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Exploration of the occupational and personal dimensions impacted by the COVID-19 pandemic for nurses: A qualitative analysis of survey responses

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Abstract

Aim: To explore the occupational and personal life dimensions that have been impacted by the COVID-19 pandemic for registered nurses (RN) and licensed practical nurses (LPN).

Design: Qualitative interpretive description approach.

Methods: Between July and September 2020, a web-based cross-sectional study was conducted among RNs and LPNs in Quebec, Canada. Included in this survey was an open-ended question allowing nurses to describe the occupational and personal life dimensions that were impacted by the COVID-19 pandemic. Thematic analysis was used to interpret the qualitative data from this open-ended question. Reporting followed the Standards For Reporting Qualitative Research (SRQR).

Results: Of the 1860 survey respondents, 774 RNs and 43 LPNs responded to the open-ended question (total $n = 819$). For the occupational dimension, six themes were identified: impacts of infection control on work, change in daily work tasks, offloading and reorganization of care, deterioration of working conditions, increased stress at work and issues related to the profession. For the personal dimension, four themes were found: impacts on the family, dealing with changes about leisure and personal life, impacts on physical and psychological health.

Conclusion: Knowing the dimensions affected by the COVID-19 pandemic could help to identifying appropriate interventions to support RNs and LPNs.

Impact: The COVID-19 pandemic has significantly impacted the occupational and personal lives RNs and LPNs working in the Quebec healthcare system. More specifically, Quebec's nurses experienced a major reorganization of care generated by important government decisions. Knowing how the pandemic affected different life dimensions will help in the development of support adapted to nurses' realities. Even in a pandemic context, improvements in the work environment or appropriate support could lead to an improved psychological health for nurses.

KEYWORDS
COVID-19 pandemic, nurses, occupational impact, personal impact

Note from the authors: The authors are authorized to use the original data from the survey for this qualitative research.

1 | INTRODUCTION

Registered nurses (RN) and licensed practical nurses (LPN) working in Quebec (Canada) weathered a major reorganization of their professional services during the first wave of COVID-19 pandemic. Central to these changes was a Quebec Ministry of Health and Social Services emergency order to ensure adequate human health resources and care delivery. This order contributed to substantial modifications to nurses' day-to-day work including redeployment to priority areas, retraining, vacation cancellation, mandatory full-time work schedules and overtime hours. These and other changes occurred in the context of an increasing number of hospitalizations and deaths due to COVID-19, variable access to personal protective equipment, pre-existing shortage of healthcare staff and pending availability of COVID-19 vaccination protection. Given the significant potential occupational and personal impacts of the pandemic for Quebec's nurses, and the essential role that nurses play in provincial health system, research into the experiences of Quebec RNs and LPNs is warranted.

1.1 | Background

Nurses have experienced negative repercussions on their occupational life dimension during the COVID-19 pandemic (Pappa et al., 2020; Preti et al., 2020). Nurses have, for example, reported exhaustion over the many changes in infection prevention and control protocols or mentioned having been inconvenienced by the protective measures such as mask wearing (Crowe et al., 2020; Goh et al., 2020; Ness et al., 2021). Stress experienced at work (e.g. conflicts with colleagues, heavy workload, performance of unusual tasks, care units more at risk of contamination) has been shown to generate psychological distress among nursing staff (Brophy et al., 2021; Bukhari et al., 2016; Crowe et al., 2020; Sun et al., 2020). Moreover, many issues such as pressures of high-priority training, inexperienced health workers in providing care and early unavailability of practical methods such as seen in past pandemic situations had many consequences (Nayahangan et al., 2021). During COVID-19, as well as during others epidemic infectious diseases, nurses were afraid of contracting the disease and to pass it on to their family members (Alsubaie et al., 2019; Brophy et al., 2021; Bukhari et al., 2016; Goh et al., 2020; Raza et al., 2020; Sarabia-Cobo et al., 2020). Some nurses have experienced stigma and rejection from those around them (Kackin et al., 2020) resulting in more psychological distress (Park et al., 2018).

In addition to these occupational repercussions, nurses also faced negative personal repercussions during the pandemic. As a healthcare workers, nurses experienced several changes in their daily lives (e.g. avoiding some public places) and having isolated themselves from their family (Brophy et al., 2021; Crowe et al., 2020; Kackin et al., 2020; Lee & Lee, 2020; Ness et al., 2021). Research into the psychological and physical health of healthcare professionals revealed an increase in sleep disorders, stress and anxiety, emotional distress, post-traumatic stress disorder (PTSD), post-traumatic stress (PTS) as well as depressive symptoms (Crowe et al., 2020; Kackin et al., 2020; Lai et al., 2020; Lee et al., 2018; Liu et al., 2020; Raza et al., 2020; Tam et al., 2004; Xiao et al., 2020).

Similar to other international jurisdictions, the province of Quebec has experienced high COVID-19 incidence and mortality rates. As a result, the pandemic has overburdened the health system. Indeed, during the first wave, it was the most affected province in Canada, with 59,845 confirmed cases, of which 7310 people were hospitalized and 5829 died between 01 March and 27 July 2020 (Institut national d'excellence en santé et en services sociaux [INESSS], 2020). During this early period, the Quebec government's Ministry of Health and Social Services issued several ministerial orders to suspend or amend collective agreements (Ministère de la Santé et des Services Sociaux, 2020). The goal was to allowed employers to meet the needs of the population, including the cancellation of vacations, power to assign healthcare workers any position, place, shift or schedule needed regardless of seniority (Ministère de la Santé et des Services Sociaux, 2020). These measures led to high mobility and significant uncertainties for registered nurses (RN) and licensed practical nurses (LPN).

