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Nursing student experiences of remote learning during the COVID-19 pandemic

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Abstract

Background: The emergence of the COVID-19 pandemic resulted in a sudden transition to remote learning. These circumstances presented many challenges for higher education faculty and students around the world but especially for nursing education programs which are traditionally conducted in a face-to-face learning environment that includes hands-on experiential learning.

Methods: Guided by Meleis' Transition Theory, a qualitative descriptive design was utilized to explore prelicensure nursing students' experiences of the transition to remote learning during the Spring 2020 semester. Participants were recruited from one baccalaureate program in the Pacific Northwestern United States. Interviews were conducted and transcribed using a web conferencing platform. Data were analyzed using Colaizzi's phenomenological reduction.

Results: Eleven students participated. Interviews revealed four overarching themes: technological challenges, academic relationship changes, role stress and strain, and resilience.

Conclusion: The sudden transition to remote learning resulted in a number of challenges for nursing students. Despite these challenges, students demonstrated a remarkable sense of resilience and perseverance. Faculty have an opportunity to address student stressors and design remote courses in such a way to facilitate student engagement and community building.

KEYWORDS
COVID-19, Nursing Education, Teaching/learning, Technology

1 | INTRODUCTION

On March 11, 2020, the World Health Organization (WHO) formally declared COVID-19 a pandemic.[1] In the wake of the pandemic, governments throughout the world implemented self-isolation, social distancing, and travel restrictions to contain the spread of the virus.[2] During the Spring 2020 semester, in an effort to slow the spread of the virus, many institutions of higher education were required to pivot to a remote learning platform in response to this global pandemic. This transition from face-to-face instruction to an online learning platform presented students with several challenges. These challenges included technology infrastructure, technology support, time management, learning space, family, and work.[3] Prelicensure nursing education is unique in the focus on preparing students to become competent practitioners and the reliance on clinical experiences. The purpose of this study was to explore prelicensure baccalaureate nursing students' experiences of the transition to remote learning during the Spring

2020 semester in one of the first states impacted by this transition.

1.1 | Background

The emergence of the global COVID-19 pandemic prompted significant changes in teaching and learning modalities around the world. These circumstances presented many challenges for higher education faculty and students but especially for nursing education programs which are traditionally conducted in the face to face learning environment inclusive of hands-on experiential learning. In response to the pandemic, the American Association of Colleges of Nursing (AACN) remained committed to ensuring faculty and students were safe, but also recognized the importance of continuity of teaching and learning throughout the outbreak.[4] The COVID-19 pandemic prompted nursing programs to teach traditional didactic content synchronously and asynchronously using alternative platforms such as learning management systems and web conferencing. With concerns of COVID-19 viral exposure and the need to conserve personal protective equipment, many nursing programs abruptly removed students from hands-on clinical experiences at healthcare institutions[5] and replaced these experiences with virtual and web-based simulation programs.

Even before the pandemic the literature has uncovered several themes associated with student challenges to online pedagogies including technological barriers, inadequacy in student/instructor communication, and difficulties with engaging students.[3,6–8] Following the pandemic, stories of disruptions in education emerged related to this rapid shift in both clinical and didactic course delivery.[6,7,9,10]

1.2 | Theoretical framework

Transition is described by Meleis et al.,[11] as central to the domain of nursing and requires a person to incorporate new knowledge, alter behavior, and even change the definition of self. Transitions can be facilitated or inhibited by conditions such as meanings, cultural beliefs and attitudes, socioeconomic status, preparation, and knowledge, as well as community and societal conditions.[11] Transitions can produce what has been described as profound alterations in the lives of individuals and their significant others and have important implications for well-being and health.[12] Students in this study were in the midst of experiencing a profound transition from face to face to remote learning requiring them to incorporate new knowledge and alter their behaviors, thus Transition Theory was the guiding theoretical framework for this study.

2 | METHODS

In an effort to understand the lived experience and perceptions of students transitioning to remote learning during the COVID-19 pandemic, a descriptive phenomenological design was utilized.

