ORIGINAL RESEARCH

Academic and Practice Experiences of Nursing Students During the Initial Phase of the COVID-19 Pandemic

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Abstract

Aim: To explore undergraduate and graduate nursing students' academic and employment experiences as they faced the first surge of the COVID-19 pandemic in New York. **Background:** Little is known about the pandemic's impact on nursing students who were also providing patient care during the initial phase of the COVID-19 outbreak. Many faced dramatically altered learning environments while also meeting the challenges of professional practice. **Method:** An electronic survey with an open-ended question was distributed to a convenience sample of students enrolled in a large public university; 194 responded. Data were collected from April through October of 2020. A thematic analysis was used to analyze the responses of 194 students. **Results:** Five themes illuminating students' academic and practice experiences were revealed: battling the unknown, filling the void, education interrupted, experiencing moral distress, and taking an emotional toll. Severe mental anguish and emotional distress resulted from providing care during the pandemic. These perceptions may have long-term effects on professional role development, especially in novices and new graduates. **Conclusion:** Findings indicate a need for significant modifications in both academic and practice arenas. Faculty and clinical leaders must implement changes that will support student and staff preparedness during times of both normalcy and crisis.

Keywords: COVID-19, nurses, pandemic, academic

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The first surge of the COVID-19 pandemic in New York during March 2020 presented unthinkable challenges for healthcare institutions. Nursing, in particular, faced previously unimagined barriers to professional practice and personal safety. Colleges and universities across the nation were also forced to implement limitations and restrictions. Due to the nature of their curricula, nursing students encountered dramatically altered learning environments. However, little is known about the pandemic's impact on these students, who were pursuing undergraduate and graduate degrees at that time, while also meeting the challenges of working or volunteering in healthcare.

Like other nursing schools across the United States, state and local 'stay at home' regulations prompted a school of nursing at one public New York state university to make important decisions regarding classroom learning, simulations, and clinical experiences. As a result, onsite classes transitioned to online platforms, and in-person simulations were canceled. Guidance from the American Association of Colleges of Nursing (2020) recommended limiting student exposure to patients with, or suspected of having COVID-19, along with numerous local outbreaks of the virus, led to a decision to cancel clinical experiences for all undergraduate students. However, pre-license students were called upon to assist non-COVID units within the university's associated academic medical center to free registered nurses (RNs) needed to provide care on COVID-19 units. Graduate students who were already RNs were permitted to continue completing their clinical hours, provided that their clinical sites remained available to them. Many students were also called upon to care for patients with COVID-19 at their places of employment. The purpose of this study was to explore undergraduate and graduate student nurses' experiences as they navigated school and practice during the first surge of the COVID-19 pandemic.