In Quebec, RNs graduate from a college or university nursing program and work in variety of health settings (e.g. hospitals, local community service centres [CLSCs], residential and long-term care centres, medical clinics and health centres). Although most of the RNs practice in clinical settings, they can also be educators, researchers or clinical managers (Ordre des infirmières et infirmiers du Québec, 2014). In 17 activities defining their professional scope, the RN's field of practice is defined by expectations for: 'assessing a person's state of health, determining and carrying out the nursing care and treatment plan, providing nursing and medical care and treatment to maintain or restore health and prevent illness, and providing palliative care'. (Nurse Act, section 36, paragraph 1). (Gouvernement du Québec, 2021, p. 9). LPNs, also referred to as nursing assistants, complete a formal post-secondary training program and mainly work in hospitals or residential and long-term care centres. In their field of practice, LPNs contribute to 'the assessment of a person's state of health and in the carrying out of a care plan, provide nursing and medical care and treatment to maintain or restore health and prevent illness and provide palliative care' (Ordre des infirmières et infirmiers auxiliaires du Québec, 2020, p. 5). For example, LNPs can prepare and administer medication according to a prescription other than the intravenous route.

Unlike studies reporting on the COVID-19 pandemic in other countries (Brooks et al., 2020; Lai et al., 2020; Mo et al., 2020), the most affected healthcare settings in Quebec by the pandemic seem to be broader (e.g. residential and long-term care centre [CHSLD]; home care and hospital centre) (Institut national d'excellence en santé et en services sociaux [INESSS], 2020). This suggests we still do not fully understand the impact of care reorganization during the first wave of the pandemic in Quebec on RNs and LPNs. Exploration of the occupational and personal impacts on RN and LPN will allow us to develop adequate support that is tailored to their reality.

2 | THE STUDY

To describe the psychological health profile of RNs and LPNs in the province of Quebec during the COVID-19 pandemic, we conducted a cross-sectional observational study through an online survey (Benyamina Douma et al., 2021). This article will focus on the qualitative analysis of an open-ended question integrated into this quantitative study. Qualitative inquiry is broadly exploratory and descriptive, and it can lead to unexpected findings. While recent qualitative studies report on the impact of the pandemic on healthcare workers, they comprise samples outside of Quebec which may limit the transferability of the results. Given the richness and quantity of data collected for this open-ended question, we conducted a qualitative analysis of the content.

2.1 | Aim

The aim of this qualitative study was to explore the occupational and personal life dimensions that have been impacted by the COVID-19 pandemic for RNs and LPNs in the province of Québec.

2.2 | Design

Qualitative interpretive description methodology (Thorne, 2016) was selected to examine the open-ended question included in the survey. Interpretive description is a flexible qualitative approach which can illuminate phenomena that will contribute to the understanding and advancement of the nursing profession. Our decisions about methodology and data analysis method are consistent with the constructivist paradigm. Using written answers to an open-ended question, we explored the perspectives of nursing participants about occupational and personal life dimensions impacted by the pandemic in an inductive way.

2.3 | Sample/participants

2.3.1 | Participants

To be eligible to participate in the survey, RNs and LPNs had to have a valid licence to practice issued by the *Ordre des infirmières et infirmiers du Québec* (OIIQ) or the *Ordre des infirmières et infirmiers auxiliaires du Québec (*OIIAQ) at the time of their participation. We did not identify any exclusion criteria.

2.3.2 | Sampling

The sampling for the survey—and therefore for the open-ended question—was distinct for the RNs and the LPNs. Contact with RNs and LPNs was facilitated by the OIIQ and the OIIAQ, which are the professional organizations issuing permits to practice. For the quantitative online survey, a sample size of 3000 RNs and 3000 LPNs was targeted to obtain good statistical power (Harrell et al., 1996; Vittinghoff & McCulloch, 2007). To recruit RNs, we used a random sampling strategy using the list of OIIQ members who had given their consent to share their contact information with research teams. Of the 77,347 RNs with a licence to practice, 28,000 agreed to be contacted by researchers. Among these 28,000 nurses, 15,000 were randomly selected by the OIIQ. Following the reception of the contact information, we then invited these 15,000 people to participate to the study by email. Two reminders were sent, 2 and 4 weeks after the launch of the online survey (Dillman et al., 2014).

To recruit LPNs, we used a convenience sampling strategy. The recruitment of LPNs was made possible through an advertisement published in the OIIAQ's bimonthly newsletter. We drafted the announcement, and it was distributed by the OIIAQ to its members. This advertisement contained the link to access the online survey as well as the consent form. All 29,427 LPNs licensed to practice received this newsletter.

2.4 | Data collection

2.4.1 | Survey

Data collection took place from July to September 2020 (Benyamina Douma et al., 2021). Among the survey questions, we asked a semi-open multiple-choice question on work-related aspects impacted by COVID-19. These aspects regarded potential change of work schedule (e.g. occasional vs. regular), of tasks and of assignment. Participants had the option of choosing more than one answer and of adding details to the 'other' choice option. Also, we had included a Likert-type question on specific aspects impacted by COVID-19 in the family and work spheres. These aspects regarded the number of hours worked per week, working from home, family income, the presence of dependent children and the physical and mental load associated with the role of caregivers.

2.4.2 | Open-ended question

We asked an open-ended question to capture all possible aspects of occupational and personal life experiences and allow sufficient opportunity for descriptive depth. Participants could write down their answer to clearly explain and detail their thoughts and feelings. The question was 'What other aspects of your life have been influenced by the COVID-19 pandemic?'

2.5 | Ethical considerations

This study was approved by the research ethic committee of the CIUSSS de l'Estrie—CHUS on 09 June 2020 (project #2021-3746 COVID-Survey). RNs and LPNs completed a consent form before

starting the questionnaire. To maximize the participation rate in the online survey, an incentive was offered (Dillman et al., 2014). Therefore, 10 prizes of $100 in the form of prepaid Visa® gift cards were drawn at random from the participants who completed the online survey. RNs and LPNs agreed to participate on a voluntary basis, and they could stop responding at any time. The data were anonymous and stored securely on servers in password-protected files. It was not excluded that participating in this research could generate distress symptoms in participants. In the consent form, external resources that could be of support were clearly identified (e.g. phone numbers for existing services).

2.6 | Data analysis

2.6.1 | Qualitative data analysis

We analysed the open-ended question with the thematic analysis method described by Braun and Clarke (2006). Between November 2020 and January 2021, two members of the research team (MM and IL) carried out the thematic analysis in collaboration with the other members of the team (NBD, SL and EG). Braun and Clarke's (2006) method is composed of six steps. Our research team is made up of two men and four women with varied backgrounds (five RNs and one occupational epidemiologist) and different clinical experiences (emergency room nurse, intensive care nurse, geriatric nurse, community health nurse).