Junior and senior prelicensure baccalaureate students at a university in the Pacific Northwestern part of the United States were interviewed following approval from the University's Human Protection Review Board (HPRB Protocol #364). The Pacific Northwest region of the United States was one of the first areas of the country to be impacted by COVID-19.[13] Before engaging in the study, the researchers agreed and subsequently adhered to a strict treatment fidelity plan that outlined the specific steps for data collection and subsequent analysis to ensure the researchers were consistent in their approach.

Two of the principal investigators (PIs) not affiliated with the university conducted the interviews. This was intentional so that students did not feel coerced into participating by one of their current or former nursing faculty. It was also thought that students participating in the study would feel more comfortable sharing their experiences and thoughts if they spoke with an interviewer not affiliated with the university. Interviews were conducted using an online video meeting platform and demographic data was collected using survey software.

2.1 | Sample recruitment

Junior and senior nursing students enrolled in a baccalaureate nursing program at a university in the Pacific Northwest were purposively recruited in 2020 between August and early September before the new semester starting through a school-affiliated email from one of the PI's. The email explained the study's purpose, discussed confidentiality, and invited potential participants to contact one of the two nonuniversity affiliated PIs. Interested students responding to the email were invited to a password-protected recorded online interview and provided with a survey link to a demographic questionnaire. Upon completion of the interview and demographic questionnaire, participants were provided with a $20.00 e-gift card.

2.2 | Data collection

Students agreeing to participate were given a pseudonym designed to protect their identity and interviewed individually by one of two PIs not affiliated with the university using a semi-structured format. Students self-selected a location in which to complete the interview that was conducted using an online meeting platform. The interview consisted of general guided reflective questions that attempted to elicit student experiences and their perceptions of transitioning from face to face to all remote learning. Students were asked open-ended questions such as "Can you tell me about your experience transitioning from face to face to remote learning" and "What was it like for you, for your family"? The interviewers occasionally asked follow-up questions for clarification and to validate student responses. Additionally, students were prompted to elaborate on points by being asked to "Go on" or "Tell me more". Just before the interview, students were directed to a password-protected survey platform

where they completed a demographic questionnaire. Students were asked to provide their assigned pseudonyms so that the demographic questionnaire could be linked to the interview transcripts.

2.3 | Data analysis

Interviews were recorded and transcribed by using the online meeting transcription feature. All interview transcriptions were verified by the interviewers for accuracy through watching the recorded interviews. Data analysis was completed using Colaizzi's seven-step phenomenological reduction.[14] This process included becoming familiar with the data (by reading through the transcript several times), identifying significant statements relevant to the phenomenon of transitioning to remote learning, formulating meanings (i.e., identification of meanings relevant to the phenomenon), clustering themes, describing the themes, condensing the described themes down to short statements that capture the essence of the phenomenon, and finally seeking verification of the themes through another review of the transcripts. Throughout, the PIs reflexively bracketed their suppositions, this was accomplished by meeting weekly to discuss our perceptions and personal experiences with students teaching remotely during the pandemic and how these perceptions may influence the analysis of the data.

Following each interview, transcripts were independently analyzed by each team member and significant statements were extracted to formulate emerging themes. Team members then met to discuss interpretations until a consensus was reached among all PIs. Team members came to a consensus following the 11th interview that no new themes were emerging and that data saturation had been achieved.

Lincoln and Guba's[15] framework was used to establish qualitative scientific rigor. Credibility was established through triangulation, debriefing, and member checking with participants at the end of each interview. Triangulation was achieved by comparing data across interviews and reviewing reflective field notes of the PI's observations and perceptions documented in the reflective field notes following each interview. Dependability and conformability were achieved by the use of an audit trail and treatment fidelity plan. Transformability was shown through the use of detailed and thick descriptions of the data.

3 | RESULTS

Eleven students participated in this study; 45.45% ($n = 5$) were junior and 54.55% ($n = 6$) were senior nursing students. The majority of participants were female ($n = 10$), with a mean age of 24.6 years. Of the sample participants, 63.64% ($n = 7$) were first-generation college students. The self-identified racial/ethnic breakdown was Caucasian ($n = 5$), Asian ($n = 4$), Black or African American ($n = 1$), and American Indian ($n = 1$). The mean length of the interviews was 25.6 min with a range of 13–38 min. Four themes emerged from the data analysis: technological challenges, academic relationship changes, role stress/strain, and student resilience.

