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Research article

The experience of baccalaureate clinical nursing faculty transitioning to emergency remote clinical teaching during the COVID-19 pandemic: Lessons for the future

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ABSTRACT

Background: Experiential clinical learning in undergraduate nursing education allows for fusion of nursing knowledge with practice to ensure the development of competent graduate nurses. The global COVID-19 pandemic necessitated an abrupt transition from in-person clinical educational experiences to emergency remote clinical teaching.

Objectives: The purpose of this study was to describe the experiences of baccalaureate nursing clinical faculty who transitioned from in-person clinical to emergency remote clinical teaching during the COVID-19 pandemic in spring 2020.

Design: A qualitative descriptive design was used.

Setting: The study took place in the United States.

Participants: Nineteen baccalaureate nursing clinical faculty participated in the study.

Methods: Participants engaged in semi-structured, in-depth, online interviews.

Results: Five themes emerged from the data: transition, collaboration and support, the joy of teaching, authentic professional experience, and the overarching primary theme, stress of the moment.

Conclusions: The transition to emergency remote clinical teaching during the COVID-19 pandemic caused stress and anxiety. However, there were important lessons learned about how to best support students and faculty while providing a robust online learning experience. Understanding the experiences of clinical nursing faculty during this abrupt transition can support recommendations for best practices in the future.

1. Introduction

In spring 2020, stay-at-home orders, lockdowns, and social distancing guidelines necessitated by the global COVID-19 pandemic forced the closure of colleges and universities worldwide. According to guidance from the World Health Organization (WHO) (2020) and Centers for Disease Control and Prevention (CDC) (2020), virtual meetings replaced physical gatherings and non-essential personnel were limited. Thus, in-person nursing clinical education was emergently halted to decrease the spread of COVID-19 while protecting students, staff, and patients.

Nursing programs quickly transitioned to emergency remote clinical teaching (Commission on Collegiate Nursing Education, 2020) and faculty were challenged with providing relevant and engaging clinical experiences in an exclusively online format (Morin, 2020; Sandhu and deWolf, 2020). There are notable differences between emergency remote teaching and robust online education; emergency remote teaching provides temporary, alternate access to education or educational supports that would not otherwise be available during a crisis (Hodges et al., 2020).

2. Background

As a practice-based discipline, nursing curricula use both theoretical and clinical learning to prepare graduate nurses. Clinical education, as a signature pedagogy of nursing education, is vital for professional
nursing preparation as it provides experiential learning opportunities that fuse nursing theory with practice (American Association of Colleges of Nursing [AACN], 2021). Clinical learning supports knowledge acquisition and application (AACN, 2021; Shulman, 2005), prioritization and organization of patient care (AACN, 2021; Ironside et al., 2014), and increased confidence (Boe and Debesay, 2021). According to boards of nursing, clinical learning experiences are essential for the development of a prepared nursing workforce (National Council of State Boards of Nursing, 2005; Singapore Nursing Board, 2017).

Natural disasters and disease outbreaks have interrupted in-person clinical experiences in the past. In the aftermath of Hurricane Katrina in 2005, Tulane Medical School reported the complexity of providing clinical learning experiences with long-term power outages and loss of infrastructure (Hedges et al., 2018; Krane et al., 2007). Alliances were formed with other colleges to provide facilities, allowing Tulane to quickly re-commence operations (Krane et al., 2007). Similarly, during the Severe Acute Respiratory Syndrome (SARS) outbreak in Hong Kong in 2003, clinical teaching was discontinued abruptly, forcing nursing schools to utilize laboratories for experiential learning (Thompson et al., 2005). Each school utilized laboratories for experiential learning (Thompson et al., 2004).