2.6.2 | Step 1 - Familiarization with the data

Answers to the open-ended question were imported into an Excel document to facilitate reading and grouping of data. MM got acquainted with the data and noted initial observations in relation to the study's objectives. For example, she noted that stress was predominant in several excerpts, whether it was about personal, family or professional life.

2.6.3 | Step 2 - Generating initial codes

MM began analysing the data inductively and affixed relevant labels (codes) to answer the research question. We paid particular attention to the person and their experience in relation with COVID-19. For each of the codes, MM added a descriptor and selected relevant examples to make the code meaningful to other team members. At this stage, MM categorized data in five themes: 1-occupational impacts, 2-personal impacts, 3-physical impacts, 4-psychological impacts and 5-societal impacts.

2.6.4 | Step 3 - Searching for themes

For this step, MM and IL reviewed the codes to identify themes. Themes capture the links between the data and the research question. For instance, we grouped together the elements of responses that dealt with isolation, whether it was voluntary isolation (to protect their loved ones) or imposed isolation (infection prevention and control policy), whether it was isolation with the immediate family or the extended family. Similar themes were grouped together as a cluster in the Excel document. The themes were presented to and discussed with all team members (MM, IL, NBD, SL and EG). This teamwork led us to refine dimensions and themes. Thus, we categorized data in two broad dimensions: 1-occupational and 2-personal. Physical impacts and psychological impacts were regrouped into the personal dimension and societal impacts was merge in the occupational dimension.

2.6.5 | Step 4 - Reviewing themes

Following discussion with the entire team, we proceeded with the revision. MM checked the internal consistency of the data, that is, she went back to the raw data (narrative answers) to confirm it was consistent with the themes. Then, MM and IL made sure they had not forgotten a theme and that the themes represented all the data (Braun & Clarke, 2006).

2.6.6 | Step 5 - Defining and naming themes

MM identified quotes (verbatim) which are relevant examples for each theme. She also named the themes to sum up the essence of each of them and she wrote down the results to tell a cohesive story. Meetings with the entire research team made it possible to refine the themes and the presentation of the results. An example of inductive coding and transforming data are shown in Appendix S1.

2.6.7 | Step 6 - Producing the repost/manuscript

In an iterative process, the writing of the results took place concomitantly with Step 5. The research team provided comments to improve the results throughout the process.

2.7 | Rigour

We have followed the Standards for Reporting Qualitative Research (SRQR) (O'Brien et al., 2014) (Appendix S2). We paid special attention to the credibility, transferability and reliability to ensure the rigour of the qualitative data analysis (Frambach et al., 2013; Morse, 2015). For *credibility*, we conducted the analysis iteratively. Using an inductive approach, we analysed the data of the open-ended question while considering the inherent subjectivity, that is, by focusing on participants' experience during the first wave of the COVID-19 pandemic. We positioned ourselves as researchers, having ourselves experienced occupational and personal impacts linked to the pandemic. For *transferability*, we described in detail the context of our

study (Morse, 2015) as well as participants' socio-demographic data, specifically the RNs and LPNs of the province of Quebec. In support of our results, we shared numerous quotes demonstrating the richness of participants' experiences. For *reliability*, we described in detail the data collection as well as the data analysis procedures. We co-coded the data (MM and IL) and collaboratively identified themes. Agreement about analytic decisions was reached through team discussion.

3 | FINDINGS

3.1 | Description of participants

Of the 1860 survey respondents, 774 RNs and 43 LPNs responded to the open-ended question (total n = 819). A summary of the sample characteristics are presented in Table 1. Survey participants who responded to the open-ended question did not differ significantly from non-respondents about the type of nurse, the highest education level and having children. However, participants responding to the open-ended question differed from the non-respondents with respect to age, gender, years of nursing experience and living status.

3.2 | Qualitative results

We divided the impacts of COVID-19 into two dimensions: 1-occupational and 2-personal. In Table 2, for each of the dimensions, we have identified the corresponding themes and presented relevant quotes.

3.3 | Occupational dimension

Few participants named positive outcomes on their work during the first wave of the pandemic, but most of them expressed negative consequences. The six themes identified were: 1-impacts of infection control on work, 2-changes in daily work tasks, 3-offloading and reorganization of care, 4-deterioration of working conditions, 5-increased stress at work and 6-issues related to the profession.

3.3.1 | Impacts of infection control on work

Infection prevention and control procedures had a major impact on the work of RNs and LPNs. Some participants mentioned they have perceived an ambiguity in the communication of infection control policy and procedure. In addition to the difficulty in obtaining personal protective equipment, frequent changes in infection control requirements and conflicting information, whether from the ministry or the clinical organization, led to confusion and stress for nurses. Participants said they spent a lot of time disinfecting equipment.

TABLE 1 Sample characteristics

Variables	n^a	Mean (SD)	n (%)
Age (years)	608	44.9 (12.2)	
Experience (years of practice)	800	17.5 (11.9)	
Gender	616		
Men			36 (5.8)
Women			580 (94.2)
Type of nurse	817		
Registered nurse			774 (94.7)
Licensed practical nurse			43 (5.3)
Highest education level	620		
High school degree			1 (0.2)
Professional studies degree			27 (4.4)
College degree			133 (21.5)
Bachelor degree			459 (74.0)
Living status	615		
With a partner			429 (69.8)
Alone			140 (22.8)
Other (roommate/parents/ family)			46 (7.5)
Have children	609		
Yes			412 (67.7)
No			197 (32.3)

Note: n total = 819.

Abbreviation: SD, standard deviation.

[a]Missing data from the socio-demographic questions.

They also identified discomfort in wearing personal protective equipment such as a mask or goggles.

> Difficult to wear the mask, the glasses and/or the visor. We do not see well with the glasses and with the visor especially during the administration of drugs, because prescriptions are written in small characters. The discomfort of the mask, glasses or visor during a heat wave, and no air conditioning on the units.

