

Self-Efficacy and Concerns of Graduate Nursing Students Regarding the COVID-19 Pandemic

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Abstract

Purpose: Many nurse practitioner students work as nurses while balancing family obligations and graduate school work. The purpose of this project is to learn more about the self-efficacy and concerns of rural graduate nursing students during the COVID-19 pandemic.

Sample: Family nurse practitioner students at a rural, public, liberal arts university in the Southeastern United States participated in the study.

Method: Demographic information and survey information was obtained from graduate nursing students to assess their self-efficacy and concerns about the COVID-19 pandemic, using the 10-item General Self-Efficacy (GSE) Scale.

Findings: Respondents reported varied effects of the COVID-19 pandemic on work schedules. The mean GSE self-efficacy score was 3.32 across two-time points (n=67). Nine

qualitative themes were revealed: concerns about contracting and transmitting COVID-19, importance of personal protective equipment and hygiene, impacts at home, stress, decreased clinical placements, coping strategies, public health preparedness, future effects of COVID-10, and a renewed commitment to nursing.

Conclusion: This study provides insight into the experiences of rural graduate nursing students caring for patients during the COVID-19 pandemic.

Keywords: graduate nursing education, self-efficacy, pandemic, COVID-19

Self-Efficacy and Concerns of Graduate Nursing Students Regarding the COVID-19 Pandemic

In December 2019, the coronavirus (COVID-19) outbreak occurred in China, and on January 30, 2020, the World Health Organization (WHO) declared that COVID-19 was a pandemic (WHO, n.d.). Several studies have measured nurses' perceptions and concerns related to caring for patients during pandemics. However, there is a lack of research on the potential for self-efficacy to be protective against burn-out and stress during the current COVID-19 pandemic, especially among graduate nursing students.

In a study of Chinese Singaporean nurses who had cared for patients during the Severe Acute Respiratory Syndrome (SARS) and Influenza A/H1N1 virus outbreaks, three qualitative themes emerged: living with risk; the experience of SARS; and the acceptance of risks (Koh et al., 2012). Nurses perceived that work increased the risk of contracting the viruses but did not impact the willingness to care for patients (Koh et al., 2012). Nurses voiced concerns about how work could negatively impact family members' risk of contracting the virus (Koh et al., 2012). In a study of New Zealand nurses during the 2009 H1N1 pandemic, infection control, high acuity and mortality

rates of patients, being asked to work additional shifts, and a lack of support were identified as issues (Honey & Wang, 2012). Similarly, in a study of Irish nurses' perceptions about an influenza pandemic, nurses had concerns about a heightened risk of infection, increased workload, stress levels, and concerns about infecting family members (McMullan et al., 2016). However, nurses felt that working during the H1N1 pandemic improved nursing skills and led to increased job satisfaction (Honey & Wang, 2012).

Fernandez et al. (2020) conducted a systematic review to better understand the lived experience of working as a nurse in an acute setting during a pandemic. From this work, three synthesized findings were identified: supportive team work to provide quality care, the physical and emotional impact, and responsiveness of organizational reaction.

In an early study that examined the mental health consequences of caring for COVID-19 patients on healthcare providers in China, depression, anxiety, and insomnia were identified as prevalent and were more pronounced in women, nurses, those employed in the epicenter (Wuhan), and those on the frontline. A large proportion of the nurses in the sample (71.5%) were identified as “junior,” indicating less work experience, which may increase vulnerability to psychological stress. Features of the novel coronavirus, including its high communicability, high morbidity and potential fatality rates, as well as a lack of supplies to respond to the epidemic, changes in work, fear of spreading it to others, and isolation may foster a sense of danger (Lai et al., 2020).

In a study of Israeli dentists during COVID-19, factors associated with psychological distress included having chronic illness, fear of being infected with COVID-19 by a patient, and a higher reported self-overload (Shacham, 2020). Dentists with higher self-efficacy scores and those in committed relationships had lower psychological distress levels (Shacham, 2020). In a study of Korean nurses, perceived self-efficacy in providing care for patients was the strongest predictor of

nurses' intention to care for patients with an emerging infectious disease (Lee & Kang, 2019). Self-efficacy, the belief that an individual possesses within himself the strength, skills, or traits to persevere in the face of adversity, may be an asset in meeting the demands placed on graduate nursing students who are simultaneously working and enrolled in school during the COVID-19 pandemic.

The United States Census Bureau (2010) defines rural as the population, housing, and territory not included in an area with at least 50,000 people. The city in which the university is located had a population of approximately 38,531 residents in 2019 (United States Census Bureau, 2019). There are several portions of this county designated as rural by the Federal Office of Rural Health Policy (Health Resources and Services Administration [HRSA], 2021). Additionally, many students live in surrounding counties that are designated as rural by the Federal Office of Rural Health Policy and commute to the university for classes (HRSA, 2021).