Since the COVID-19 pandemic is recent, literature is limited regarding the effect of the pandemic on higher education. Existing literature identifies that higher education faculty found the transition to online teaching (Johnson et al., 2020), associated work-life balance (Sacco and Kelly, 2021), and concurrent political and societal movements occurring in the United States (U.S.) (Sacco and Kelly, 2021) extremely stressful early in the pandemic. Higher education students experienced changes in sleep patterns, difficulty concentrating, and loss of social interactions due to the stress of the pandemic (Son et al., 2020), while lack of designated online learning spaces and financial concerns further increased students' stress levels (Masha'al et al., 2020). Despite these stresses, nursing students identified that maintaining contact and a good relationship with their clinical faculty helped with transitions during and after emergency remote clinical education (Ulенаers et al., 2021).

3. Purpose

Although transient, understanding the lessons learned from emergency remote clinical teaching during the COVID-19 pandemic can foster more informed clinical education during future emergencies. Thus, the purpose of this qualitative descriptive study was to describe the experiences of baccalaureate nursing clinical faculty transitioning from in-person clinical teaching to emergency remote clinical teaching during the COVID-19 pandemic in the spring of 2020.

4. Theoretical framework

Lewin's (1951) Change Theory has three major concepts: driving forces (cause the change to occur), restraining forces (counteract the driving forces), and equilibrium (driving forces equal restraining forces). The three stages of Lewin's (1951) Change Theory include: unfreezing (letting go of old behaviors), changing (changing thoughts, feelings, or behaviors), and refreezing (establishing the change as the new normal). The COVID-19 pandemic and associated mitigation strategies were the driving forces requiring emergency remote clinical teaching. This study explores the experiences of clinical faculty as they transitioned through the stages of change during emergency remote clinical teaching.

5. Methods

This study used a qualitative descriptive design. Following Institutional Review Board approval from the home institution, social media posts with an embedded electronic survey link were placed on LinkedIn, Facebook, and Twitter inviting participants who met the inclusion criteria (English-speaking clinical nursing faculty teaching in an accredited baccalaureate nursing program in the U.S. who transitioned from in-person to online clinical teaching in the spring of 2020) to participate in the study. Participants were encouraged to share the invitation with others. Participants viewed the consent form and provided consent via the electronic survey. If the participant consented, they completed a demographic questionnaire and provided contact information to schedule an interview. If the potential participant declined consent, the survey was not completed, and no data were collected.

Individual, semi-structured interviews were conducted using an interview guide (Table 1) via the Zoom videoconferencing platform and recorded with an external digital audio recorder. Audio files of the interviews were transcribed by a member of the research team. The lead author confirmed verbatim transcription of the data with a 10% audit of the transcripts and verified accuracy of the transcripts. Data were analyzed using conventional content analysis (Hsieh and Shannon, 2005). Each author independently read interview transcripts, taking notes on substantive areas of content and emerging themes. All authors then discussed the findings to develop a structure of major categories (Elo and Kyngas, 2008). Member checks with study participants supported the scientific rigor for this study (Tobin and Begley, 2004).

6. Results

6.1. Sample

Nineteen clinical nursing faculty were interviewed (Table 2). The sample recruited was 100% female, 84% (n = 16) white, and primarily from the northeastern United States. Twenty-two individuals completed the informed consent and demographic survey; three could not be contacted to schedule an interview. Data saturation was reached after the twelfth interview, but the researchers conducted 19 interviews for rich saturation of the data.

6.2. Themes

Five themes emerged from the data: transition, collaboration and support, the joy of teaching, authentic professional experience, and the overarching primary theme, stress of the moment (Table 3).

6.2.1. Stress of the moment

The main theme that underscored all interviews was the “stress of the moment.” The stress of the moment caused notable anxiety and stress for both faculty and students due to the changes, losses, and even victories that occurred after the switch to emergency remote clinical teaching.