3.3.2 | Changes in daily work tasks

Participants experienced significant modifications to their work due to the pandemic. For RNs and LPNs, required modifications resulted in changes in their daily tasks. For example, in some sectors, healthcare activities were suspended (e.g. clinical research, operating theatre or outpatient clinics) while other sectors experienced a substantial increase in workload (e.g. infection prevention nurse, manager) to develop and implement new procedures.

> As the head nurse (DSS) of my residence, there has been a lot of counseling to family members &, of course, to my residents.

Professional opportunities related to the assignment of new tasks were noted by one participant:

> My expertise has developed in many areas because I have been required in several sectors where I had never worked before. My social life has been very enriched as I have met new people with whom I have created strong bonds.

For some participants, the pandemic was a defining moment of change in professional status. For example, some retired nurses returned to clinical settings while other nurses retired early or left the profession.

> *I decided to return to my profession again because I love PCI* (prevention and control of infections) *and I reconnected with my profession in a different way and I have a more positive outlook after leaving the healthcare system [...].*

3.3.3 | Offloading and reorganization of care

Offloading, which consists of a reorganization and/or redistribution of patient services according to evolving care needs in the healthcare system in a COVID situation, resulted in many nurses' experience redeployment. For example, several nurses reported the requirement to work on another care unit or a different healthcare establishment. The reorganization of work due to the pandemic has also forced several nurses to work full-time, to have irregular schedules, to change their 8-h shift to a 12-h shift or even to completely change shifts.

> Very changing work shifts, almost every day: either 5 a.m. to 1 p.m., 6 a.m. to 2 p.m., 9 a.m. to 5 p.m., 10 a.m. to 6 p.m. or 12 p.m. to 8 p.m. [...] Every day, between 2 p.m. and 5 p.m., I was called to be told where I would work the next day.

The reorganization of care was a positive experience for one nurse.

> At work, I was assigned to only one floor instead of three, I had the time to offer care as before. I really enjoyed it.

3.3.4 | Deterioration of working conditions

Several people described a deterioration in their working conditions. More specifically, nurses noted an increase in working hours due to mandatory overtime. Also, the ministerial order forced some nurses, occupying a part-time position, to work full-time.

> There was a lot of frustration in my workplace from those who were part-time and became full-time

because of the ministerial order (I am full-time) so that most of the time some took sick days often to not have to work full time.

The lack of staff, the arrival of new staff who were not used to a care unit and the increase in tasks (e.g. disinfection) have contributed to the work overload. These changes have resulted in a decrease in the quality of care.

> The workforce has changed dramatically. You have less qualified people doing the job. [...] The quality of care has gone down. [...] The whole system is in chaos. The residents are not taken care of properly. Few nurses on the job for too many residents. Nothing changed during COVID. Putting a few boxes of gloves, masks and disinfectant will not change the reality of what is happening in many eldercare institutions.

3.3.5 | Increased stress at work

An increase in stress at work and the deterioration of the work environment were also reported by several people. Participants noted an escalation in conflicts between colleagues, a decrease in moments of collegiality and less teamwork. A few participants mentioned that they did not have a designated place for breaks or meals. Sometimes they had to eat alone in their car.

3.3.6 | Issues related to the profession

As it relates to a novel coronavirus disease, several participants wrote about uncertainty permeating the work of nursing given their exposure to the virus at work. An element frequently mentioned by participants was the fear of being themselves infected with COVID-19 and managing the fears of people around them.

> Constantly stressed, you worry about COVID, your family worries about you, friends don't want you around because you're a nurse, families in home care worry that you may have COVID.

This fear of the disease could also be reflected in the fear of infecting relatives or patients.

> Nightmares of contracting the virus and spreading it to my elderly parents.

Some nurses described perceptions of social discrimination. For example, some participants were denied access to a business because of their profession. Others were socially rejected or observed their children being rejected from social settings because of their profession.

People's fear of being around me because I am a nurse during COVID was double-edged. We call you "guardian angel" but we shun you like the plague.

Work/study balance was also an issue for nurses. A few participants shared that they had experienced difficulty continuing university studies for professional development while working full-time as a nurse in the healthcare system. The requirement to work while the rest of the population was required to stay home contributed to frustration among some participants.

Stress from increased work hours when everyone is in confinement and complaining about doing nothing.

In summary, several negative impacts emerged from the results of the occupational dimension. In particular, the ambiguity of infection control procedures caused confusion and increased stress for nurses. The changes brought about by the pandemic including modification to daily work tasks, offloading and reorganization of care, deterioration of working conditions, stress at work and issues related to the professional contributed to emotional and cognitive overload for some participating RNs and LPNs.

3.4 | Personal dimension

Many elements of the personal dimension were shared by participants. Although most mentioned negative aspects of the pandemic in their personal and family life, a few participants experienced the pandemic positively. The four themes identified are: 1-impacts on the family, 2-dealing with changes about leisure and personal life, 3-impacts on physical health and 4-impacts on psychological health.

3.4.1 | Impacts on the family

Participants mentioned having experienced several negative impacts of the pandemic on their family life. First, several mentioned having experienced obstacles in their family relationships such as difficult cohabitation with a member of their family or marital difficulties.

Our family life has adjusted but tensions arise from being together all the time.

Participants noted an observable increase in stress in the family unit due to the COVID-19 pandemic. For example, they noticed the psychological distress of a spouse or a child.

I have noticed the development of anxiety disorders in my 2 children.

A spouse newly working from home was mentioned as a stressor for the family, as was the loss of a spouse's job and the decline in family income. In many instances, daily life was described as having been turned upside down by the pandemic. Among participants' comments, we found examples explaining the complexity of daily family tasks. For example, it was necessary to adjust family habits for shopping (e.g. store lineups, reduced opening hours, increase in food costs), to modify their transport habits (e.g. use the car and not public transport) or to support relatives (e.g. shopping for family members in isolation or older parents).

The most frequently mentioned element concerns the difficulties of balancing work and family life. Several people expressed that they had experienced a greater mental strain as a result of public-school closures. Outcomes of these closures included the need to homeschool their children and/or new difficulty in finding childcare services so they could attend work.

It was difficult to take care of 3 children, their school activities and their online lessons.