Literature Review

The experiences of frontline nurses during the first wave of the COVID-19 pandemic have been well-documented in the literature. Fear, anxiety, stress, exhaustion, and burnout were found to be universally identified (Almubark et al., 2020; Liu et al., 2020; Sheng et al., 2020; Tan et al., 2020; Zhang et al., 2020). Furthermore, nurses consistently report higher levels of psychological distress when compared to other healthcare professionals (Maiorano et al., 2020; Shechter et al., 2020; Zerbini et al., 2020). The qualitative study by Sheng et al. (2020) conducted at four hospitals in Wuhan City, China, identified three negative themes associated with nursing practice: exhaustion and fear of contracting the virus, perceived incompetence when treating patients with COVID-19, and feelings of unfairness when considering the distribution of responsibilities between physicians and nurses. Yet, despite these negative findings, a positive theme was also noted, that of unexpected professional benefits. These benefits included support the nurses received from the public, colleagues, and administrators; the improved social image of nursing; and their perceived self-growth and increased competency as the pandemic persisted. Likewise, the most critical findings of another qualitative study of first-line nurses in China were reflected in the negative subcategories of heavy workloads and pressure, fear and anxiety, feelings of helplessness and frustration, a lack of knowledge about the disease, and unfamiliarity with the environment (Tan et al., 2020). However, Tan et al. (2020) also identified improved professional responsibilities and the promotion of professional identity as positive outcomes of providing care during the pandemic. Zhang et al. (2020) found that nurses who cared for patients with COVID-19 progressed through three stages. An early stage, characterized by feelings of ambivalence, a middle stage of negative psychological feelings, when young nurses were noted to be particularly vulnerable, and a final stage of psychological adaption. However, it was universally reported that the positive effects of the pandemic did not occur spontaneously. Instead, they were the result of intensive education, communication, and the support of nursing administrators who implemented appropriate and insightful interventions. The findings of Zhang et al. (2020) regarding the vulnerability of young nurses led them to suggest that new and recent graduates may require additional attention and work-related support. Likewise, Tan et al. (2020) recommended that nurses with low seniority, assumedly new or younger nurses, or those new to their role, would require additional training and support. Sheng et al. (2020) also stressed the importance of education to improve decision-making and problem-solving skills. Given these suggestions, as well as the dearth of qualitative literature regarding the impact of the pandemic on nursing in the United States, and the need to prepare future practitioners who can provide adequate care, it is logical to wonder about the effects the first surge had on those who were pursuing undergraduate and graduate nursing degrees at that time. Undergraduate students would transition to professional practice with limited experience providing direct care to patients with COVID-19. Graduate students would assume new roles as nurse practitioners during the pandemic. Knowledge of their unique perceptions and experiences may provide insights that could lead to the development of more effective academic and clinical education programs. These programs could better prepare students to meet the demands and challenges of future global pandemics and healthcare crises.

Method

Design, Sample & Data Collection

Qualitative inquiry is an essential approach to understanding the rich and varied experiences of a phenomenon. Braun and Clarke's (2006) thematic analysis, informed by a constructivist lens, was conducted on responses to an open-ended question asking students to reflect upon their experiences, emotional responses, and striking memories during the pandemic. The open-ended question followed a quantitative survey in which students provided responses regarding their perceptions of their academic and practice experiences. These findings will be reported in a separate manuscript. Convenience sampling was used to recruit

students who worked or volunteered in healthcare settings during the pandemic. Inclusion criteria consisted of nursing students enrolled in the pre-license and licensed undergraduate program and graduate nursing students enrolled in the Adult-Gerontology Nurse Practitioner (AGNP) program at one New York State public university from March through October 2020. Sampling continued until participant accounts of their experiences became redundant. A total of 194 students contributed to the study. An electronic survey was used to collect responses to the open-ended question.

Ethical Considerations

The university's institutional review board approved the study. Participants were recruited via email as listed in the university listserv; the email contained a link to the anonymous survey in Qualtrics. Information regarding anonymity was provided with assurance that faculty would not know if students completed the survey and that their decision of whether to participate would not impact their grades. Students were instructed not to disclose their employment/volunteer site or unit to further protect autonomy. Data were stored in a password-protected database.

Data Analysis

In the analysis of the data, researchers followed the thematic analysis process outlined by Braun and Clarke (2006). Thematic analysis is an iterative and reflective process appropriate for researchers working in teams with a large data set (Nowell et al., 2017). The research team consisted of five faculty, including two experienced qualitative researchers. Per Braun and Clark (2006), the six phases of analysis were reviewed during their first meeting (Table 1), followed by a discussion of thoughts regarding initial codes. Each researcher was instructed to systematically work through the entire data set, give equal attention to each item, and keep a reflexive journal during the entire analysis process. During regular meetings that took place throughout all phases of the data analysis process, researchers collated codes, engaged in dialogue, and shared notes on evolving themes or diagramming developments. Diagramming is important for understanding connections between themes (Nowell et al., 2017). The generation of initial codes allowed the researchers to simplify and focus on specific characteristics of the data. For example, because fear, unpreparedness, inability to provide adequate care, and guilt were apparent across both undergraduate and graduate responses early in the data analysis, a decision was made to analyze the data set as a whole. Codes of extracted data served as an organizing structure for the development of themes. Consensus on the themes was reached during the six months of analysis and dialogue. Shared documents for the creation of codes and themes served as an audit trail for the final themes.