Table 1
Semi-structured interview guide.

| 1. Please share with me your experiences transitioning emergently to online clinical teaching. |
|-------------------------------------------------|
| a. Please share how clinical content was delivered in the emergency remote clinical learning. |
| 2. Please share with me any barriers your experienced delivering emergency remote clinical education during the Spring 2020 semester. |
| 3. Please share with me anything that helped the transition of clinical from in person to an online format. |
| 4. Please share with me your experiences preparing for the emergent transition of clinical to an online format. |
| 5. What supportive services did you use/have to assist with this transition? |
| 6. What would you do differently now that you have experienced this transition? |
| 7. What is your perception of the student experience during on-line clinical learning? |

| a. Can you describe the positive experiences? |
| b. Can you describe the negative experiences? |
| 8. What were you surprised about with the learning styles of your students? |
| 9. Do you feel you were able to meet the objectives of the clinical course? |
| 10. Is there anything else that you would like to share with me? |
Currently, many clinical faculty were working concurrently at the bedside and felt tremendous stress from the dual role. One faculty member noted, “So it wasn’t just the work it was that everything was stressful right? Your whole life was stressful, and nobody knew what was going on and so it was like stress on stress…”.

Participants spoke of how virtual clinical frequently turned into “therapy” sessions with students. A clinical instructor stated, “It felt like a crying fest or like a venting fest for the students... It was very tearful, so I think just like letting a lot of leeway and being understanding.” Many students were grieving the loss of important life events, such as graduation. Another faculty member reported, “The COVID-19 crisis not only affected in-person learning experiences, but also affected home and work life.” Checking in and allowing students to process what was happening was an important part of the clinical instructor’s role: “... really took the students situation and you know we talked to them a lot of check-in with them. How they were doing, we always started with that which was easy to do in a clinical”.

The pandemic was not the only stressor in spring 2020; this time was also marked by major political and societal movements in the U.S., which added to the stress of the moment and impacted participation in the virtual clinical environment. One participant noted:

“I mean distraction was huge, particularly during the protests and you know all the activity...especially those that lived in the city... there was a lot going on right, and there were clashes with protesters and police and vigilantes and all kinds of stuff going on…”

Students were sent home from campus and forced to learn in a different environment with many not having dedicated learning spaces. Some students were relegated to learning in their bedrooms, or in rooms with other people. Faculty had to remind students how to be in a “learner mindset” when learning online from home. Participants expressed difficulty engaging some students in online clinical learning, which felt “like pulling teeth.” It took extra effort to identify what facilitated learner engagement because the online environment was, as one participant described, “a huge barrier to keeping students engaged and excited to learn” and another faculty member often felt like “a one-woman show.” Students had difficulty coping with the stress of the

| Characteristics                | n (%) |
|-------------------------------|-------|
| Age                           |       |
| 25-34                         | 2 (11%)|
| 35-44                         | 6 (32%)|
| 45-54                         | 5 (26%)|
| 55-64                         | 4 (21%)|
| 65-74                         | 2 (11%)|
| Gender                        |       |
| Female                        | 19 (100%)|
| Male                          | 0 (0%) |
| Race                          |       |
| White/ Caucasian              | 16 (84%)|
| Black/ African American        | 3 (16%) |
| Practice Area                 |       |
| Illinois                      | 2 (11%) |
| New Hampshire                 | 1 (5%) |
| New Jersey                    | 1 (5%) |
| New York                      | 1 (5%) |
| Pennsylvania                  | 14 (74%)|
| Employment Status             |       |
| Non-tenure                    | 8 (42%) |
| Tenure-Track                  | 1 (5%) |
| Tenured                       | 1 (5%) |
| Adjunct                       | 9 (47%) |
| Years of experience           |       |
| 0-5 years                     | 6 (31%) |
| 6-10 years                    | 4 (21%) |
| 11-20 years                   | 4 (21%) |
| >20 years                     | 5 (26%) |

