ORIGINAL RESEARCH

# Who is caring for nurses? A qualitative description of psychological influence of COVID-19 pandemic on RNs' self-efficacy and job satisfaction

Venise Bryan*[1], Jennifer M.L. Stephens[2], Andrea Shippey-Heilman[1], Gwen R. Rempel[1]

[1] *Faculty of Health Disciplines, Athabasca University, Athabasca, Alberta, Canada*
[2] *Fay W. Whitney School of Nursing, University of Wyoming, Laramie, WY, United States*

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## ABSTRACT

Working while undertaking graduate education in nursing is challenging at any time. During the COVID-19 pandemic, many nurses continued to work on the frontline while completing their graduate studies. Healthcare workers, including nurses, were routinely exposed to several types of psychological trauma during the COVID-19 pandemic. In this study, we seek to generate an understanding of the psychological influence of COVID-19 on registered nurses' (RNs') self-efficacy and job satisfaction while commencing graduate studies in nursing and working in clinical practice during the pandemic. A qualitative descriptive design was used to explore written reflections from 72 RNs enrolled in their first Master of Nursing graduate course at an online university. The RNs' online discussion postings related to the impact of the pandemic on nursing. Data were analysed using content and thematic analysis. Analysis revealed five overriding themes around job satisfaction and self-efficacy: level of professional involvement and guilt, communication of information and leadership, psychological and physical wellbeing, the safety of self and others, and relationships to and within the nursing profession. Overall, a strong sense of kinship contributed to job satisfaction and self-efficacy. Findings confirmed the need for so-called "aftercare" for nurses by leadership and administrators. The impact of the COVID-19 pandemic has been considerable on the individual nurse's sense of self-efficacy and job satisfaction, and this is particularly noted in nurses who commenced graduate studies during the pandemic.

**Key Words:** COVID-19, Job satisfaction, Self-efficacy, Nursing, Qualitative research, Graduate nursing education

## 1. INTRODUCTION

Nurses and frontline healthcare workers have faced intense pressure during the COVID-19 pandemic declared in Canada in early 2020.[1] COVID-19 triggered significant modifications to public health and acute care sectors while causing global economic difficulties.[2, 3] The resulting strain on national healthcare systems placed healthcare workers, many of whom are nurses, under extraordinary levels of stress and trauma.[4–6] Despite these demands on nurses, many decided to commence graduate studies while continuing clinical work on the frontlines, further heightening the stress and trauma they experience.[7–9]

The health sector pandemic response has been supported through the redeployment and transfer of nurses, further contributing to their heightened stress.[10, 11] Nurses have publicly acknowledged and accepted the sacrifice and risks associated with the pandemic but acknowledge the need for psychological support to effectively carry out their roles.[5, 12, 13] Psychological pressures associated with COVID-19 can

*Correspondence: Venise Bryan; Email: vbryan@athabascau.ca; Address: Faculty of Health Disciplines, Athabasca University, 1 University Drive, Athabasca, Alberta, T9S 3A3, Canada.

cause nurses to question their ability and capacity to provide effective nursing care due to burnout, high patient death tolls, and loss of colleagues through attrition and death, thus negatively influencing nurses' self-efficacy.[14, 15] Self-efficacy is the perception that one can accomplish a specific task, goal, or set of tasks associated with a discipline.[16, 17] One's self-efficacy is influenced by goal/role mastery, seeing others accomplish the task, receiving positive feedback from organizational leadership, and interpreting one's physiological and psychological feelings about accomplishing the task.[18] Registered nurses' (RNs') self-efficacy may be negatively influenced during a crisis, such as a pandemic.[19–22]

Foli and Thompson developed a middle-range theory addressing the psychological trauma nurses experience and witness, including vicarious/secondary trauma, workplace violence, and trauma from disasters.[23] Foli identified COVID-19 as a disaster trauma that inflicted psychological trauma on nurses where there was a lack of tangible and intangible resources to render safe, ethical, and effective nursing care.[4] COVID-related system-induced trauma includes RNs seeing colleagues become ill and die, contributing to increasing feelings of fear, guilt, shame, helplessness, and hopelessness; this also negatively influences nurses' self-efficacy and job satisfaction.[5, 13] Job satisfaction is the nurse's expectations about the job compared to their experience; this could be influenced by relationships with colleagues and leaders in the workplace.[24] The intense emotions nurses experience witnessing the effects of COVID-19 on patients, colleagues, and leadership ambiguity may lead to burnout and dissatisfaction with the profession; this may inspire RNs to leave nursing at a time when global nursing shortages are critical.[23, 25, 26]