In contrast, some participants mentioned a positive impact of the pandemic on their family life. Examples included an increase in income, the advantages for the management of family life while working from home and having more quality time with one's children and spouse.

Support for children and domestic tasks (e.g.: taking care of children when they are sick, taking them half a day so that I can do my errands, prepare emergency meals) which was usually done by my parents has been changed for support from my spouse. By working from home, he has less travel time, so he has done more household- and child-related chores. Neighbors could also watch my children when they were playing outside so that my partner and I could take care of the house, run errands, etc. It is positive in the end!

3.4.2 | Dealing with changes about leisure and personal life

For some nurses, social isolation and a lack of close physical contact with loved ones was very difficult. The isolation of RNs or LPNs from their extended family (e.g. parents or siblings) was an element that was frequently mentioned by participants. Also, some participants chose to voluntarily isolate themselves from their spouse and/or their child for a certain period to avoid transmitting the disease.

In mutual agreement, my partner, who works from home, left with my daughter and my dog to our house in the Gaspésie region and I stayed alone in Montreal.

TABLE 2 Thematic findings

Dimension	Themes (number of participants who have mentioned this element, 819 in total; %)	Quotes
Occupational	Impact of health measures on work (n = 78/819; 9.5%)	• *For me, there was the excessive hand washing that hurt, the skin that cracks and burns while washing. Constant changing of roles and the effort to keep up to date with policies and guidelines.* • *The orientation of the PCI (prevention and control of infections) has changed several times which created a lot of insecurity for the care team.* • *Lack of adequate equipment (protective glasses for some regular staff members while other staff members who occasionally came to the floor had the correct equipment). Lack of adequate product and bad information for disinfecting personal equipment (glasses, visor).*
	Change in daily work task (n = 139/819; 16.8%)	• *I retired in April 2019. Back to work for COVID-19. [...] I decided to return to my profession again because I love PCI and I reconnected with my profession in a different way and I have a more positive outlook [...]* • *I found out I was pregnant so overnight I found myself working from home full time.* • *As research coordinator, most of the projects were put on hold.* • *I had to do the nursing assistant's tasks in the hot zone at the same time as my own nursing tasks in the cold zone.* • *Tasks at work have changed and phone follow-ups have become more present.*
	Offloading and reorganization of care (n = 54/819; 6.7%)	• *I work with pediatric clients and I had to go and help in the CHSLD (residential and long-term care centers) red zone.* • *I am a nurse coordinator in mental health research and I returned to the floor, working with the elderly, so not at all in my field of expertise.* • *Emotional weight (stress increased ++++) [...] seeing your colleagues being sent everywhere in the hospital like ping-pong to meet the needs elsewhere even if we did not have a float team station ....* • *The hours and shifts have changed. I worked weekends when I wasn't doing weekends. I did a few evening shifts when I was only working until 4:00 p.m before. My schedule is often communicated to me last minute.*
	Deterioration of working conditions (n = 86/819; 10.5%)	• *Difficulties experienced with coworkers due to increased anxiety* • *Work atmosphere that has changed negatively.* • *Communication with other colleagues, especially since I did the task of PCI coach, it was difficult to explain to them that we are going to reuse the N95s, colleagues reacted badly and some were less respectful.* • *I am the manager of the team of counselors in infection prevention in a CIUSSS (integrated university health and social services centers). The number of hours of work exceeds the limits ... few moments of respite.* • *Mandatory overtime*
	Increased stress at work (n = 63/819; 7.7%)	• *Having to restrict nursing teams, having to adapt to and manage outpatient care in the context of the pandemic, supporting many nurses through mental health challenges, generalized fear and what feels like a collective trauma.* • *I was a manager in a very COVID CHSLD which was very often in the media. This made the leaders of the CISSS questioned all the managers and I left under pressure before becoming sick and especially before losing my psychological health.* • *I am a manager (coordinator of a CHSLD) and since the start of the pandemic the stress and anxiety of the staff have been palpable, so a lot of support related to the emotional state of my team (150 employees).* • *Pressure at work, no support from our superiors, no direct communication only electronically.* • *Difficulties experienced with coworkers due to increased anxiety.*
	Issues related to the profession (n = 101/819; 12.3%)	• *My children have been ostracized because of other parents' fear of my work and of me being a vector.* • *Feeling ostracized by other coworkers for working on COVID wards.* • *Stigma from friends because I am a nurse.* • *The fear of saying that we are nurses because people are afraid to be in our presence.* • *Sometimes I'm afraid to say that I work in the healthcare sector, to be denied entry to a store.* • *I experienced discrimination in businesses around my home that refused to let me in because I am a nurse.* • *Harder work because of the fear of catching the virus from my workplace.* • *I had to isolate myself at home throughout my shift at work and the time I had the disease without anyone being able to visit me for fear of contracting the virus. My relatives no longer want to go out with me because I am a healthcare worker for fear that I might carry the virus.* • *I am currently in school obtaining higher education, and that institution is now in disarray. It is uncertain how it will proceed in the coming months.* • *My studies because I am a full-time undergrad student and I have ADHD. I failed one of my exams and had several bad results.* • *I'm going to university and balancing work and school together in COVID is really not easy*