There is a lack of research on the self-efficacy and concerns of rural graduate nursing students regarding the COVID-19 pandemic. The purpose of this project is to learn more about the self-efficacy and concerns of rural graduate nursing students during the COVID-19 pandemic.

Methods

The study was conducted at a public liberal arts university in the rural, southeast United States. Institution Review Board approval was obtained. This graduate nursing program is a hybrid, master's degree family nurse practitioner program in which students complete a plan of study over two years. All of the graduate nursing students are registered nurses, and most of them are working full-time or part-time at local healthcare facilities as nurses during COVID-19 while balancing family obligations and graduate schoolwork.

An anonymous, online survey was administered to graduate nursing students enrolled in family nurse practitioner courses in the first and second years of the program in the summer of 2020 and then with the same group of students in the fall of 2020. The statewide percent positivity for COVID tests was 7.7% on June 1, 2020 and 9.1% on October 12, 2020 when the surveys were deployed (South Carolina Department of Health and Environmental Control, 2020a, 2020b). The surge in COVID cases that begin in late fall and winter of 2020 had yet to affect the area.

The web links to the voluntary surveys were placed in the online learning management system, which was used to deliver course content in the two online courses. Completion of the surveys was voluntary. Students were informed that no incentives or penalties were connected to survey completion. Demographic information and survey information was obtained from graduate nursing students to assess their self-efficacy and concerns about the COVID-19 pandemic, using the 10-item General Self-Efficacy (GSE) Scale (Schwarzer & Jerusalem, 1995) along with nine qualitative questions. The GSE is a freely available scale in which participants self-report their efficacy (Schwarzer & Jerusalem, 1995). The Cronbach's alpha for the GSE ranges between .76 and .90 (Schwarzer & Jerusalem, 1995). Positive coefficients correlated to emotion, optimism, and work satisfaction, while negative coefficients were found for depression, stress, health complaints, burnout, and anxiety (Schwarzer & Jerusalem, 1995).

Results

Demographics

A total of 67 graduate nursing students completed the survey at two points in time (47 students out of 68 students at time 1 in June 2020 for response rate of 69.12%; 20 students out of 68 students at time 2 in October 2020 for a response rate of 29.41%). The majority of respondents (87%) were female and almost three-quarters of the respondents (73%) identified as White or

Caucasian with a remaining 21% identifying as Black or African American. Almost half of the respondents (42%) were between the ages of 26-35 years of age.

Of the 67 total respondents surveyed across two time points, there was a range of years worked as an RN: 19% reported 1-3 years of experience, 34% reported 4-6 years of experience, 7% reported 7-10 years of experience and 37% reported greater than 10 years of experience. Similarly, there was a range of settings in which respondents worked: 18% reported working on the COVID-19 floor, 12% reported working in the Emergency Department, 6% reported working in Home Health, 27% reported working in the Intensive Care Unit, 12% reported working on the Medical Surgical floor, 10% reported working in an Outpatient Clinic and the remaining respondents worked in Pediatrics, Psychiatric setting, Women's Health or other.

Quantitative

Of the 67 total respondents surveyed across two time points (47 students at time 1 in June 2020; 20 students at time 2 in October 2020), there were varied effects of the COVID-19 pandemic on work schedules: 30% reported working fewer hours due to the pandemic, 27% reported working more hours due to the pandemic, and 34% reported no impact on work schedule. Respondents (n=67) were asked to indicate level of agreement with various statements measuring resilience and self-efficacy using the Likert scale response options: 1=Not at all true, 2=Hardly true, 3=Moderately true, and 4=Exactly true. Table 1 shown below shows the average level of agreement for each of the GSE scale statements.

Table 1*Mean Self Efficacy of Graduate Nursing Students using GSE Scale*

Average level of agreement with Agree/Disagree Statements (Likert Scale: 1=Not at all true, 2=Hardly true, 3=Moderately true, 4=Exactly true)	Summe r Average (n=47)	Fall Averag e (n=20)	Total Averag e (n=67)
I can always manage to solve difficult problems if I try hard enough.	3.28	3.40	3.31
If someone opposes me, I can find the means and ways to get what I want.	2.43	2.50	2.45
It is easy for me to stick to my aims and accomplish my goals	3.40	3.35	3.39
I am confident that I could deal efficiently with unexpected events.	3.43	3.40	3.42
Thanks to my resourcefulness, I know how to handle unforeseen situations.	3.34	3.25	3.31
I can solve most problems if I invest the necessary effort.	3.53	3.50	3.52
I can remain calm when facing difficulties because I can rely on my coping abilities.	3.43	3.45	3.43
When I am confronted with a problem, I can usually find several solutions.	3.43	3.35	3.40
If I am in trouble, I can usually think of a solution.	3.51	3.50	3.51
I can usually handle whatever comes my way.	3.43	3.45	3.43
Mean GSE Self-Efficacy Score	3.32	3.32	3.32