Little research pertains to the psychological influence of COVID-19 on Canadian RNs. To understand the psychological influence of COVID-19 on RNs' self-efficacy and job satisfaction, we studied RNs living and working across Canada who had recently started graduate studies at an online university. Within their first course, learners were invited to write reflections on their nursing experiences early in the pandemic. The student demographics at the university represent 41,900 students who reside in all 10 Canadian provinces and three territories.[27] Thus, this university is well situated to provide insight into the Canadian RN experience as it is a leader in online education and the graduate nursing students enrolled in the program are from across Canada. The purpose of this qualitative study was to examine written reflections of graduate nursing learners to understand the phenomenon of the psychological influence of the pandemic on RNs' self-efficacy and job satisfaction while commencing a graduate nursing program.

## 2. Methods

Qualitative descriptive design was used to portray and interpret the phenomenon of psychological influence within the context of a global pandemic by studying the participants' viewpoints.[28] A descriptive approach is beneficial when studying human experiences that are complex, elusive, and not widely studied.[?]

### 2.1 Sampling and data source

Convenience sampling occurred from the written reflections by RNs who were graduate learners in spring 2020 (n = 90) and fall 2020 (n = 124). An optional learning activity in their first graduate course invited learners to post a self-reflection about their experiences working during COVID-19 (see Figure 1). Inspiration for the written reflection was provided through a post by Foli that described the traumatic experience of nurses during COVID-19.[4]

> The Covid-19 pandemic introduced ethical, moral, and social dilemmas for nurses working in a variety of settings. Many nursing theorists and philosophers considered these issues in their writing as a way to provide support and direction to frontline nurses and leaders. Consider the Foli (2020) article (see reference list, https://nursology.net/2020/04/07/covid-19-and-psychological-trauma/) and how it correlates with your personal experience and if you are comfortable, provide a brief reflection in the Unit 2 Forum.

**Figure 1.** Learning Activity 2.3 graduate RN learners completed

### 2.2 Data collection and informed consent

The Athabasca University Research Ethics Board granted ethics approval for this study, File No 24088. All learners registered in the first graduate nursing course during spring and fall 2020 (N = 293) were invited to participate in the study by giving written consent via email for the research team to include their written reflection in the data set. The graduate research assistant (GRA) compiled a list of consenting learners, who retroactively pulled the students' reflective posts, removed identifying information, and assigned each participant an anonymized code. The anonymized posts were uploaded to secure SharePoint files accessible only to the research team. The research team consisted of two PhD-prepared assistant professors with experience teaching the course, a full professor, and a GRA; the professors were RNs.

### 2.3 Data analysis

Directed qualitative content analysis and thematic analysis were used to identify categories, sub-categories, and themes in the learners' written reflections.[29,30] The spring 2020 data were analysed first by the GRA and one co-investigator; initial codes were tabled in an Excel spreadsheet to facilitate further coding and collaboration with the research team. Some codes appeared several times through the same transcript and across others where participants discussed similar experiences. In the second coding round, the researchers further refined the meaning units by assigning three-to-five-word code names. Similar codes were highlighted and became categories and sub-categories. The researchers iteratively worked within the data until no new categories or sub-categories emerged. The exact process was repeated for fall 2020 data. Finally, the results of the coding analysis from both terms were combined and compared to identify common themes.[31] Ongoing research team discussions ensured that the analysis and resulting themes were consistent and representative of the cumulative data sets.

### 2.4 Rigour

Trustworthiness was attained through dependability, transferability, credibility, confirmability, and reflective journaling.[32,33] Dependability was established through a clear audit trail detailing the research process. The purposeful study design facilitated transferability, which involved real-time, real-world graduate nursing course data. Confirmability and credibility were established through independent data analysis by two research team members with weekly meetings and input from the entire team until final themes were identified. The principal investigator and the GRA did reflective journaling throughout the entire research process. Researchers reflected on their role, intrinsic biases, and assumptions that may have affected the research process and results and regularly discussed how these could be mitigated.