**Table 3**

**Themes with quotes.**

- “Really talk to them about what were the times of the day they could meet instead of being prescriptive, you know working with them and I got a lot of great feedback about that, so I think that’s something I learned and I’m glad I that I did it that way.”
- “And one of the biggest barriers that we talked about with the students a lot is that putting themselves in a place to learn or being ready to learn... You don’t realize how many things you process when you’re putting your bag down, sitting down and preparing to learn and be engaged in the class, and so if they don’t have that physical experience of walking into a classroom and, you know, getting their book out and whatever it is they do, they don’t realize all those cues or what’s like setting him up to be ready to pay attention so they walk into their bedrooms, down in bed, ready to relax, not ready to engage and how that’s going to affect how they’re hearing the information. I was surprised at how much they needed to go back to basics.”
- “… but I actually felt like there was a space for the online clinicals in terms of those students who may struggle to process things on the floor... being there is so overstimulating, so overwhelming they’re so worried about doing something wrong and hurting somebody and they... got that time that was really safe to just like walk through and you know, kind of clear up some misconceptions and walk through this step by step medication administration when it’s not like, OK, we gotta get meds in the room. So I think that was a help for their learning.”
- “How am I going to be home and study when I have like three siblings? Or you know parents are there helping out with or whatever? Just like distractions. I had students who were taking exams in their car in the street.”
- “It’s kind of like we have to do this right now and everybody is panicking, and nobody knows what’s going to happen and, you know nurses are good at being flexible, so I was able to manage that.”
- “We really advocated for the students and went to our Dean and said, you know, this isn’t going to cost you much per student... they were able to cut a deal and give us a really good deal... we already had a relationship with them and the students did not have to pay for it.”
- “The team was really important. Both because of the amount of work to do, but also because it helped get a bunch of perspectives, and I think that that helped it to be better, uh?”
- “Many, many hours trying to create new things, but I think that the reason why I survived with some sanity was because nursing faculty are very generous in sharing not only just sharing wisdom but sharing tools.”
- “I am really grateful that we have this technology because so that we could still connect. We in some ways I think we had better discussions. We were able to cover more topics and concepts in content in different scenarios in the in the online experience, but of course then they missed the actual thing.”
- “Because there’s nothing more rewarding than watching your first-year students all clustered together. All eight of them to follow you around. You know, for the first day and as they get further away... and they help each other, and they start automatically helping each other their confidence builds. I love watching that process.”
4

Table 3 (continued)

| and I think they also... You know, there's so much that you can talk about, but then it's in practice you can't do right, so that's across the board. |
| --- |
| • Being able to observe students in clinical practice is, I mean, much of what you use to evaluate them is based on your observations, how they interact with patients. How they interact with one another, how they interact with the staff so you didn't have? I did not have that. I had to depend on what they wrote in their logs and the conversations I had with them, so I think that that is somewhat of a disadvantage when you're doing this kind of clinical experience. When I've worked with students in the past you know you have time to give them that individual attention that they need and to identify their strengths and the weaknesses that they have, you have more time to do that and observe that and so in this kind of setting you don't have the opportunity or opportunity to do that. |

moment and were unable to prioritize work and assignments.

An unexpected benefit to the virtual clinical learning environment was that some students thrived online. The change to a virtual environment mitigated the stress of in-person clinical experiences. Students who typically struggled during on-site clinical experiences benefited from more time to process information, make appropriate decisions, and translate nursing theory into practice.

6.2.2. Transition

The second theme, “transition,” was also evident throughout the participant interviews. While the concept of transition is not surprising in the context of an abrupt move to emergency remote clinical teaching, faculty participants highlighted facilitators and barriers that impacted a successful transition. Specifically, faculty highlighted the relevance of preparation, time, flexibility, resources, and innovation in transitioning to emergency remote clinical teaching.

Because the shift to emergency remote clinical teaching was so abrupt, faculty did not have much time to prepare. One participant noted, “It was a major hustle and bustle, so we had to come up with ideas quickly. We had to figure out how they're going to do, how they're going to get their experiences.” Some faculty received time off to prepare for online clinical delivery, which helped to address the extremely time-consuming nature of this sudden transition. As one clinical faculty member described the heavy workload of the transition, “We, the entire faculty, flipped our entire curriculum online in a week. Creating that was a lot of work... I think I worked 12-hour days, probably for two weeks, just to get it all done.” Faculty likened the quick transition to emergency remote teaching to their prior experiences as clinical nurses and utilized knowledge from these experiences to help them through the transition.