The highest level of agreement was with the statement “I can solve most problems if I invest the necessary effort” (3.52) and the lowest level of agreement was with the statement “If someone opposes me, I can find the means and ways to get what I want” (2.45). Overall respondents indicated a “hardly true”, “moderately true” or “exactly true” on each of the GSE state statements. The mean self-efficacy score on the GSE scale was 3.32 (“moderately true”).

Qualitative

Directed content analysis was used to analyze the nine open-ended survey questions from summer and fall 2020 (shown below in Table 2). The investigators coded the open-ended survey questions to identify and determine the categories and repetitive themes found, and agreement was reached on any differences.

Table 2

Open-ended Survey Items

Open-ended Survey Items
1. What concerns did you face in your work as a registered nurse during the COVID-19 pandemic?
2. What issues did you have trying to balance your work and home life during the COVID-19 pandemic?
3. How was your ability to complete clinical rotations in the nurse practitioner program impacted by the COVID-19 pandemic (if applicable)?
4. How did the COVID-19 pandemic affect you emotionally?
5. How do you feel that the COVID-19 pandemic has changed your outlook professionally?
6. What positive impact has the COVID-19 pandemic had on you-personally or professionally?
7. What coping strategies have you used during the COVID-19 pandemic?
8. How do you anticipate that your life will be different going forward?
9. Any other comments?

Nine qualitative themes were identified that remained consistent from both time periods.

The themes included concerns about contracting and transmitting COVID-19, importance of personal protective equipment and hygiene, impacts at home, stress, decreased clinical placements, coping strategies, public health preparedness, future effects of COVID-19 and a renewed commitment to nursing.

The nursing students had concerns about contracting and transmitting COVID-19 in the summer and fall of 2020. One student said “primary concern is getting sick with COVID-19, due to underlying health conditions.” Another student reported, “I was concerned that I would bring the virus home to my family.” One student stated “More cautious in caring for patients and especially when coming home to my family.” Students were concerned about the lack of personal protective equipment and recognized the need for hygiene measures. One student admitted a concern about the “uncertainty of PPE availability while caring for COVID patients.” A student reported that there was a “lack of PPE, [and] unknown exposure risk.” Another said

“It has made me become more aware and see the importance of having good hand hygiene and educating patients on proper sanitation techniques.”

Nursing students were concerned about the impact of COVID-19 at home in the summer and fall of 2020. One student said “no daycare center open during pandemic” was an issue. For some students, an impact related to COVID was “more family time” and “more at home time.” Another student said, “It was horrible between work, school, and family. [I] was unable to see family many weeks at a time due to risk of exposure. It was very difficult and mentally/emotionally exhausting.” Some of the students experienced reduced hours as nurses during the summer of 2020. A student said, “I never thought I’d see a day that an ER nurse was not needed.” In the fall, many students were asked to work additional hours. One student said, “It's hard to dedicate time to home with extra hours.” Another student in the fall relayed they were “required to work extra hours, my husband was laid off requiring me to work more.” Another student in the summer said “being financially secure” was a concern. This concern continued into the fall, and one student said COVID was “mostly a financial struggle.”

The pandemic was stressful for students in the summer and fall. One student in the summer said, “It was stressful and draining between monitoring my own activity, taking care of patients I knew personally with COVID, and adapting to the constantly changing environment of care.” In the fall, one student said COVID “creates more stress for our occupation.” Another student said, “I know it will make me a stronger provider, yet it has been a struggle with all of the extra stress.”

The graduate nursing students also had decreased clinical placements. One student in the summer said, “The biggest issue I had during COVID was loss of clinical placement.” For another student, the healthcare “organization paused student learning temporarily...having to

find another preceptor unexpectedly.” This issue continued into the fall. One student said, “It was difficult to locate a provider agreeable to accept students.” Another student reported finding clinical placements was “nearly impossible, consumed all of my time trying to find someone who would allow me to complete hours with them. It was emotionally, physically, and mentally draining.

Coping strategies was another theme in the summer and fall. The students used a variety of strategies including “spiritual renewal,” “praying,” “yoga,” “meditation,” “talking with other co-workers,” “exercise,” “great support of family” and “time outdoors.”