## 3. Results

Written reflections from 72 graduate nurse learners, 22 from spring 2020, and 50 from fall 2020, constituted the data for analysis. Five themes specifically addressing self-efficacy and job satisfaction included: (1) level of professional involvement and guilt; (2) communication of information and leadership; (3) psychological and physical wellbeing; (4) safety of self and others; and (5) relationships to and within the nursing profession.

### 3.1 Level of professional involvement and guilt

Although demographic data were not collected from those who consented to have their written reflections analyzed, many (44/72) noted within their written reflections their level of involvement that we defined as their professional role and area of work (see Figure 2). While some nurses continued working in their pre-pandemic role and area of work, many were assigned additional duties, and others were tasked with new positions and/or redeployed to priority work areas elsewhere. Most learners working frontline during COVID-19 were in hospital settings. Those who were not frontline were assigned to COVID-specific committees to create policies and procedures, coordinate resource allocation, curate new COVID-19 information, and educate frontline nurses. Everyone discussed the strain. One learner explained that "many days were spent with no breaks and working overtime shifts in order to manage the workload." Others described being forced to work overtime shifts, and several expressed that overtime became an unquestioned expectation. Redeployed nurses reflected on the challenges of working with unfamiliar technology, staff, and patients; "I was terrified and anxious for so many reasons. I had never been orientated to that department before… Would I make a mistake?"

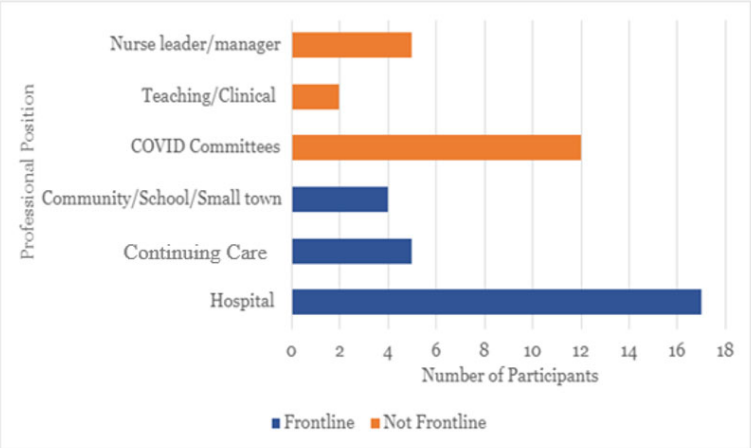


**Figure 2.** Showing participants' level of professional involvement while working during the COVID-19 pandemic (n = 44)

Whether frontline or not, most described feelings of guilt. Those working away from the frontline expressed guilt about being "safe" and "protected." A nurse working from home expressed feeling "helpless and guilty." Another said, "I could not shake feeling like I wasn't really contributing, I was not really performing my duty as a nurse as I was not out there facing the virus." A redeployed nurse noted that even though "I was definitely contributing in a way that was meaningful... it did not feel like it was enough".

Different levels of professional involvement did not differentiate their reflections on job satisfaction. Most conveyed satisfaction and pride in their nursing role. One participant stated, "As professionals we must flow with changes, support one another, be innovative and most importantly remain competent in our new pandemic roles." Another wrote, "I am confident that we will come out of this with many lessons learned and having done the very best that we can."

### 3.2 Communication of information and leadership

All participants described the process of communicating information and wrote about how "constantly" information changed, "an overwhelming amount of information," or the "lack of information." Persistent information issues influenced their psychological wellbeing, as "it is mentally exhausting trying to keep up ... a huge source of stress and anxiety." Another participant articulated anxiety regarding the frequent changes to information: "We are faced with something completely new and are struggling every day to gather as much information as possible to be able to contain this virus... how do we continue to practice nursing when we do not know anything about what we are facing?" Concern about knowledge deficits stemming from unsupportive leadership came from a learner who connected poor job satisfaction and self-efficacy: "When I feel the most traumatized and burdened is when I lack knowledge to confidently and safely care for my patients ... but most painfully when I feel unsupported by my environment, my peers or leadership."