Table 1

Braun and Clark's (2006) Six Phases of Thematic Analysis

Phase	Description
1. Become familiar with data	Considered a foundational phase, researchers read and re-read the data set to be familiar with all aspects noting initial ideas.
2. Generate initial codes	In a systematic fashion, researchers identify initial codes. Codes represent a feature of the data.
3. Search for themes	This phase consists of sorting codes into potential themes. Diagramming may help to uncover the relationship between codes (potential themes).
4. Review themes	This phase begins when a set of themes has been established. Refinement includes separating or collapsing themes.
5. Define and name themes	Iterative process moving back and forth between data extracts and themes to generate a clear theme name with accompanying narrative.
6. Produce the report	A final opportunity for analysis occurs when writing the scholarly report using vivid data extracts to capture the essence of the theme.

Rigor

Several strategies were implemented to ensure the trustworthiness of the study's findings. Credibility was enhanced by a five-researcher team who maintained a prolonged engagement with the raw data. Reflexive notes enriched the participants' written statements. Researchers moved individually and collectively between raw data, codes, and theme documents. To enhance dependability and confirmability, the team compared the code and theme documents with the raw data at weekly meetings, adding, revising, or deleting codes. Transferability was enhanced by the variation in participants' education levels, unit specialties, and the provision of thick descriptions, which are important for making applications to other situations.

Results

Participants included pre-licensure (37.1%) and post-licensure (30.4%) baccalaureate nursing students, as well as nurse practitioner students specializing in adult-gerontology (32.5%). Most were female (82.5%), between the ages of 21 to 30 (47.9%) or 31 to 40 (25.8%) years, unmarried (45.9%), and without children (65.5%). Race/ethnicity included White (63.4%), Asian (14.4%), Hispanic/Latinx (10.3%), Black/African American (7.2%), multi-racial (4.1%), and Native American (0.5%). Almost half (44.6%) reported experience working as RNs. Of those currently working as RNs, 23.7% reported 1 to 5 years of experience, most frequently in medical/surgical (29.9%) or critical care (19.1%) units (Table 2).

Table 2
Demographic Characteristics of Respondents (N=194)

	Category	n	%
1. Age	< 20	13	6.7
	21 to 30	93	47. 9
	31 to 40	50	25.8
	41 to 50	31	16.0
	51 to 60	6	3.1
	>30	1	0.5
2. Gender	Male	33	17.0
	Female	160	82.5
	Other	1	0.5
3. Race/ethnicity	Asian/Asian American	28	14.4
	Black/African American	14	7.2
	Hispanic/Latino	20	10.3
	Native American/ Indian	1	0.5
	White	123	63. 4
	Multi-racial/multi-ethnic	8	4.1
4. Marital Status	Single	89	45.9
	Married	72	37.1
	Widowed	1	0.5
	Separated	4	2.1
	In a domestic partnership or civil union	8	4.1
	Single, but cohabitating	20	10.3
5. Program Enrolled	Pre-license undergraduate program	72	37.1
	Post-licensure RN undergraduate program	59	30.4
	Adult-gerontology primary care nurse practitioner (AGNP) program	63	32.5
6. Employment Clinical Specialty	Medical/Surgical	58	29.9
	Critical Care	37	19.1
	OB/GYN/Neonatal	7	3.6
	Perioperative	6	3.1
	Psychiatric Mental Health	8	4.1
	Private Office/Private Practice	13	6.7
	Rehabilitation/ Long Term Care	7	3.6
	Geriatric Care	5	2.6
	Other	3	1.5
	No Specialty Area	50	25.8

An analysis of responses to the open-ended question revealed five themes illuminating students' academic and practice experiences while providing nursing care during the first COVID-19 surge: *Battling the unknown, filling the void, education interrupted, experiencing moral distress, and taking an emotional toll.*