TABLE 2 Continued

Dimension	Themes (number of participants who have mentioned this element, 819 in total; %)	Quotes
Personal	Impacts on the family (n = 290/819; 35.4%)	• My partner has obsessive–compulsive disorder. The pandemic has been exceedingly difficult for him in terms of his mental health and it has had an impact on my mental health as well. • Take care of my disabled son 24 h a day without respite because school is closed, and respite is close • Children aged 5 and 7 had to be homeschooled until June 23, with total disorganization of our school and spouse working from home full-time. • Children who had to look after themselves at home when schools were closed. • Reorganization of family life due to school closures and my job. • Management of daily life, shopping, meals, household chores (only person in the house who can go out) reduced opening hours and long waiting period. • Driving to work instead of public transport. • Difficulties in romantic relationship with my husband (more tensions and fights). • Impact of my mother's death from COVID-19 (in a CHSLD). Powerlessness to not be able to care for her due to visitation restrictions until she was at the end of her life.
	Dealing with changes about leisure and personal life (n = 178/819; 21.7%)	• Living alone, without a spouse or children and being on sick leave, I have been alone a lot. Despite the phone and video conference contacts which helped keep in touch with my friends and family, the human contact and my need to see and socialize was difficult after 2 months of confinement but no depression. Just a lack of human contact. • Vacationing outside the region has been canceled. • Loneliness and isolation: working alone, shopping for groceries once a week and staying at home: very difficult and I realized that it affected my morale. I felt sadder. I was watching a movie and I had tears in my eyes, I felt sad that I couldn't see my children, to be cut off from my normal life. • My mother lives in a CHSLD and I was unable to see her for several weeks. • Difficulty finding love (single). • Impossible to take time to exercise, rest, and do other healing activities. • I live alone and the confinement and travel restrictions have greatly isolated me from my family who live farther away. I find it very difficult not to see my children and my sister.
	Impacts on physical health (n = 52/819; 6.3%)	• Physical consequences from lack of follow-up in usual clinics, chronic condition making life stressful and impacting job. • After 4 months of fighting this virus general physical and mental fatigue are the biggest change in my life. • I am much more tired due to the important lack of staff during this pandemic and all that superiors ask of us. Not to mention that we are denied all our vacations. • Great emotional and physical fatigue after my work hours and on weekends. • Physical stress - fatigue from overworking and mental exhaustion from the amount of policy and procedure updates. • Change in routine (used to getting up early, take the train, walk to work). Now get up late, come down to the kitchen to eat, go directly on the computer. Poor eating and general routine. No exercise, no socializing, no enjoyment in activities. I am more depressed and less productive.
	Impacts on psychological health (n = 95/819; 11.6%)	• Stress and anxiety due to adaptation to and the uncertainty of events. • Mental fatigue related to ongoing persistent threat of severe COVID infection for me and my family members. • I took a 3-month sick leave due to stress partly related to COVID. I was hospitalized in psychiatry for a period of 2 months for major depression. • I work in an end-of-life care center. Not allowing the whole family to accompany during the last moments was a source of great sadness [...] • Mentally difficult witnessing so many deaths

Note: The sum is greater than 819 participants; participants could provide more than one answer.

Cancellation of travel or holidays as well as the loss of leisure activities (closure of sports centres, museums, cinemas) were frequently reported as having had a significant negative impact on their personal lives.

> I had to modify my training since my martial arts school was closed for a long time and it is complicated with the new procedures. I don't travel anymore. My winter vacations were canceled, and I didn't really have a summer vacation.

3.4.3 | Impacts on physical health

Participants identified positive and negative impacts of the pandemic on their physical health. Participants reported feeling tired,

exhausted or lacking sleep. Some of the participants contracted COVID-19, whether at work or in the community. Repercussions on their health, such as fatigue, loss of smell or taste were reported.

> Contracted COVID at work, recently in ER for secondary effects on the heart due to COVID, now on meds for 3 months and a week off work.

For a few participants with health problems, experienced delays medical appointments or disease treatment negative affected their health.

> _I was gradually getting back from the SAAQ (Quebec Automobile Insurance Company) during the first 4 months of the pandemic and the ergonomic equipment to adapt my office to my new medical condition was not issued and installed during this time, which increased my physical pain._

However, on a personal level, some participants saw the pandemic as a good time to start healthy life habits.

> This break was good for me. I took advantage of this period to catch up with my domestic tasks. Eating well was easy since there was no outing (restaurant, social). We had full control of our portions! I took the opportunity to undertake a fitness program (at least two hours of exercise per day indoor and outdoor).

3.4.4 | Impacts on psychological health

Stress and anxiety were frequently mentioned in the participants' comments. Among other impacts on psychological health, some nurses wrote that they experienced psychological distress and even symptoms of post-traumatic stress disorder. Although less frequently, positive impacts were also shared by participants.

Some social debates aroused negative emotions among participating RNs and LPNs. For example, failure to follow sanitary guidelines, such as masking in public, provoked anger in one participant:

> The lack of compliance of people in the population made me angry, since such disrespectful behavior contributes to increase the workload of healthcare workers in hospitals.

The living conditions of the elderly were also the source of negative feelings.

> Disgust from seeing the way the nursing homes are and the terrible conditions for the patients and the workers.

Also, participants expressed distress over the many deaths that occurred during the first wave of the COVID-19 pandemic.

> I have witnessed several ends of life that were awful and without dignity.

Guilt, helplessness, uncertainty, insecurity, sadness, fear and inadequacy are feelings that were named in participants' responses. Despite everything, two participants shared positive elements of the pandemic.

> I experienced a lot of gratification, appreciation, sense of usefulness from my profession by practicing during the pandemic. I take away several very positive aspects from this experience. I liked being part of this solidarity movement.

> Few people on the bus, calm due to the decrease in traffic, more birds that you could hear sing, it was quiet, really in my element.

Although we identified some positive elements in the personal dimension such as increased income, increased quality time with family and improved healthy lifestyles, several negative points emerged. Among other things, the sudden upheavals caused by the pandemic in the daily life of the participants led to negative repercussions on work-family balance and thereby increased the mental burden of respondents. Isolation from extended family, thus reducing access to social support resources, could also have caused negative consequences combined with the loss of leisure time over a long period of time. Other negative personal issues included fatigue, exhaustion and lack of sleep in some in addition to the possible complications related to COVID-19. Considerable psychological impacts were also reported such as psychological distress, increased stress and anxiety.

4 | DISCUSSION

This study aimed to qualitatively explore the occupational and personal dimensions that have been impacted by the COVID-19 pandemic in Quebec's RNs and LPNs. We identified several negative and a few positive impacts of the COVID-19 pandemic in this population, affecting both occupational and personal life dimensions.

4.1 | Occupational dimension

The occupational consequences of the pandemic identified in our study were mostly negative, including impacts of infection prevention, change in daily tasks, reassignments and reorganization of care, deterioration of the working conditions, increased stress at work and issues related to the profession. Some of these themes are in line with the literature.