New and evolving information resulting in constant policy and procedure changes regarding masks, personal protective equipment (PPE), and visitation had many participants feeling "frustrated, exhausted and overwhelmed." Some participants alluded to unsafe practices resulting from policy changes, including suddenly having to wear a surgical mask more than once and for long periods. PPE altered the nurse-patient relationship: "... so much of our role includes therapeutic touch and physical presence. I'm certain patients are dissatisfied with care received." Regarding visitation, a nurse explained that "policy makers had to balance individual wishes with overall public needs, resulting in strict visitation policies that did not align with best practices." These visitation policies impacted patient and family wellbeing that negatively affected the nurses. One participant felt "sad... for those who had to die alone because of infection control rules." Another RN who worked in labour and delivery wrote about the psychological trauma inflicted on patients and their families because of "strict COVID-19 restrictions" and how it was negatively affecting her mindset: "my heart ached."

How participants viewed leadership related to information varied between the spring and fall learner data. Spring participants generally provided more positive reflections on leadership, saying, "to be most effective, leadership need to provide clear, timely, and transparent communication to staff." Participants in the fall also expressed what they believed good leadership was, with several communicating a need for leadership to be more supportive, empathic, and attentive. Having endured the early months of the pandemic, their written reflections on leadership conveyed a more negative reality: "When there is no evidence that the employer wants to listen to the true needs of their employees... employees will not have the complete trust in leadership required for healthy morale... it is not acceptable that health care leaders ignore the concerns brought forward by their employees who do the work." Another participant similarly explained that "every time concerns were raised about our inappropriate PPE or staffing concerns, we were told management would look into it with no follow up." A nurse described the lack of common sense perceived by staff about their leaders and subsequent declining trust: "The organization has started offering staff options for guided mindfulness moments and stretch breaks that can be scheduled during the workday ... When there is no evidence that the employer wants to listen to the true needs of their employees and offers wellness strategies that can't even be accommodated due to office confinements, employees will not have the complete trust in leadership required for healthy morale."[34]

Along with negative leadership accounts were positive accounts of leadership. Someone noted, "the support we are receiving from our manager and our hospital has been incredible... every day we have huddles and prepare the equipment and rooms for incoming patients... now more than ever we are working as a team." Some participants in leadership positions explained that "as leaders we needed to ensure our nurses' concerns were heard and opportunities for the team to reflect were provided."

### 3.3 Psychological and physical wellbeing safety and health of self and others

Most participants in this study focused their written reflections on experiences and impacts of trauma or perceived trauma related to their psychological and physical wellbeing.

Most participants highlighted negative feelings, including "fear of the unknown," "anxiety," "terrifying," "uncertainty," "stress," "exhaustion," and "powerlessness." Several nurses related the pandemic as a traumatic experience, agreeing with Foli.[4] One participant wrote, "after reading the article by Foli, it became evident how traumatic being a medical professional during the COVID-19 pandemic can be... I can relate" and another explained, "the Foli article invoked such emotions ... there were many correlations in the article that I could relate to such as shortage of PPE supplies." Masks, PPE, and human resources were all reported as scarce, many attributing psychological trauma to lacking resources: "One day the health authority asked nursing staff to count every piece of personal protective equipment we use, even pairs of gloves. The next week, there were health care personnel coming onto the unit to count our current PPE without explanation as to why. We began to question why? Is there not enough? And fear sets in."

The impact of staffing shortages was repeated in the written reflections regarding trauma and perceived wellbeing. Cited reasons for the shortages included early retirement, leaves of absence, illness, or calling off work because patient loads were unreasonable. One nurse explained that her unit had "seen many of our senior staff members retire early, which has put a strain on our intermediate and junior staff." Another participant noted, "more and more nurses are becoming ill, so we are experiencing severe staff shortages." One nursing leader articulated that "things are getting worse... from nursing shortages, burn out ... we are overwhelmed with new admissions and do not have the nursing staff to support the increase." Staffing issues left nurses "drained physically and emotionally."

Accounts of trauma extended to witnessing poor patient health outcomes and families experiencing deep pain and suffering. Self-efficacy was affected by these traumatic experiences. Some nurses articulated that vicarious and system-induced trauma made it "difficult for us to feel as if we are providing safe, and excellent quality of care." Another noted that, "there is immense system-induced trauma that presents when nurses are expected to be the experts in something that is constantly changing." And "seeing how quickly these patients deteriorate is very troubling... you can't possibly watch every patient at all times." Some also wrote that as time passed in this stressful work environment, tolerance to the situation lessened, resulting in desensitization, further eroding job satisfaction and nurse self-efficacy.