Battling the Unknown

The theme *battling the unknown* portrays participants' experiences as they began encountering patients during the first COVID-19 surge. A sense of battle was the result of many factors. The increasing volume of patients, higher levels of acuity, and staggering death rates resulted in the inability to provide quality nursing care. Care was described as "unorganized," "chaotic," and ineffective in promoting patient survival. Statements such as "thrown into battle" and "fighting a war" were made. When resources were lacking, feelings of resentment towards hospital administration/leadership were noted. Many participants made statements regarding insufficient information, protocols, personnel, and/or personal protective equipment (PPE), adding to the sense of a battle. One related, "We were not prepared; we were not equipped with education or PPE...It is so unsettling to know as a nurse that I was basically thrown into battle without the necessary weapons." Another described the situation as "running into a burning building without the right equipment on."

Complicating the volume and severity of patient illness was fear related to the unknown aspects of how the virus was transmitted. One pre-license student, volunteering on a non-COVID unit during the time when PPE was in short supply, also shared a fear regarding safety:

> We [students] were not allowed to wear masks while the whole nursing staff wore masks during the beginning of the pandemic. That was ridiculous and really upsetting for me. Our lives matter just as much as theirs do, even if we weren't going into any isolation rooms, [it] doesn't mean we weren't going to be exposed or spread it to our family members.

The media portrayal of nurses as heroes also contributed to the experience as a battle or "fighting a war." Although the public considered them heroes, some participants viewed this negatively. Resentment was apparent as one participant related:

> I feel that the narrative being pushed of healthcare workers as 'heroes' is being used to paint a picture of healthcare workers as sacrificial lambs…None of us signed up to be used as pawns... The sudden recognition that we are getting from the public for our heroic work is only setting us up to be casualties of war.

Some expressed that while their battle was against the coronavirus and its unpredictable progression was difficult, it was also worthwhile. One participant recalled, "Most striking in my memory is…how battling the unknown started out as frightening and turned into being something worth facing head-on." Other participants indicated that the pandemic facilitated adaptability, collegiality, and a 'team' approach in providing care. Some related that support from co-workers, who were now considered "family," helped them get through their first few shifts. Other participants

said that the battle of caring for patients with COVID-19 became easier as time went on, "It gets easier the second time…[It] became so unnaturally natural to enter their rooms, you even forget about their status." Another participant reflected that they were more confident as time progressed, and there was less ambiguity.

Filling the Void

Filling the void presents descriptions of the expanded nursing role of providing care to patients in isolation. One aspect of this theme developed as participants described the exhaustive patient advocacy role of 'filling in' for family members who could not be present due to visitation restrictions. Participants described how their patients' isolation impacted them and how they attempted to provide comfort. One recalled: "The most striking memory I had is where one of my patients randomly asked me to pray for her because she was scared to die. It broke my heart but strengthened my faith."

Throughout the data, participants described the value of using technology to connect patients to their families during times of great sorrow:

> I remember phoning the wife every night at 8:30 pm and then again at 6:30 am, just so she could let him hear her voice. One morning, she said to me...' I have nothing else to say'…So I recommended she talk about some of their beautiful moments and memories. She said, 'Yes, ok! I can do that.' The most beautiful conversation ensued...I was holding his hand while she was speaking with him. That's all I could do.

Another aspect of *filling the void* was the altered nature of providing care. As a result of new guidelines developed to prevent the spread of infection, the time physicians and ancillary staff spent in patients' rooms was significantly reduced. Care that was previously distributed among healthcare team members was now provided almost exclusively by nurses. The isolation and responsibility impacted participants, "The first time spent alone with a confirmed COVID positive patient in the room, [I] donned my PPE, and just entering through the door, closing it behind me, being alone with him, totally alone, and scared." Another participant described a striking memory of caring for patients during this time as, "being quarantined with my patients for three days and nights."