Time was consistently identified by participants as a concept closely associated with the transition from an in-person clinical experience to emergency remote teaching. Faculty worried about time management in relation to learning new technologies, delivering educational content, supporting students, and managing personal challenges at home. As one participant stated, “You know, like PTSD where you have no memory of it because it was crazy and, you know, with your kids at home at the same time we're going online and then everything was kind-of a big blur.”

Student and faculty flexibility was crucial for a successful transition to emergency remote clinical teaching because as one participant stated, “every hour it was changing”; another participant also commented that “You [had to] make the best out of a bad situation” and “adapt quickly.” Faculty identified the need to be flexible and understanding of the students’ unique needs with comments such as “I think, you know, being flexible and understanding that there are certain things... that can happen and, you know, [being] understanding about it.” Faculty were also impressed with students’ flexibility stating, “the students, although they probably, you know, wish they were in clinical, they were flexible... They definitely rolled with the punches.”

Resource availability was another important consideration for the transition to emergency remote clinical teaching. Faculty had to be creative and innovative with teaching strategies to provide the best possible educational experience (see Table 4 for examples of innovative teaching strategies utilized during emergency remote clinical teaching). It was important to faculty that students did not incur additional expenses; therefore, faculty used existing resources in new and creative ways or identified additional free materials to fill gaps.

Technology was integral for the successful transition to emergency remote teaching because it became vital in the delivery of virtual clinical content. However, the technology presented a learning curve and sometimes did not work correctly as one faculty member shared: “We had a number of faculty that had never taught online or weren't as savvy online, and that was difficult. Getting that learning curve up and running too.” Despite the positive feedback from most faculty for their institution's Information Technologies (IT) support, unstable internet connections, severe weather, and time zone differences all created barriers to content delivery. For example, one participant shared, “The problems that we had with Zoom for clinical, that wasn’t something IT could have fixed. That was more like your internet connections, unstable people dropping.”

6.2.3. Collaboration and support

The presence, or lack thereof, of “collaboration and support” influenced whether clinical faculty perceived emergency remote clinical teaching as successful. Clinical faculty who had available resources, regular meetings, effective communication, and worked as a team with administrative, technological, and collegial support, responded favorably to remote emergency clinical teaching. One participant noted feeling as if, “absolutely everyone was in it together” and stated, “that was fantastic.” Another participant identified that they “felt...appreciated.” On the other hand, a lack of technological or administrative support, and ineffective or absent communication fostered negative experiences. For some adjunct faculty, lack of support and communication gave rise to negative feelings and disconnection. As one adjunct faculty shared, “I felt very isolated... I don't feel... adjunct faculty were very supported.”

Collaboration that resulted in consistent structured online clinical experiences increased positive experiences for both faculty and students, while inconsistencies in clinical delivery affected student engagement, led to student and faculty discontentment, and increased faculty stress. One faculty member responded, “I don't think the material... was laid out... well to be supportive of faculty.” Another faculty member expressed, “My biggest barrier was that other clinical groups only met

Table 4

| Innovative virtual clinical teaching strategies. |
| --- |
| Live virtual connection via tablets with community members (older adults in long term care, educational programs with school students, agencies) |
| “Human avatar”- Instructor role play of patient, doctor, interdisciplinary team member |
| Building MARs and discussing steps of medication administration |
| Online patient videos with discussion and debriefing |
| Approved pictures of real-life wounds, etc. |
| Virtual scavenger hunt- pictures of supplies, wounds, medications etc |
| Case studies with and without a virtual component |
| Virtual simulation products |
| Guest speakers |
| House of horrors-identify the errors in pictures/videos |
| Student presentations: medication, patient video breakdown |
| Existing online learning activities |
| Products/ online resources from book/ software publishers |
| Discussion of peer-reviewed articles |
| Virtual escape rooms |
| Clinical vignettes |
| Weekly themes with assignments and discussion (global emergency, global disasters, COVID) |
for like 20 minutes...and I had them for the full five hours...it wasn’t a consistent layout.”