3.1 | Technological challenges

Many students perceived that faculty were unfamiliar with the delivery of online teaching pedagogies and described this lack of familiarity as a barrier to learning. One student offered their interpretation as follows:

> I would say that my professors really struggled with having online access. They weren't as tech-savvy as one would need to be to do a full-day online class. So a lot of the time we either didn't have lecture or... they would just send out their lecture notes and say, you know, 'here they are read them when you can' and obviously, that didn't work.

An additional uncertainty was related to virtual communication via the online learning platform. Some student concerns included when to ask questions and how to approach their professor during remote learning:

> ...Not being able to ask questions ... you don't know if someone else is going to start talking. And then you don't know if your professor can hear you... And then you're like, I feel embarrassed because you don't even know if the connection is okay ... You have to ask your question, like, four different times and then by the time teacher actually hears your question, it's like, never mind I didn't even care about the answer anymore... I don't even remember why I was asking it.

Further challenges included connectivity issues, netiquette, and distractions in their learning environments. One student described the transition to remote learning as follows:

> It felt like the lectures were much longer than they actually were because in class, you know, you can ask questions, engage more with the professor, but it's very hard to do over Zoom...there's also a lot of distractions... at home and ... it was a disaster.

Another student stated,

> I'm not super tech savvy but the [online learning platform] calls would drop and I wasn't sure if it was my WiFi or maybe my teacher's WiFi. And so we'd all get kicked off and then I'd call my classmates and they were also kicked off.

One student described her thoughts after an internet provider company unexpectedly disconnected the cable while she was taking an exam:…. *And I was like, why is my screen frozen? I'm on a timed exam, you know… I was 19 questions in, you know… the worst time. And I went outside and here's the guy holding the cable in his hand with the hard hat on and everything…, And it was just a mess.*

Students further identified changes to the exam proctoring process which lead to perceptions of faculty mistrust. Regarding their perceptions of the educator's attempts at maintaining exam security, one study participant stated the following:

They [the professors] needed us to record on our phone. And then we had to take the test on the computer. Sometimes our phone cut off… we were worried that it counted as cheating because they [the professors] didn't hear us… Or for touching it, they may think that we're reading off of her phone but really we're trying to adjust it. It was just the anxiety part of it was trying to, like, we're not cheating it's just hard to show it at the same time, you know, while we're testing.

Despite many negative aspects related to the reliance on technology for education, students perceived positive outcomes as well. These included the ability to re-listen to recorded lectures and shorter lectures that were more direct in content. The following excerpt of one student's thoughts about having access to recorded lectures:

I was able to record the visual of the teacher speaking. It's different than audio recording in class…. I'm a visual learner so that helped a lot.

3.2 | Academic relationship changes

In addition to technological changes, students described the negative impact of remote learning on peer-to-peer relationships. A majority of students described feeling isolated, lonely, missing study groups, and an inability to ask questions to peers…. *Not being able to have discussions with my classmates, I think was pretty different. Just because our cohort has been together since the beginning. And so it was weird to have to go from learning as a big group … and being able to like bounce ideas off of each other… to learning completely on your own.*
Another student stated:

I got kind of lonely, you know, just to be over zoom all the time and not have that [in-person interaction]. On occasion, we did have a presentation that we had to work

on as a group, but then my group didn't even want to meet over Zoom.

Even so, some students described forming their own study groups through social media platforms where they had an opportunity for some enhanced peer-to-peer interactions. One student reflected:

We sometimes would have Zoom study sessions and I feel like we grew closer together as a family kind of because we felt like we were going through this together. Nobody was alone, and we had the support that we needed.