The discomfort related to wearing personal protective equipment and the overwhelmingly frequent changes in protocols brought up significant concerns for the quality of the care delivered and were found to negatively impact nurses in many studies (Bennett et al., 2020; Crowe et al., 2020; Galehdar et al., 2020; Goh et al., 2020; Ness et al., 2021; Nyashanu et al., 2020; Sarabia-Cobo et al., 2020). The deterioration of the working conditions was also consistently reported in the literature, due to staff shortages, longer shifts, mandatory overtime, inadequate availability of personal protective equipment, increased nurse/patient ratios and inappropriate levels of risk imposed on staff (Bennett et al., 2020; Brophy et al., 2021; Goh et al., 2020; Kackin et al., 2020; Ness et al., 2021; Nyashanu et al., 2020; Raza et al., 2020; Sarabia-Cobo et al., 2020).

The increased stress at work was reported by nurses in many studies, but for different reasons than found in our sample. Indeed, increased tension between colleagues and decreased teamwork-induced stress in the nurses of the present study. In comparison, the literature reports higher stress at work related to high mortality rates in patients, delivering bad news, concerns for patients and families, high intensity work, obligation of making ethical decisions, uncertainties about the disease and its treatment, rapid changes in patients' status, uncooperative patients and families and limited pandemic preparation (Bennett et al., 2020; Brophy et al., 2021; Crowe et al., 2020; Galehdar et al., 2020; Goh et al., 2020; Kackin et al., 2020; Lee & Lee, 2020; Ness et al., 2021; Nyashanu et al., 2020; Sun et al., 2020). The issues related to the profession causing discrimination against nurses in society were also reported in several studies, for example denial to access buses, social stigma and being treated as a virus (Galehdar et al., 2020; Kackin et al., 2020; Lee & Lee, 2020; Sarabia-Cobo et al., 2020).

The literature has recently documented many positive impacts of the pandemic on nurses' professional identity, including a strong and renewed sense of duty and pride, professional growth, feeling of gratefulness from the public and finding new meaning in their work, which we did not find in our study (Goh et al., 2020; Kackin et al., 2020; Lee & Lee, 2020; Sarabia-Cobo et al., 2020; Sun et al., 2020). This difference could be linked to the way data were collected. In our study, participants answered only one broad open-ended question which allowed us to accumulate a wide variety of answers in a large sample, while many qualitative studies focused on in-depth interviews with fewer participants, including specific questions on the positive and negative impacts of the COVID-19 pandemic. From the onset, the participants in our study tended to focus more on the negative impacts on their lives, maybe to release tension.

Two important themes identified in our study were less commonly reported in the literature: the change in daily tasks as well as reassignments and the reorganization of care. Some studies found similar results, such as situations where units would be converted into COVID-19 units and nurses having to adjust the delivery of care and some nurses being reassigned to a different unit (Kackin et al., 2020; Ness et al., 2021; Owens, 2020). Only one study reported nursing consideration of a change in career path (Bennett

et al., 2020). The demography of the affected population in addition to the governments' crisis management strategies were different from one country to another, which could explain this discrepancy. In our case, the healthcare settings in Quebec most affected by the first wave of the pandemic seem to have been long-term care, unlike other countries where acute care was affected the most (Brooks et al., 2020; Institut national d'excellence en santé et en services sociaux [INESSS], 2020; Lai et al., 2020; Mo et al., 2020). Moreover, reassignments and reorganization ensuing from the Quebec government's emergency powers had major impact on nurses. It resulted in changes to nurses' routines, tasks and workload, whether in community service centres, long-term care centres, residences for the older or hospital settings. Cancellation of vacations and holiday, high mobility of healthcare workers at the place and time needed regardless of seniority, position, shift and work schedules were frequently mentioned negative impacts by participants and may have caused more distress for RN and LPN.

4.2 | Personal dimension

As for the personal dimension, many participants' comments also described the negative consequences of the COVID-19 pandemic, with only a few positive comments, showing impacts on family, isolation and lack of physical contacts, as well as physical and psychological health.

The consequences for family emerging from our study were various, including positive aspects (increased income, benefits of working remotely and increased quality time with family) and negative aspects (marital difficulties, family conflicts and tension, decrease in income and work-family imbalance). Our results differ from the literature, where the focus is mostly on the fear of transmitting the disease to family members (Bennett et al., 2020; Brophy et al., 2021; Galehdar et al., 2020; Goh et al., 2020; Ness et al., 2021; Raza et al., 2020; Sarabia-Cobo et al., 2020). Only a few studies documented the impact of the pandemic on work-home imbalance (Crowe et al., 2020; Galehdar et al., 2020; Ness et al., 2021), and no positive impacts of the pandemic on the family were reported in the literature, to the best of our knowledge.

Our results about isolation and lack of physical contacts are in line with many studies, where fear of transmitting the disease brought nurses to self-quarantine, thus feeling extreme isolation and loneliness (Kackin et al., 2020; Lee & Lee, 2020; Ness et al., 2021; Raza et al., 2020). Concerning the physical impacts of the COVID-19 pandemic on RNs and LPNs, only one study reported fatigue (Sun et al., 2020). Moreover, our sample reported that they used the opportunity posed by social isolation to start a healthier lifestyle, contrasting with Ness et al. (2021) who found that healthcare workers experienced negative changes in their physical activity routines.

The negative consequences of pandemic outbreaks on healthcare workers' psychological health have been reported quantitatively and qualitatively in many studies. Indeed, two recent literature reviews reported psychological health disturbances, with a high prevalence

of symptoms associated with post-traumatic stress disorder, depression, insomnia and anxiety (Pappa et al., 2020; Preti et al., 2020). Females and nurses appear to have higher rates of affective symptoms compared with male and medical staff respectively, which is in line with the present results since our sample was mostly composed of female RNs and LPNs (Pappa et al., 2020). Moreover, negative emotions such as fear, distress, exhaustion, anxiety, depression, powerlessness, moral distress, and trauma-related symptoms were reported in several other qualitative studies (Bennett et al., 2020; Crowe et al., 2020; Galehdar et al., 2020; Kackin et al., 2020; Lee & Lee, 2020; Ness et al., 2021; Nyashanu et al., 2020; Owens, 2020; Raza et al., 2020; Sarabia-Cobo et al., 2020; Sun et al., 2020).