Filling the void also portrays ways in which participants felt they were unable to meet their patient needs. Sometimes their inability was due to time constraints, "I wanted to spend more time with him and let him know he wasn't alone, but I had to care for other patients." Other participants described being inadequately prepared to provide care in an Intensive Care Unit (ICU), "Imagine a medical-surgical nurse caring for ICU patients with no training or knowledge." Some participants expressed frustration. A pre-license participant volunteering on a non-COVID unit described how students were not permitted to enter a patient's isolation room due to the shortage of PPE, "We helplessly stood outside and called for assistance." Another participant recounted an encounter in this way:

> Students were not allowed to enter isolation rooms. So, I had to watch a woman cry laying in her own feces and could only stand at the door to comfort her while waiting for a staff member to become available to help her. Meanwhile, I had the skills necessary to do it myself but couldn't because of the imposed rule.

Education Interrupted

Education interrupted describes participants' experiences as the didactic and clinical components of their coursework were altered due to COVID-19 restrictions. While some noted that the transition from onsite classes to online coursework was not their preferred learning method, the greater impact of *education interrupted* pertained to the cancellation of planned clinical experiences or the transition to virtual clinical experiences. This was particularly true for the pre-license students. Statements of being "disappointed," "robbed," or "clinically unprepared" were made when referring to suspended clinical components. One participant related, "I am angry and feel that my knowledge suffered during this time, and I am nervous about the future… as I feel learning in person is where I thrive." Other participants summarized their concerns related to the lack of clinical experiences as "I feel clinically unprepared" and "Missing the last part of the semester was the hardest. I was hoping to improve my clinical skills during capstone, but that didn't happen."

The inability to provide care to patients with COVD-19 during the pandemic resulted in frustration for some senior pre-license students scheduled to graduate that spring. Although they were not permitted to provide care or interact with these patients during their final months of school, they would be expected to care for them immediately following graduation. Some participants expressed strong emotions regarding limitations imposed by the pandemic, "I was not able to get much clinical experience, as I live with high-risk people...I felt guilty that I wasn't volunteering, and I felt sad because of the isolation." However, students also related positive responses related to volunteer opportunities that occurred on non-COVID units within the university's associated medical center: "I feel as though the volunteer hours at the hospital were amazing."

Experiencing Moral Distress

Participants in this study experienced *moral distress* during the COVID-19 surge due to a perceived inability to provide adequate care or advocate for their patients and concerns over their own health. This led to internal conflicts, as represented in the data. Many participants shared that they experienced guilt and helplessness as they witnessed futile treatments that failed to interrupt the rapid, downward spiral of so many patients. Several described the directive not to code COVID-19 patients as a striking memory. One participant related a situation when an intensivist ended the resuscitation of a patient with COVID-19 in response to a new protocol developed to reduce healthcare workers' exposure to the virus, "The patient was a full code. It was mortifying, and I was disgusted with the situation." Another spoke of the shock of being unable to maintain patient dignity while providing care, "I had to take the monitor off the still-warm body of the recently deceased patient to use on the patient requiring emergency intubation." Distress was felt by employed participants who were transferred to assist on COVID-19 units, as they felt they lacked the required skills, "Feeling helpless because I could not help more…I was not cross-trained in floor nursing. I

felt like a fraud nurse." The desire to do more was also apparent in the responses of pre-license students volunteering on non-COVID units, "We all felt the guilt that, as students, we couldn't enter isolation rooms." Finally, many participants experienced guilt stemming from a constant fear of contracting the virus or bringing it home to their families. One participant responded that a striking memory was "My inability to stop caring about my welfare to help my patients."

Taking an Emotional Toll

The theme *taking an emotional toll* depicts the severe mental impact of providing nursing care during the COVID-19 surge. Participants described feeling emotionally and physically exhausted while sharing in family grieving during end-of-life care. One participant related, "Holding up the phone to my patient's ear so their families can say goodbye. Gut-wrenching." Another stated, "Tonight I FaceTimed with a distraught family as they hysterically cried while speaking to their dying mother, sister, wife." Still, another participant summarized the emotional toll as:

> The physical and mental demand is exhausting...advocating and providing mental and emotional comfort to patients are absolutely necessary components in nursing. Throughout the crisis periods of COVID-19, the need of emotional support for patients exponentially rose, and filling the void of the isolation between the patient and their families was one of the most exhausting tasks.