In addition to changing peer relationships, students described deteriorating faculty-to-student relationships. Examples provided included unanswered emails, lack of office hours, late or absent feedback on work submitted, and loss of face-to-face contact that made it more difficult to ask questions. One student stated,

[I] wasn't able to go to talk to my professors and after class, it felt like the professors were already so busy trying to plan for the next lesson. And sometimes they just wouldn't respond to our emails when we had questions. And it was just kind of hard to get in touch with them sometimes as well.

3.3 | Role stress and strain

In response to the onset of the COVID-19 pandemic, students faced increased responsibilities outside of their academic workloads that resulted in role stress and strain. Influencers included changes in family dynamics and structure, increased responsibilities such as homeschooling, and financial distress. One student described their experience caring for three younger siblings while their mother who was a nurse caring for COVID patients was quarantining at another part of their home:

I didn't have to pitch in financially, but just a lot more household work, and I just felt like I was super stressed because I was having to pick up all the slack.

Furthermore, learning environment distraction was also a source of stress for students. A participant shared that she was in the midst of listening to an important lecture in pediatrics and her own young child dropped a donut in another room and started screaming. The student lamented: *By the time I came back, it's like I just missed everything on how to save a child's life.* Another student described the distraction associated with their brother vacuuming while they were

in the midst of a final exam, and another lamented: "They like gave us hot sauce, like when we already were on fire."

Another student reflected,

> I mean, definitely, stress does not help one learn. Stress from world events and stress from, like, okay, how everything is changing? What do I need to do? How is this going to change my requirements? Am I going to get enough clinical hours to graduate? So I think it just added to stress. And that stress, you know, compounded itself in such a way that it made it harder to learn.

One student shared their perception of learning skills remotely:

> It really makes a difference to be in-person and hands-on with nursing classes... it's one thing to recite the steps of doing something, but it's different when you're actually doing it and it felt very hard and stressful to know that I wasn't able to practice it fully.

3.4 | Resilience

The transition to remote learning prompted many students to enhance their resourcefulness and creativity. Students became self-directed and formed independent study groups, and practiced nursing skills on items available in their learning. Students relayed feelings of accomplishment by achieving the Dean's list, discovering their own strengths, and increasing their efficiency. Despite the challenges associated with world events and the academic institution's response by transitioning to remote learning, students still perceived a bright side. They appreciated the flexibility of remote learning, extra study time garnered from not having long commutes, increased time with family, and the ability to take time for self-care. One student's portrayal of their adaptations during the transition to remote learning follows:

> I had to find ways to be creative, to learn how to do a lot of the nursing tasks. And so my creativity expanded. I made my own tools. I made my own Foley catheters...and I did a bunch of stuff with teddy bears and I taught classes with a few of my peers. So after we do our classes we get together and do our own classes to make sure that we got everything out of the lecture.

Other students made the following statements:

> ...So, that part of it [remote learning] wasn't that difficult. Just the transition. It wasn't ideal, but nothing about all this has been ideal. So you just got to do the best with what you got

> .... It was challenging, but I still pulled it through.

> ...Our last semester was interesting. But to me, it was very good because we got really challenging patients and I heard that we wouldn't get that in real life. And we learned a lot.

Regarding coping strategies, one student reported the following:

> ...I have an app on my phone called Calm that I use regularly. I'm also seeing a therapist on a regular basis. So it's also helped me and whenever I have free time, I tried to exercise as much as I can.

4 | DISCUSSION

The COVID-19 pandemic brought about a sudden extraordinary change in the delivery of nursing education that resulted in alterations in the way content was taught by faculty and received by the students. This study is among the first to describe student perceptions of transitioning to remote learning during the COVID-19 pandemic. The themes revealed a number of challenges experienced by the students during this transition beginning with technology.

Students generally have a positive view of the use of technology in nursing education.[16] However, to be successful, the technology must be reliable, accessible, and user-friendly with tech support available 24 h a day, every day.[17] The students in this study reported a number of challenges associated with the use of technology including unreliable internet, test proctoring programs, and perception of faculty being unprepared to teach in this environment. A number of students appreciated the opportunity to listen to recorded lectures at their own pace and recent research by Islam et al.,[18] affirm student preferences for recorded lectures versus live lectures. While this study reflected student perceptions of transitioning to remote learning during the pandemic, the findings are applicable to nursing education beyond the pandemic. For example, faculty should always consider offering a primer on course expectations, guidelines for engaging with faculty (e.g., netiquette), approaches for connecting with peers, and strategies for building and strengthening resilience. Additionally, if classes continue to remain remote, faculty should consider an appropriate blend of asynchronous with synchronous classes to allow for more flexibility. Finally, faculty should be prepared to provide alternative assignments in the event that a student has technological difficulties.