The students became aware of the importance of public health preparedness because of the COVID-19 pandemic. One student said, “It made me realize we need to be more prepared for things like COVID-19 to protect our patients as well as ourselves.” Students in the summer and fall felt that there were future effects of COVID-19. “I now have some degree of PTSD. You cannot see this many people die and not be affected.” Another student reported “Everything around me including the healthcare system has changed.” In the fall of 2020, students also expressed uncertainty for their future, with one person saying, “Fear is among all Americans, things are not the same.” This concern about the future was extended to their profession. One student said, “I feel like I have done all this work over the years and am graduating into a job market that is not there.” Another student in the fall said, “I worry it has (sic) effected job availability for myself once I graduate as an NP.”

Students had a renewed commitment to nursing due to COVID-19. One student said, “It made me even more motivated to help others and just strengthened my love to be a nurse and future NP.” Another student reported, “Working under stressful and uncertain conditions with difficult patients has improved my critical thinking and nursing skills.” A student said, “It is an

encouragement to work together with other healthcare professionals to overcome the many obstacles we face to continue to provide the best care for patients while supporting each other.”

Discussion

Because the COVID-19 pandemic impacted the nurses' hours in varying ways, it is difficult to generalize the specific impact of the COVID-19 pandemic on work schedules. However, 57% of graduate nursing students (n=67) in this study had a change in their working hours, which may have impacted them financially and in their work-life balance. The changes in work schedules may have been particularly stressful due to the constraints that being enrolled in a rigorous curriculum already imposes.

It is important to consider the self-efficacy of nurses during a pandemic such as COVID-19 because of its relationship to mental health, resiliency, and the intention to care for patients during a pandemic. In the present study, the quantitative results indicated that the graduate nursing students had an overall moderate level of self-efficacy. Shacham (2020) found that healthcare providers with higher self-efficacy scores may have lower levels of mental distress, which is important during the stressful conditions of caring for patients with an emerging infectious disease. It is important to maintain an adequate nursing workforce to care for patients with COVID-19. Research indicates that nurses who have higher self-efficacy levels may be more likely to care for patients during a pandemic (Lee & Kang, 2019). In fact, willingness to work in any disaster has been found to be related to self-efficacy and was higher in males, those who are young, and those with more education (Al-Hunaishi et al., 2019).

Similar to the findings of Koh and colleagues (2012), contracting and transmitting COVID-19 was a concern of the graduate nursing students in this study, but these students also reported a renewed commitment to nursing. The graduate nursing students were concerned about the

importance of personal protective equipment and hygiene, which is analogous to the findings of Honey and Wang (2012). Stress was a theme reported by McMullan and colleagues (2016), which is also a theme in this study.

This study provides insight into the experiences of rural graduate nursing students who are working as nurses while completing courses in a family nurse practitioner program. One of the themes unique to graduate nursing students included decreased clinical placements, which impacted their ability to complete clinical courses on time in the nurse practitioner program. Because of issues with clinical placements during the summer and fall of 2020, nursing faculty reached out to current preceptors, and several preceptors were able to accept multiple students. In addition, some students were able to complete clinical hours at free clinics, which strengthened partnerships with the nursing program. Other students completed their clinical hours at urgent care settings, where there were fewer restrictions on students. None of the nurse practitioner students were unable to complete courses due to a lack of clinical placements.

Completing the survey may have been healing for some of the nursing students. One student said,

I am glad I took time to do this survey. I have not put into words what I have been going through enough during this time. This was therapeutic. In 6 weeks, I have seen more people die than I have in three years.

Some of the limitations of this study include the small number of graduate nursing students in a single nursing program who were surveyed at two points in time (summer and fall 2020) in the middle of the COVID-19 pandemic. During both times, cases had not surged to high levels locally, and nursing was yet to lose one of its own to the illness in the local area. Since that time, the rural area in which the study was conducted has seen very high cases rates for COVID-19. It

may be interesting to do additional research as the pandemic evolves in other rural areas. The response rate for the surveys may have been lower due to the constraints of the pandemic itself, as well as emotional saturation related to it.

Conclusion

This study provides insight into the experiences of rural graduate nursing students who are caring for patients during the COVID-19 pandemic. These findings have implications for nurse educators, nurses, and health care administrators who may have lacked awareness of the issues facing graduate nursing students in rural areas working on the front lines during a pandemic. Since self-efficacy can be taught, future research may focus on ways to improve among nurses and nursing students so that they are better prepared for and more willing to work during stressful work situations such as pandemics. In addition, further research may focus on the concerns of graduate nursing students over a period of time during a pandemic.

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