Witnessing enormous suffering and death led to strong emotions and/or nightmares; participants were prone to re-living patient suffering, replaying shifts in their minds, or having recurrent thoughts about how they responded to their families' fears, "Weeks later, I still cope with memories of FaceTiming patients' families." One participant summarized the severity of the disease by relating her observations during a three-day span on a COVID-19 unit:

> The most striking memory is a 72 hour stretch of watching four people die and five people being intubated. The nurses' responses of guilt, sadness, and hopelessness were extremely heartbreaking. One nurse fought to have a young 40-year-old woman intubated...Another nurse remained with an elderly patient with no known family, who was so critical she remained face down as her SaO2 declined.

Watching patients suffer without their relatives in attendance, conducting emotionally fraught video sessions with families, providing care to high numbers of critically ill patients, and the underlying fear of contracting the disease themselves added to the torment experienced. One participant related:

> Here we were literally fighting so hard to save people's lives while comforting families, keeping them hopeful and updated all at the same time. The emotions I felt in these last several months are like nothing I have ever felt before.

Another participant reflected on the experience, "It had been extremely difficult feeling so helpless and watching people of all ages die scared and alone." Regret was obvious in a situation described by a participant who assured a patient that they were going to be ok as "pre-intubation" medications were administered, only to have the individual expire four hours later.

Still, another participant enrolled in the RN completion program, related "[I] watched people suffering and could not help them. As a new nurse, I will never be able to forget this pandemic."

Discussion

Major findings from this study highlight significant alterations in the nursing role and its impact upon participants as they provided care as employees or volunteers at healthcare facilities throughout New York State during the first surge of COVID-19. Within battling the unknown, participants described providing care as a battle due to the volume and acuity levels of patients, the sky-rocketing death rate, the lack of PPE, and concern of contagion. These findings were consistent with a previous study conducted in New York in which nurses experienced acute stress, depression, and anxiety while providing care to patients with COVID-19 during the first surge (Shechter et al., 2020). Notably, the importance of support from co-workers and administrators, who were sometimes referred to as a second family, was identified by participants in the current study as invaluable during this catastrophic period.

Within the theme *filling the void*, it was apparent that the nurse advocacy role had greatly expanded for participants of this study. Advocacy, the cornerstone role of the nurse-patient relationship, now included serving as a liaison to digitally connect patients with families during a time of extreme crisis. This added role was fraught with sadness, led to long-lasting negative feelings, and was emotionally depleting. Participants were also required to fill in for other members of the healthcare team in response to new guidelines, leading to feelings of isolation. This contrasts findings from a study of ICU nurses who felt that the role of family liaison was very gratifying, but the need to fill in for other healthcare professionals was viewed as an increased workload (Fernández-Castillo et al., 2021).

Findings from the current study regarding the impact of canceled clinical experiences, especially for pre-license students, were echoed by (Ramos-Morcillo et al., 2020), who interviewed 32 undergraduate and graduate nursing students in Spain. Participants in that study worried that the interruption and decreased clinical hours would lessen their competency. Similarly, an online survey study of 772 undergraduate nursing students enrolled in five universities across the United States found that respondents were concerned that they would not be prepared to enter the workforce due to the lack of opportunity to practice hands-on skills (Michel et al., 2021). It is interesting to note that respondents from both studies, along with those from another qualitative study of third-year baccalaureate nursing students in the United States, revealed dissatisfaction with the shift to online education, which, most felt, was detrimental to their learning (Heilferty et al., 2021). Notably, although concerns regarding clinical learning were strongly expressed in the current study, the transition to online learning was not viewed negatively. This may be due to the school's commitment to a hybrid learning model implemented before the pandemic.