Regarding nurses' psychological and physical wellbeing, some wondered who was taking care of nurses while they were taking care of their patients. Most participants anticipated a need for self-healing after COVID-19. One participant hoped that "nurses and other health care workers are given resources and supports they need post-crisis to deal with this trauma, but it worries me because many of them have not been supplied with the resources they need IN-crisis." Another worried about how nurses would "heal and grow from this experience," stating that "each person experiences trauma in a different way, therefore careful consideration must be made when approaching the after care of nurses in this pandemic." Some participants explained that nurses needed to be better educated about psychological trauma because unmet mental health needs impacted the "ability to care for others and be cared for."

### 3.4 Safety and health of self and others

Overwhelmingly, nurses responded to the learning activity about COVID as trauma with heightened concerns around balancing the safety and health of self and others, particularly family members. One participant echoed the sentiments of her peers saying, "we [nurses] are all trying our best to continue to provide care for our patients while trying to ensure that we keep ourselves and our families safe. It is... draining, both physically and emotionally." Some expressed anxiety about being a vector for the virus: "I remember crying going into work fearful of becoming ill myself, cross contaminating patients, possibly infecting other staff members or my family." Several nurses took extra safety precautions by distancing themselves from their partners and children, and one nurse actually "moved into the guest bedroom when the first COVID death in [location] took place in our hospital.". Still another participant explained, "My husband and I had many discussions about isolating or not isolating at home, especially since our youngest daughter was only 2, and came to the conclusion that I would limit contact but not isolate due to the psychological impacts we thought this would have on our three girls."

In addition to being worried about their patients and families, the nurses conveyed concern for their health and safety, which was compromised by PPE unavailability and workplace violence. A nurse noted, "it is well-documented that surgical face masks lose effectiveness over time, particularly due to the moisture from exhalation." Several participants wrote that nurses were experiencing increased workplace and patient violence that affected their sense of safety for themselves and others, "Staff and patients alike were all fearful, on edge and highly anxious which may have been a contributor to higher accounts of workplace violence... I have observed staff to staff verbal violence... there has also been an increase in patient violence requiring security."

Concerns about being physically safe from infection and

attack influenced decision-making around patient care. One participant stated, "if we [nurses] felt safe, the patient would have received quality care." Many nurses in this study noted that they felt "paranoid," "vulnerable," and "uncomfortable," and a few expressed that they were "lucky to not be on the frontlines." One participant said, "my perspective on nursing changed for a little and I wondered why I was putting myself at risk to care for others." Reflections on safety immediately impacted feelings of job satisfaction. One participant wrote: "the thought that if we only felt safe to provide quality care that the resident would have had a better experience caused us to be angry, sad, and have dissatisfaction with our job and our workplace."

### 3.5 Relationships to and within the nursing profession

Participants described connectedness, strong relationships, and deep care for the nurses and the nursing profession. Some described their graduate learner peers and nursing colleagues as "soldiers" and "heroes." Several nurses discussed an overwhelming sense of duty, responsibility, and commitment toward their patients, profession, and colleagues, even at the expense of peace of mind. One participant noted constantly worrying about their children getting sick, but "the sense of duty towards the nursing profession was strong enough to prevent me from quitting." Another participant wrote, "as a nurse I was ready to fill my duty and sleep at the hospital for as long as they needed. . . with this duty and self-sacrifice comes burnout and compassion fatigue." The level of commitment to their profession, especially in the early months of the pandemic was discussed: "The staff. . . bonded together to do what we could do best, save lives, keep our community safe, work to our highest potential every single day because as professionals that is what we are trained to do." Another explained, "I was reminded of the reason I went into this profession, and it was to help the sick and broken, and that is what I stood by. It is easy to get caught up in fear, but I reflected on this profession of nursing being 'my calling' [and I] was happy to help those in need."

