ethics Committee approval number (#: PMs.19.13).

### Declaration of competing interest

No conflict of interest has been declared by authors.

### Acknowledgment

Our sincere appreciation for faculty who participated in this study.

### References

- Ahmed, H., Allaf, M., & Elghazaly, H. (2020). ‘COVID-19 and medical education. *The Lancet*. [https://doi.org/10.1016/S1473-3099\(20\)30226-7](https://doi.org/10.1016/S1473-3099(20)30226-7). Online first. Published: March 23, 2020.
- Ahmed, S., Hegazy, N., Abdel Malak, H., Kayser, C., Elrafie, N., Hassanien, M., et al. (2020). For utilizing distance learning post COVID-19 using (PACT)TM a cross sectional qualitative study. *BMC Medical Education*, 20, 400. <https://doi.org/10.1186/s12909-020-02311-1>.
- Al-Balas, M., Al-Balas, H. I., Jaber, H., Obeidat, K., Al-Balas, H., Aborajoo, E., et al. (2020). Distance learning in clinical medical education amid COVID-19 pandemic in Jordan: Current situation, challenges, and perspectives. *BMC Medical Education*, 20, 341. <https://doi.org/10.1186/s12909-020-02257-4>.



- Blake, H. (2009). Staff perceptions of e-learning for teaching delivery in healthcare. *Learning in Health & Social Care*, 8(3), 223–234. <https://doi.org/10.1111/j.1473-6861.2009.00213.x>.
- Bowen, M. (2020). Covid-19 has changed how we teach students. *Veterinary Record*, 186(14), 461. <https://doi.org/10.1136/vr.m1535>.
- Budhai, S., & Williams, M. (2016). Teaching presence in online courses: Practical applications, co-facilitation, and technology integration. *Journal of Effective Teaching*, 16(3), 76–84.
- Button, D., Harrington, A., & Belan, I. (2013). E-learning & information communication technology (ICT) in nursing education: A review of the literature. *Nurse Education Today*, 34. <https://doi.org/10.1016/j.nedt.2013.05.002>.
- Chang, C., Shen, H. Y., & Liu, E. Z. F. (2014). University faculty's perspectives on the roles of e-instructors and their online instruction practice. *The International Review of Research in Open and Distance Learning*, 15(3), 72–92. <https://doi.org/10.19173/irrode.v15i3.1654>.
- Chapman, B. (2010). How long does it take to create learning? Development times for instructor-led learning (ILT). Retrieved from <http://www.chapmanalliance.com/>.
- Chick, R. C., Clifton, G. T., Peace, K. M., & Propper, B. W. (2020). Using technology to maintain the education of residents during the COVID-19 pandemic. *Journal of Surgical Education*, 77(4), 729–732. <https://doi.org/10.1016/j.jsurg.2020.03.018>.
- Crawford, J., Butler-Henderson, K., Rudolph, J., Malkawi, B., Glowatz, M., Burton, R., ... Lam, S. (2020). COVID-19: 20 countries' higher education intra-period digital pedagogy responses. *Journal of Applied Learning & Teaching*, 3(1). <https://doi.org/10.37074/jalt.2020.3.1.7>.
- De Gagne, J. C., & Walters, K. (2009). Online teaching experience: A qualitative metasynthesis (QMS). *MERLOT Journal of Online Learning and Teaching*, 5(4), 577–598.
- Farooq, F., Rathore, F. A., & Mansoor, S. N. (2020). Challenges of online medical education in Pakistan during COVID-19 pandemic. *Journal of College of Physicians and Surgeons Pakistan*, 30(Suppl), S67–S69. <https://doi.org/10.29271/jcpsp.2020.Suppl.S67>.
- Frazer, C., Sullivan, D. H., Weatherspoon, D., & Hussey, L. (2017). Faculty perceptions of online teaching effectiveness and indicators of quality. *Nursing Research and Practice*. <https://doi.org/10.1155/2017/9374189>.
- Gardner, P., Slater, H., Jordan, J. E., Fary, R. E., Chua, J., & Briggs, A. M. (2016). Physiotherapy students' perspectives of online e-learning for interdisciplinary management of chronic health conditions: A qualitative study. *BMC Medical Education*, 16(62), 1–9. <https://doi.org/10.1186/s12909-016-0593-5>.
- George, P., Papachristou, N., Belisario, J. M., Wang, W., Wark, P. A., Cotic, Z., et al. (2014). Online eLearning for undergraduates in health professions: A systematic review of the impact on knowledge, skills, attitudes and satisfaction. *Journal of Global Health*, 4(1). <https://doi.org/10.7189/jogh.04.010406>.
- Goh, P., & Sandars, J. (2020). A vision of the use of technology in medical education after the COVID-19 pandemic. *MedEdPublish*. <https://doi.org/10.15694/mep.2020.000049.1>. Retrieved from.
- Hodges, C., Moore, S., Locke, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. Retrieved from <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>.
- Hoffmann, R., & Dudjak, L. (2012). From onsite to online: Lessons learned from faculty pioneers. *Journal of Professional Nursing*, 28, 255–258. <https://doi.org/10.1016/j.profnurs.2011.11.015>.
- Hollis, V., Openshaw, S., & Goble, R. (2002). Conducting focus groups: Purpose and practicalities. *British Journal of Occupational Therapy*, 65(1), 2–8. <https://doi.org/10.1177/030802260206500102>.
- Li, C. H., Rajamohan, A. G., Acharya, P. T., Liu, C. J., Patel, V., Go, J. L., & Kim, P.E. & Acharya, J. (2020). Virtual read-out: Radiology education for the 21st century during the COVID-19 pandemic. *Academic Radiology*, 27(6), 872–881. <https://doi.org/10.1016/j.acra.2020.04.028>.