6.2.4. Joy of teaching

The “joy of teaching” was expressed in stories about integrating unique teaching styles within the virtual clinical setting. Faculty shared how they found ways to still find pleasure in teaching. One participant noted, “I was actually surprised how fun that was and how satisfying and I was so thankful.” Several participants reflected on teaching strategies that they couldn’t pull through to the virtual environment by sharing, “People that are more hands on like I’m a more hands on kind of instructor, so this is making it harder for me ‘cause it’s not how I like to teach.” Others emphasized new approaches that augmented their teaching in the virtual setting. While one clinical instructor stated, “There’s more time for reflection, more time to kind of process information.” Another participant noted, “We brought in a good sense of humor to a lot of different things and lightheartedness.”

Particular elements of teaching that brought joy remained even in the virtual world. A clinical instructor noted, “I will say the one thing is that I was really secretly proud of myself that I pulled it off too.” Educators were amazed with student learning at a distance but expressed missing special moments in person like one clinical instructor shared: “Watching them get their first injections like doing their first. It’s great watching their a-ha moments yes I love that, and I missed that I really did.”

Clinical faculty worked to overcome the distance between themselves and their students while continuing to pursue effective learning that fostered satisfaction and positive outcomes. A participant stated, “But we were trying to do the positive like, well, you’re still developing the thinking and NCLEX doesn’t need you to demonstrate, they need you to think.” Faculty linked past experiences from their own clinical practice to help virtual clinical come alive for their remote students. A participant shared, “[They] really enjoyed when I gave them experiences from my working so they like to hear you know any stories that I had to give about in a situation that we were talking about.” While faculty inherently found joy in emergency remote clinical teaching, students sought additional support from their peers to enhance the virtual experience. Students told their instructors about how they were able to connect with classmates during a difficult time when they were often not engaging with peers due to quarantine and isolation. As one participant stated, “A lot of the students told me they enjoyed having a lot of discussion-based learning, which is what I kind of trended towards during the online clinical.”

6.2.5. Authentic professional experience

The last theme identified was “authentic professional experience.” The clinical environment provides a unique learning experience where student nurses can interact with a variety of patients throughout the lifespan, as well as members of the interprofessional healthcare team; however, these opportunities were missed during emergency remote clinical teaching. As one clinical instructor stated, “There’s something more you wish you could create other ways for them to connect with people in real world.” Additionally, unique specialty experiences were lost, such as entering the home of a patient during a homecare rotation, providing care and comfort to a fearful child during a pediatric rotation, or managing a complex critical care patient while comforting them and their family. One faculty member summed it up: “I think the biggest barrier was the fact that they received no hands-on experience with a very, you know, specialized that you know a subspecialty of nursing, so they didn’t have the experience of working with patients and their and their families in particular.”

Some faculty remarked how they were concerned about the growth and development of critical thinking and clinical judgement skills due to the lack of in-person clinical experience. Additionally, evaluating student competency was challenging because faculty could not observe students’ skills or interpersonal communication. “Being able to observe students in clinical practice is, I mean, much of what you use to evaluate them is based on your observations, how they interact with patients...I did not have that.” Another participant stated, “so now I can see inside their brain, but I’m not seeing their physical movements if they’re not putting this stethoscope in the right position.”

7. Discussion

The COVID-19 pandemic was a driving force that necessitated a rapid shift from in-person clinical education to emergency remote clinical teaching. The results of this study illustrate how the major restraining forces of stress and anxiety related to the COVID-19 pandemic affected both faculty and students during the transition to emergency remote clinical teaching. These findings are corroborated by other recent studies. Early in the pandemic, faculty reported feelings of stress and anxiety with the transition to online teaching (Johnson et al., 2020), and nursing faculty reported stress from uncertainty and difficulty maintaining a work-life balance (Sacco and Kelly, 2021).