Over half of the participants wrote about the kinship, connection, and empathy they had for their peers and colleagues, discussing a "sense of community," "support," and "togetherness." Many referred to colleagues as "brothers and sisters in nursing" and expressed empathy for their direct colleagues, peers, and nurses across the globe. Several participants identified teamwork and togetherness as offsetting the trauma nurses experienced throughout the pandemic. One participant stated: "I have seen a support and togetherness never witnessed in my professional career. Every day I bear witness to the creative minds of brilliant nurses, allied health, and other professionals come together with ingenuity never seen before."

A sense of togetherness was not always comforting. Some participants conveyed that they were asked to do things they had never done before by leadership which seemed increasingly disconnected from frontline practice. In this and other ways, the pandemic, and perhaps the experience of graduate education, led to shifts in vision around nursing, nursing as a profession, and the rapidly shifting place of the nurse within the new, emerging pandemic culture of healthcare.

## 4. Discussion

This study considered the context and written reflections of graduate nursing learners within their first course of a Master of Nursing program. An optional learning activity asked learners to consider how they coped with traumatic experiences during the COVID-19 pandemic. The themes related to job satisfaction and self-efficacy revealed an overall sense of transformative change in healthcare that occurred due to the conditions of a sudden pandemic situation. We believe that all nurses in this study had "exposure" to COVID-19 realities and articulately described how direct their involvement with COVID-19 was, ranging from providing hands-on bedside care to working on policies to being on leave and feeling guilty about that. Within the findings were nuances of a struggle between doing the "right thing" for the self and doing the "right thing" for society. Overall, the pandemic seemed to have inspired unconscious or subconscious revelations about the ontological and existential meanings of nursing and being a nurse. For example, a key finding related to learners' discussion of the purpose of being and becoming a nurse and how the pandemic challenged or supported these assertions. Many participants described feeling bolstered in their decision to become a nurse, or to stay in nursing, or to work specifically on the frontline driven by an underlying motive of service to others. Service is long associated with nursing, a sense that nurses give selflessly to society through work that demonstrates caring for others.[35] This service is central to nursing's social mandate.[36] Our findings demonstrated that this mandate for service, as inherent to nursing and arguably a component of the elusive epistemology of nursing, is both empowering and deeply traumatizing.[37]

A key element in this study was that all participants were new to graduate education. Other researchers have also begun to explore the relationship between self-efficacy and graduate education. Laurencelle and Scanlan found that students entering graduate education viewed themselves as leaders but struggled with self-efficacy from the standpoint of being a new graduate student.[15] International studies confirm the importance of self-efficacy as central to coping with the Covid-19 pandemic.[19–22] Many of our study's learners

self-identified as experienced nurses and leaders, yet still, self-efficacy and job satisfaction were negatively influenced. Recent research has addressed pandemic-specific trauma as self-expressed by graduate students.[7–9] To be a graduate student conveys a sense of ownership over a career and profession and expresses a sense of longevity, commitment, and future vision. Our research added the complexity of becoming a graduate student within the novel socio-cultural context of a pandemic. Despite the difficulties identified related to their work in nursing during a pandemic while navigating graduate education, these graduate learners conveyed steadfastness. Despite a rapidly changing work environment, a sense of duty, pride in work, and kinship with one another foster a sense of self-efficacy and job satisfaction.

Job satisfaction was negatively influenced as uncertainty was prevalent at the pandemic's beginning. Additionally, poor patient outcomes and reduced family involvement due to changes in the visitation policy impacted job satisfaction. As such, these graduate learners developed concerns about the quality of patient care and identified tensions seeing patients suffering alone. Similar to this study, it has been shown that staff shortage and the resulting demand to do mandatory overtime contributed to poor patient outcomes, burnout, increased stress, and compassion fatigue among nurses.[12, 13, 26, 38, 39] However, resilience and a sense of duty assisted in combating the dissatisfaction experienced, and an overall strong sense of kinship contributed to job satisfaction. Findings confirmed the need for so-called "after care" for nurses by leadership and administrators, which could come in the form of transparent and improved communication as well as new measures for ongoing support.[39]