A second theme that was noted among the students was that of changing peer and faculty relationships. Peers and faculty play an important role in helping students develop a sense of community and belonging.[19] During traditional face-to-face instruction, nursing students often see one another regularly, form study groups, work to-

gether on projects, and share notes. Students will also often stay after class to meet with a professor or drop by for office hours. The sudden transition to remote learning resulted in an unanticipated absence of these connections leading to feelings of loss and loneliness. Though some students continued to find ways of engaging one another, there is an opportunity for faculty to help build and foster a continued sense of community. Faculty can offer active online learning strategies that give students an opportunity to collaborate with one another through the use of breakout rooms, sharing video messages, offer virtual office hours, and ask students for feedback regularly. Faculty can also develop creative strategies to foster student-to-student engagement such as developing a discussion board for students only. Additional strategies include creating assignments such as think–pair–share where students share their work with a partner to identify commonalities and differences. Building opportunities for interactions is critical to fostering a sense of community and belonging.[20]

The third theme of role strain and stress was noted in all students. Before the COVID-19 pandemic, it had been reported that nursing students have higher levels of stress than other college majors.[21] The transition to a fully remote learning platform combined with changing expectations, changing family roles, and uncertainty created significant new stresses for an already stressed student body. Some stress can provide a degree of motivation; however, excessive stress can lead to feelings of inadequacy and decreased performance.[22] Whereas faculty cannot mitigate all sources of student stress, they can help reduce some degree of student stress by limiting the number of assignments to what is absolutely necessary to meet course outcomes. It is important to recognize that just because a student is learning remotely, they do not necessarily have more time to complete assignments. Faculty can also reduce stress by helping students develop effective coping strategies such as reflection or meditation and by encouraging a collaborative environment among students and faculty.[22]

A final overarching theme that came through in each interview was that of resilience. Resilience is seen as a contextual and dynamic process that includes the ability to rise above, overcome adversity, adapt, adjust, and an ability to bounce back after a period of stress or hardship.[23] Resilience can be a protective factor in that individuals who have prior experiences with stress are thought to have better resilience and an enhanced ability to cope with new stressors.[24,25] Most students were first-generation college students without the benefit of elder help in navigating the higher education landscape. During the interviews, a number of students discussed having faced prior episodes of adversity such as military deployment, caring for children as a single parent, and/or working full time to pay for school. Students in this study described overcoming multiple barriers to technological challenges, becoming resourceful, focusing on strengths, forging ahead, and even examining their situation with an emphasis on the bright side. Nurse faculty have an opportunity to promote resilience in all students by coaching students to find ways to overcome challenges, reframe experiences from something negative to

something positive, and asking students to consider what they have learned from a stressful experience.[26]

5 | LIMITATIONS

There are some limitations to this study. This study was conducted at a single site located in the Pacific Northwestern part of the United States, thus may have inherent differences from other institutions. Students in this study may have self-selected to participate as a way of sharing their experiences and voicing their concerns. Students' perception of remote learning was not assessed before the pandemic to ascertain differences.

6 | CONCLUSION

The sudden transition to remote learning resulted in a number of challenges for nursing students. Challenges with technology, changes in peer to peer and student to faculty relationships, and stressors related to role strain created a perfect storm of role conflict and total role overload. Despite these challenges, students demonstrated a remarkable sense of resilience and perseverance. Faculty have an opportunity to incorporate new knowledge about rapid transitions to remote learning and design nursing courses that are pandemic-ready for the future. To facilitate student engagement and successful transition to remote learning, faculty will need to foster online community building, become adept in teaching in an online environment, schedule respite from technology, and promote self-care to cultivate resilience.

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