In the current study, faculty discussed that students without a dedicated learning space had difficulty preparing to learn, which added to the stress of the moment. This finding aligns with a previous study that identified higher stress levels in students without a designated learning space when returning home for online learning (Masha’al et al., 2020). Moreover, previous studies show that students had trouble concentrating, changes in sleep patterns, concerns about academics, and loss of social interactions due to the COVID-19 pandemic (Son et al., 2020). While the pandemic created significant stress and anxiety for both faculty and students, this stress of the moment was compounded by other political and social movements occurring in the U.S. during the spring of 2020, which was echoed by nursing faculty in a previous study (Sacco and Kelly, 2021).

The transition to emergency remote clinical teaching was guided by preparation, time, flexibility, resources, and innovation. Faculty had to be innovative and work quickly to create appropriate and meaningful online clinical experiences. Finances were a concern for students during the pandemic (Masha’al et al., 2020); thus, to avoid financial burden, faculty creatively used existing or free resources, such as games and online platforms (Haslam, 2021).

Participants in the current study identified the importance of adaptability due to the evolving nature of the pandemic and the influence of life events for both students and faculty. Even post-pandemic, nursing students may experience life events that impact their ability to successfully progress through the nursing curriculum. Although the importance of self-care is frequently discussed by nurses, it is rarely implemented, which contributes to moral distress and nurse burnout (Rosa et al., 2020). Offering flexibility through remote clinical options could promote proper self-care of nursing students during illness, family emergencies, or other extenuating life events.

Collaboration and support from administration, IT, and faculty colleagues were identified by study participants as instrumental to the success of emergency remote clinical teaching. However, some adjunct faculty felt they were left out of planning, were not prepared for the emergent switch to remote clinical teaching and did not have adequate support to teach clinical in the online environment. Adjunct faculty may not be compensated for the extra time needed to prepare for the emergent transition to remote learning, unlike salaried full-time faculty (Diep and Zahnies, 2020). Additionally, many adjunct faculty also work as bedside nurses; these individuals experienced the additional stress of caring for patients with COVID-19 as frontline workers. These findings highlight the importance of support for adjunct nursing faculty to decrease burnout, ensure retention (Forbes et al., 2010), and promote student learning (Crocetti, 2014).

Despite the stress and anxiety associated with emergency remote clinical teaching, faculty also reported the joy of teaching that occurred
with positive experiences and student learning. Faculty used this time to connect with students on a deeper level. Students expressed their stressors, concerns, and even the happiness found while under the stress of the moment. Prior research demonstrated the importance of strong relationships between nursing students and their clinical faculty during the pandemic (Ulenaers et al., 2021). Moreover, faculty felt students who typically struggled during in-person clinical or needed more time for translation of nursing theory in the clinical environment, were more successful with the added benefit of time in the online learning environment. This finding is supported by a recent study showing that undergraduate nursing students felt that online learning during the pandemic allowed them to develop their problem-solving skills and adapt their learning styles (Suliman et al., 2021). However, it is important to remember that while some students thrive in an online learning environment, others may be at risk for falling behind (Haslam, 2021).

The lack of in person authentic professional experiences with patients, families, and the interdisciplinary team may lead to students graduating with less confidence in their communication, assessment, and evaluation skills. Online clinical experiences, when utilized, must be well developed to provide the hallmark experiential learning opportunity that prepares a qualified nursing workforce.

7.1. Limitations

There are some limitations to the current study that may impact generalizability of the findings. Participant recruitment was limited to social media postings on the authors' personal social media pages, thus nursing faculty with limited or no social media presence did not have the opportunity to participate in this study. Additionally, the sample lacked diversity related to race, gender, and geographical location which also limits generalizability.