An intriguing finding was the distinction between spring and fall 2020 data. There was an overall sense of care and respect for nursing and nurses, yet this may speak to an overall capacity for resiliency and pride, which was most evident in the early days of the pandemic. As can be expected, the initial days of the pandemic (spring 2020), as conveyed by our learner sample, represented a feeling that nursing was challenging but also great and that becoming a graduate student in nursing at such a novel time was both challenging and stimulating. It is within the data of the spring term that, arguably, the most noted examples of self-efficacy and job satisfaction were evidenced. Individual perceptions of capabilities as both a nurse (expert professional) and a student (novice) were high. However, data from the fall term conveyed more reliance on self with an associated decline in support of leadership. In many ways, a decline in support for the other (other nurses, other leaders, public health, administrators) led to a more significant and timely demand for support of self (as student, as worker, as nurse). The self-efficacy demonstrated by these students in the later part of the pandemic (fall 2020) is distinctive from that of the spring term in that the foundation and impetus of individual perceptions for successful outcomes (both at work and school) shifted. Some described anxiety at being thrown into new situations as the stimulant for self-efficacy as a means of survival but had negative implications for job satisfaction. The overwhelming feelings that surfaced, along with anxiety and uncertainty, led to dissatisfaction and the need to prioritise self. Overall, however, our findings conveyed resiliency on the part of the nurse/student in a way that was both forced by circumstance and welcomed for the preservation of self both as being (nurse) and becoming (graduate student).

### 4.1 Limitations

This study was conducted at one Canadian university during the first year of COVID-19. The data source, written reflections that were intentionally influenced by the Foli post, limited how much of their experience the learners might have shared and could have introduced some bias.[4] No demographic data was collected from this convenience sample of RNs and there was no ability to conduct a non-responder analysis regarding any underlying systematic bias. In the absence of follow-up interviews, an opportunity was not provided to explore further the RNs' experiences early in the pandemic. Both regional and global knowledge and issues related to COVID-19 have evolved. However, this unique student population from across Canada gives a representation of RNs' experience working during the pandemic while pursuing graduate studies.[27]

### 4.2 Clinical practice implications

Much was learned from this study about self-efficacy and job satisfaction of nurses in the early months of the pandemic that has clinical practice implications. This study accentuated ongoing research and pragmatic knowledge that nurses feeling unsafe and fearful impacts the quality of patient care as much as it deteriorates a feeling of job satisfaction. Threaded amongst themes of workplace conditions were notions of a hermeneutic cycle whereby unsafe (or perceived unsafe) workplaces affected patient care which affected nurse self-efficacy and sense of job satisfaction which affected patient care into perpetuity until a sense of trauma was internalized. Efforts made by leaders to mitigate concerns over PPE and other infection control measures could produce desirable effects in both patient outcomes and the work environment. Similarly, the clinical environment would benefit from increased transparency from leadership around procedures and policies to support clinical staff. One strategy could be regular debriefings between nurses who expressed on several occasions in this study that they were committed to nursing

as a profession despite the (increasing) cost to their family life and mental health. Another strategy to promote self-efficacy would be to address human health resources with conviction, a suggestion which may need to come from an internal discussion of the profession as to the heart of what nursing is – a profession or a technical career.

### 4.3 Future research plans

This study has brought the reality of what nurses are continuing to face due to COVID-19 that is continuing in their role beyond the sense of duty. Nurses in this study looked to future healing after COVID-19, and future studies could explore post-pandemic care and healing from nurses' perspectives. Nurses' decision to self-isolate from family or socially distance from children and the psychological impact is also a subject for future research. Additionally, nurses spoke about leadership incorporating mindfulness and stretch breaks; the efficacy and use of these measures to support nurses during the pandemic and future healthcare crises warrant research. Burnout and compassion fatigue framed within the backdrop of a pandemic and mass vaccination are research opportunities to be explored on a larger scale and in greater depth to understand further how nurses experienced work through and within a pandemic.

## 5. Conclusion

This study has aimed to understand the psychological influence of COVID-19 on nurses' self-efficacy and job satisfaction through the lens of nurses living and working across Canada who entered their first term of graduate studies in the early months of the pandemic. Nurses in the study demonstrated resilience and a sense of looking to the future and healing after COVID-19 by reflecting, acknowledging, and discussing the challenges. Responsive nursing leaders need to focus on the psychological needs of nurses, including their belief in their ability to perform their nursing role with competence and overall job satisfaction. Self-care and support from nursing leadership in the form of adequate staffing, proper resource allocation, and mental health support can aid healing and recovery to prevent long-lasting psychological effects.

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## Conflicts of Interest Disclosure

The authors declare that they have no competing interests.

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