In the light of these results, there is no doubt that the COVID-19 pandemic negatively impacted RNs and LPNs' psychological health as well as occupational and personal aspects of their lives. Our provincial sample had very similar experiences. However, these experiences somewhat contrast with what has been reported in the literature worldwide. As for the occupational dimension, we hypothesized that differences between our results and the literature were probably due to the particularities of nursing work reassignments and care reorganization in Quebec during the first wave.

4.3 | Potentially modifiable factors

The need for specific psychological support and resource management for healthcare workers during the COVID-19 pandemic has been previously recommended in the literature (Kackin et al., 2020; Ness et al., 2021; Raza et al., 2020).

Psychological support could come from various sources, such as family, friends, coworkers, patients, organizational leaders and the public (Goh et al., 2020; Lee & Lee, 2020). Support from family and friends appears to have been a protective factor for healthcare professionals' psychological health (Goh et al., 2020; Xiao et al., 2020). Focusing on the reduction of psychological consequences for healthcare professionals (Chegini et al., 2019; Moloney et al., 2018) and reducing stress at work (Chegini et al., 2019) can help limit turnover intentions.

Organizational support (Fiksenbaum et al., 2006; Goh et al., 2020; Tam et al., 2004) and mutual support between work colleagues (Goh et al., 2020; Grace et al., 2005; Sun et al., 2020) appears to decrease distress among healthcare professionals. Managers should be trained in prevention and symptom screening among workers (Institut national d'excellence en santé et services sociaux [INESSS], 2020). Research suggests improving working conditions (e.g. increasing the number of nurses, adding equipment, adjusting working hours) (Kackin et al., 2020) and training opportunities on coping strategies and resilience are beneficial organizational supports (Preti et al., 2020).

Future studies should focus on developing support interventions tailored specifically for RNs and LPNs in the context of the COVID-19 pandemic. Based on the results of our study, nurses were confronted with a greater amount of work, a significant change in

daily tasks at work, offloading and a reorganization of care. For Galanis et al. (2021), low readiness to cope with pandemic, working in a high-risk environment, increased workload were associated with a higher risk of burnout symptoms. Thus, if we can modify some aspects of the working environment, it could have a potential beneficial impact on the mental healthcare of the workers.

High tension between peers and decreased teamwork were reported in the present study. These elements are congruent with other recent studies among nurses' in COVID-19 working context (Galanis et al., 2021; Ke et al., 2021). This contributes to putting employees in a vulnerable situation in terms of their psychological health. Fostering team collaboration, preventing employees from being moved to another unit/department, maintaining a welcoming work environment, valuing the work of staff, speaking frankly and clearly about the situation, being proactive with regard to staff concerns and preoccupations, promoting mentoring between novices and experts are examples of concrete actions that employers could take to improve social support at work (Institut national d'excellence en santé et services sociaux [INESSS], 2020) and, therefore, limit the negative impact on workers' psychological health.

As previously mentioned, some participating nurses mentioned having perceived an ambiguity in infection prevention and control requirements and frequent changes in these instructions. For Lake et al. (2021), effective leadership communication is significantly associated with better mental health for nurses in the same context. Thus, it supported the deployment of measures to encourage clear communications between the workers and their organizational leaders.

In the light of these results, we identified avenues for future research. First, semi-structured interviews are recommended for further exploration and description of nurses' experiences and recommendations to improve their work lives in a pandemic context. Second, it would be interesting to consider longitudinal research about nurses' commitment to work in healthcare as well as the long-term consequences of occupational and personal nurses' lives. Third, impacts on RNs and LPNs' occupational and personal dimensions should be explored following the implementation of support interventions tailored their needs.

4.4 | Strengths and limitations

The descriptive interpretive approach allowed us to generate new knowledge relevant for professional practice (Thorne, 2016). We conducted thematic analysis based on a rigorous process to ensure the results' credibility and trustworthiness (Braun & Clarke, 2006). Our research is composed of multiple profiles, which reduces interpretation bias. Many participants answered the open-ended question and specified more than one aspect of their life that was impacted by the COVID-19 pandemic. It allowed us to find redundancy in many of the statements provided by the participants, showing a tendency towards data saturation for the themes.

However, some limitations have to be mentioned. It was impossible for us to further explore participants' open-ended responses as our analysis was carried out retrospectively. Qualitative interviews with participants would have brought more richness to the data. Despite the large sample of respondents, it is important to point out that the number of LPNs respondents is small. As the method of recruitment for LPNs was through an advertisement in the OIIAQ's monthly newsletter, it was not possible to send out reminder messages. In addition, it is impossible to calculate a response rate, since we do not know how many people viewed the newsletter and saw our invitation. There were many missing data in the demographic section of the survey (both for RNs and LPNs), leading to a less accurate description of the sample. The limited numbers of men and novice nurses reduce the transferability of the results.

5 | CONCLUSION

Qualitative exploration of the occupational and personal life dimensions that have been impacted by the COVID-19 pandemic in RNs and LPNs in the province of Quebec allowed us to identify several negative and a few positive consequences of the COVID-19 pandemic for this population. Some of the emerging themes are modifiable and should be targeted to create a support intervention specifically tailored for RNs and LPNs during this crisis. A better understanding of psychological health and its determinants as well as the identification of the support needs reported by RNs and LPNs will allow nurses to be vigilant of their own health as well as that of their colleagues. This same vigilance and the necessary benevolence can also influence managers who are directly involved in the organization of services and their support for teams.

CONFLICT OF INTEREST
The authors declare that they have no conflict of interest.

AUTHOR CONTRIBUTIONS
SL, NBD, ÉG, MM, IL, DMB: Made substantial contributions to conception and design, or acquisition of data or analysis and interpretation of data; SL, NBD, ÉG, MM, IL, DMB: Involved in drafting the manuscript or revising it critically for important intellectual content; SL, NBD, ÉG, MM, IL, DMB: Given final approval of the version to be published. Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content; SL, NBD, ÉG, MM, IL, DMB: Agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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DATA AVAILABILITY STATEMENT
The data that support the findings of this study are available from the corresponding author upon reasonable request.

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SUPPORTING INFORMATION

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