7.2. Implications for nursing education

Based on the results from this study, nurse educators can implement strategies to enhance the overall quality of nursing education, as well as preemptively prepare for future emergency remote clinical teaching. It is imperative that nurse educators look beyond the classroom to consider factors that might influence students' learning. Societal events and personal issues can significantly impact students' ability to learn due to stress and anxiety. Educators must be sensitive to these considerations by being flexible, adjusting their teaching, and providing academic and emotional support to students. Faculty check-ins proved to be invaluable during the COVID-19 pandemic to help students process the pandemic and societal events, as well as their own feelings surrounding these issues. Thus, offering opportunities for students to express their feelings and seek support from their peers and faculty can be integrated into nursing education to foster social and academic support.

A concern raised by faculty in this study was the difficulty engaging students at a distance during emergency remote teaching, especially when the students were not in conducive learning spaces. Faculty can enhance online student engagement by promoting and demonstrating best practices for remote learning related to both location and mindset.

Participants in this study highlighted the benefit of online clinical learning for some students who require more time to process information, make decisions, and translate nursing theory into practice. Remote learning may offer a temporary option for students experiencing extenuating circumstances, such as a death in the family or significant personal illness, to ensure they can meet the clinical objectives and do not fall behind in their curricular progression. To this end, it is important that evidence-based best practices for remote clinical learning are established to ensure consistency in online experiences and optimal student outcomes.

The integration of innovative, evidence-based teaching strategies that promote active learning is integral to all aspects of nursing education. However, concerns were raised by participants in this study regarding the variability of available resources and support. To address these concerns, nursing faculty could collaborate to establish shared, evidence-based resources that can be utilized across settings. Having resources available to all faculty can enhance the quality and consistency of educational offerings, as well as provide support for emergent changes in educational delivery.

7.3. Recommendations for future research

To increase generalizability of these findings, future research should seek to recruit a more diverse sample in relation to age, sex, ethnicity and geographical location. Expanding recruitment efforts past the private social media pages of the authors would allow for a more diverse sample of clinical instructors to participate in future research. Connecting with professional organizations and college faculty lists within diverse settings would also improve the recruitment of diverse faculty participants. Studies exploring faculty application of teaching strategies and lessons learned during the COVID-19 pandemic could provide insight into how the findings from this study can be applied to nursing education. Moreover, it would be valuable to integrate nurse educators' perspectives with nursing students' perceptions to gain a more thorough understanding of the phenomenon of emergency remote clinical education and better refine future teaching strategies and curricula. Additionally, comparison of student outcomes after both emergency remote clinical learning and non-emergent virtual online clinical experiences are important to understand the impact of these teaching modalities on student learning.

8. Conclusion

COVID-19 has become a driving force for how we envision nursing curricula (National Academies of Science, Engineering, and Medicine, 2021). Though the move to emergency remote clinical teaching during the pandemic caused stress and anxiety, there were many lessons about successful transitions, supporting students during stressful times, necessary supports for faculty, and providing a robust online learning experience, which can support future curriculum revision. Transitioning to online clinical education requires systematic approaches to ensure success of the educator, student, and program. Findings from this study may lead to future research focused on student outcomes, as well as support faculty development related to online clinical teaching. Understanding the experiences of baccalaureate nursing clinical faculty during the abrupt change to emergency remote clinical teaching can be used to support future evidence-based recommendations for online nursing clinical education in the future.

CRediT authorship contribution statement

Michelle A. McKay: Conceptualization, Methodology, Validation, Formal analysis, Investigation, Data curation, Writing – original draft, Writing – review & editing, Visualization, Supervision, Project administration. Christine A. Pariseault: Conceptualization, Methodology, Validation, Formal analysis, Investigation, Data curation, Visualization, Writing – original draft, Project administration. Christina R. Whitehouse: Conceptualization, Methodology, Validation, Formal analysis, Writing – original draft, Writing – review & editing, Visualization. Tierra Smith: Conceptualization, Methodology, Investigation, Formal analysis, Data curation, Writing – original draft. Jennifer Gunberg Ross: Conceptualization, Methodology, Validation, Formal analysis, Writing – original draft, Writing – review & editing, Visualization.

Declaration of competing interest

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