The internal conflicts that participants described were illustrated in the theme *experiencing moral distress*. Similar to another study conducted during the pandemic, the lack of PPE, the risk of transmission to ones' family members, and caring for patients without relatives or clergy present were factors that increased moral distress (Lake et al., 2021). In the current study, which included a large percentage of pre-license students and new graduate nurses, the overwhelming impact of the pandemic was apparent in *taking an emotional toll*. They described witnessing great human suffering and death. Nightmares, feelings of helplessness, and reliving experiences from their practice environments were especially disturbing. These findings were consistent with those of an earlier study on emotional responses, which found that frontline nurses experienced extreme psychological stress related to the practice environment (Huang et al., 2020). In a study by Roca et al. (2021), undergraduate nursing students reported feelings of overwhelming sadness as they observed patient suffering and death. They also recognized their lack of education and preparedness to cope with the critical patient situations associated with COVID-19. These were indeed formative events. According to Benner et al. (2010), formative events are situations in which the novice recognizes the far-reaching responsibility of a nurse and develops the ability to see the patient as a person. Formative events are essential for role formation, an internal process constituted by changes in identity and self-understanding that transform how novices understand and act during patient encounters (Benner et al., 2010). COVID-19 may have a severe and lasting impact on nurse role formation in these new nurses.

Limitations

The findings from a thematic analysis are contextual to the study participants and may not represent the population of interest adequately. Furthermore, because convenience sampling of students from one university was used, implications and conclusions from this study may have limited transferability. In addition, data were collected via an open-ended question within an electronic survey document, thus preventing researchers from using participant observations as an additional data collection method.

Implications

The study's findings have significant implications for education and practice. Nurse educators are advised to incorporate self-care programs, such as mindfulness, meditation, and stress management, into their curricula. They are also urged to provide ongoing support that may help mitigate the harmful effects of the pandemic (Marthiensen et al., 2019). Regular and guided reflection in various forms is warranted. In a recent integrative review by Walsh et al. (2020), the use of reflection as a learning tool to promote emotional strength and build resilience was supported. Without opportunities for regular debriefing, students may not express their feelings of fear, shame, and the internal conflict they experienced during chaotic times. As a supportive mentor, the nurse educator can assist the novice in reflecting on formative events, assisting them in recognizing and appreciating the wide-ranging responsibility of a nurse as they bear witness to great human suffering during these extraordinary times.

Educational platforms must also be revised to meet the emergent needs of the future. Because subsequent healthcare crises could necessitate a return to virtual learning, Fowler and Wholeben (2020) suggested that hybrid learning models be permanently incorporated in all nursing programs. The use of both face-to-face and virtual learning would smooth the transition to fully online education in the event of another catastrophe. Findings from the current study revealed that the transition to online didactic learning was smooth, most probably because all participants were enrolled in some hybrid nursing courses before the onset of the pandemic.

Practice leaders must recognize that the overwhelming anxiety and strong emotional responses felt by nursing students during the pandemic may impact their transition to practice and their professional progression in ways that were not previously considered. The trauma experienced during the first surge may trigger psychological disruptions at various times as the pandemic continues, or as new pandemics and natural disasters arise. Nurse leaders are urged to watch for and identify staff who may need additional support. Without appropriate assistance, new graduate turnover, as well as overall nurse attrition, may dramatically increase.

Conclusion

Findings from the current study indicated that undergraduate and graduate nursing students experienced great upheaval in both their professional and academic lives during the pandemic. Professional practice was compared to *battling the unknown*, as participants provided care despite feeling physically, academically, and emotionally unprepared. They expressed a need to *fill the void* left by visitor restrictions. Participants facilitated final goodbyes with families, not wanting their patients to die alone. The pandemic *took an emotional toll* on all respondents. *Moral distress* and guilt were reported by unlicensed students who were not permitted to provide care to patients with COVID-19, as well as by RN undergraduate and graduate students who witnessed futile treatments and countless deaths in their practice environments. Additionally, as nursing students, respondents were frustrated by their *interrupted education*. The suspension of clinical experiences left many feeling unprepared and cheated. These findings shed light on students' lack of preparation. Academic and hospital-based educational programs must address the needs of these future practitioners, taking care to facilitate and support their transition to practice and professional role formation. These students, and those of the future, must be introduced to reflective and self-care practices, as well as trauma-informed exercises, which will assist the next generation of nursing professionals to thrive in times of both normalcy and crisis.

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