- Longhurst, G. J., Stone, D. M., Duloher, K., Scully, D., Campbell, T., & Smith, C. F. (2020). Strength, weakness, opportunity, threat (SWOT) analysis of the adaptations to anatomical education in the United Kingdom and Republic of Ireland in response to the Covid-19 pandemic. *Anatomic Science Education*, 13, 298–308. <https://doi.org/10.1002/ase.1967>.
- Macy, R. (2007). The transition from face-to face to online teaching. *Campus Technology*, 2007. Retrieved from <http://download.101com.com/CAM/conf/2007/Macy.pdf>.
- Mansbach, J., & Austin, A. (2018). Nuanced perspectives about online teaching: Mid-career and senior faculty voices reflecting on academic work in the digital age. *Innovative Higher Education*, 43, 257–272. <https://doi.org/10.1007/s10755-018-9424-4>.
- Marek, M., Chew, C., & Wu, W. (2021). Teacher experiences in converting classes to distance learning in the COVID-19 pandemic. *International Journal of Distance Education Technologies*, 19(1), 40–60. <https://doi.org/10.4018/IJDET.20210101.0a3>.
- Marshall, A. L., & Wolanskyj-Spinner, A. (2020). COVID-19: Challenges and opportunities for educators and generation Z learners. *Mayo Clinic Proceeding*, 95(6), 1135–1137.
- Martins, N., & Ungerer, L. M. (2017). Virtual teaching dispositions in an open distance learning environment: Origins, measurement and impact. *Africa Education Review*, 14(2), 156–173. <https://doi.org/10.1080/18146627.2017.1294971>.
- Murphy, B. (2020). COVID-19: How the virus is impacting medical schools. Published March 18, 2020. Available at: <https://www.ama-assn.org/delivering-care/public-health/covid-19-how-virus-impacting-medical-schools> (Accessed: 14 June 2020).
- Nguyen, D. N., Zierler, B., & Nguyen, H. Q. (2011). A survey of nursing faculty needs for training in use of new technologies for education and practice. *Journal of Nursing Education*, 50(4), 181–189. <https://doi.org/10.3928/01484834-20101130-06>.
- Ní Shé, C., Farrell, O., Brunton, J., Costello, E., Donlon, E., Trevaskis, S., & Eccles, S. (2019). *Teaching online is different: Critical perspectives from the literature*. Dublin: Dublin City University. <https://doi.org/10.5281/zenodo.3479402>. #Openteach: Professional Development for Open Online Educators project website. (Accessed April, 25, 2020).
- O'Doherty, D., Dromey, M., Lougheed, J., Hannigan, A., Last, J., & McGrath, D. (2018). Barriers and solutions to online learning in medical education — An integrative review. *BMC Medical Education*, 18, 130. <https://doi.org/10.1186/s12909-018-1240-0>.
- Portera, J., Barbagallo, M., Peckb, B., Allena, L., Tantia, E., & Churchilla, A. (2020). The academic experiences of transitioning to blended online and digital nursing curriculum. *Nurse Education Today*, 87. <https://doi.org/10.1016/j.nedt.2020.104361>.
- Potts, J. R. (2020). Residency and fellowship program accreditation: Effects of the novel coronavirus (COVID-19) pandemic. *Journal of American College of Surgeons*, 230(6), 1094–1196. <https://doi.org/10.1016/j.jamcollsurg.2020.03.026>.
- Rose, S. O. *Medical student education in the time of COVID-19*. Journal of American Medical Association <https://jamanetwork.com/>. <https://doi.org/10.1001/jama.2020.5227>.
- Ruarte, D. E. (2019). Effective pedagogies for online teaching and learning. Available at <https://www.researchgate.net/publication/332655856> [accessed May 29 2020].
- Rumbley, L. E. (2020). Coping with COVID-19: International higher education in Europe. *The European Association for International Education (EAIE)*. ISBN 9789074721554 <https://cbie.ca/wp-content/uploads/2020/04/EAIE-Coping-with-COVID-19-International-higher-education-in-Europe.pdf> [accessed 15 June, 2020].
- Sinclair, P. M., Kable, A., Levett-Jones, T., & Booth, D. (2016). The effectiveness of internet-based e-learning on clinician behavior and patient outcomes: A systematic review. *International Journal of Nursing Studies*, 57, 70–81. <https://doi.org/10.1016/j.ijnurstu.2016.01.011>.
- Speziale, H., & Carpenter, D. (2011). *Qualitative research in nursing: Advancing the humanistic imperative* (5th ed.). Philadelphia, PA: Lippincott Williams & Wilkins.
- Stewart, D., & Shamdassani, P. (2017). Online focus groups. *Journal of Advertising*, 46(1), 48–60. <https://doi.org/10.1080/00913367.2016.1252288>.
- Suliman, W. A., Abu-Moghli, F., Khalaf, I., Zumot, A. F., & Nabolsi, M. (2021). Experiences of nursing students under the unprecedented abrupt online learning format forced by the national curfew due to COVID-19: A qualitative research study. *Nurse Education Today*, 100(May). <https://doi.org/10.1016/j.nedt.2021.104829>.
- Taylor, D., Grant, J., Hamdy, H., Marei, H., & Venkatramana, M. (2020). Transformation to learning from a distance. *MedEdPublish*, 9(1), 76. <https://doi.org/10.15694/mep.2020.000076.1>.
- WHO. (2021). retrieved May 10, 2021 from <https://www.who.int/publications/m/item/weekly-epidemiological-update-on-covid-19—11-may-2021>.