

**Occupational Stressors and Coping Mechanisms among Obstetrical Nursing Staff  
throughout the COVID-19 Pandemic**

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# COVID-19 OCCUPATIONAL STRESSORS AMONG OBSTETRICAL NURSES

## Abstract

**Background:** As a result of heightened occupational stress throughout the COVID-19 pandemic, nurses in hospitals are experiencing high rates of depression, anxiety, and burnout. However, nurses in obstetrical departments have had unique challenges and have experienced specific sources of stress that remain unclear.

**Methods:** Semi-structured interviews were conducted with twenty obstetrical nurses that worked at an Ontario tertiary care centre during the COVID-19 pandemic. Participants shared their experiences of working during the pandemic, focusing on job stressors, personal resources, and desires for job resources. Interviews were audio-recorded, transcribed verbatim and coded using NVivo. Data was analyzed using a theoretical thematic approach based on the Job Demands-Resources (JD-R) model.

**Results:** Key job stressors identified included having an increased workload, fear of COVID-19 transmission, providing proper patient care, and overwhelming physical demands. Moreover, participants expressed they felt undervalued, inadequately supported, and burned-out during the pandemic. The most common personal resources used to cope with additional stress were relying on family members, friends, and colleagues for support, in addition to utilizing personal hobbies to decompress. Lastly, participants were able to provide suggestions on how to improve job resources, focusing on improving mental and physical support, communication, and retention.

**Conclusion:** This study provides an in-depth understanding of the COVID-19 working conditions of Ontarian obstetrical nurses, while highlighting that they were provided with inadequate levels of job resources to manage increased job demands. Findings from this study can help inform hospital management on how they can better support and meet the needs of those working in maternal care during major disease outbreaks.

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## **Chapter 1: Introduction**

### **1.1. Background and Context**

On March 11<sup>th</sup>, 2020, the novel coronavirus (COVID-19) outbreak was officially declared as a pandemic by the World Health Organization (WHO) (WHO, 2020). The virus' fast transmission pattern through both asymptomatic and pre-symptomatic patients has caused unprecedented health impacts, overwhelming healthcare systems worldwide (Deng & Naslund, 2020). Hospitals, including labour and delivery departments, needed to quickly adjust how they triage, evaluate, and care for patients in order to reduce the spread of the virus. Specific changes within prenatal, labour and postpartum care have included reducing in-person interactions between the patient and care team, exclusion of family and friends from both inpatient and outpatient care, and patients oftentimes needing to undergo universal COVID-19 testing (Capanna et al., 2020). The COVID-19 pandemic has had a profound impact on pregnant individuals and their perinatal experiences. Moreover, it drastically affected the roles, working environment and overall well-being of health professionals working within the maternity care sector (Altman et al., 2021).

Throughout the COVID-19 pandemic, frontline healthcare workers (HCW) have encountered a greater risk of virus exposure, increased workload, fear of infecting their family and friends, and social discrimination (Pfefferbaum & North, 2020). However, those working in obstetrical departments have had additional and unique challenges, such as the management of COVID-19 infection throughout pregnancy with limited evidence-based protocols and the unknown risks of the virus on fetal development and vertical transmission (Rasmussen et al., 2020; Shah et al., 2020). Furthermore, labour and delivery workers are considered a high-risk group for COVID-19 exposure due to close proximity to aerosolization and blood products

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during the second stage of labour (Palatnik & McIntosh, 2020). Specifically, studies show that nursing personnel are at the greatest risk due to the considerable amount of time they spend providing one-on-one care to patients (Jackson et al., 2020; Kambhampati et al., 2020). Care services during pregnancy and birth support not only the physical well-being of patients but also the growth and development from individual to parent (Hill et al., 2019). Given that obstetrical nurses provide the bulk of this support, they are often reported by patients as being the most influential relationship during their perinatal experience (Lunda et al., 2018). Therefore, obstetrical nurses are pivotal to the perinatal care team given their role of providing emotional, physical, and informational support to pregnant individuals. However, a study conducted by the Obstetrics and Maternal Newborn Investigations (OMNI) Research Group exploring the psychological impact of COVID-19 on labour and delivery workers in Ontario found that obstetrical nurses reported significant increases in job stress as well as a reduction in job satisfaction (Ross et al., 2022). Job stress, also known as occupational stress, refers to "a situation wherein job-related factors interact with the worker to change their psychological and/or physiological condition" (Newman & Beehr, 1979, p.1). Yet, the OMNI study did not delve into the specific factors which were contributing to the increase in job stress among participants. Thus, the job stressors that obstetrical nurses faced during the COVID-19 pandemic remain unclear.

Studies have shown that job stress is a primary risk factor for those experiencing severe psychological distress (Salvagioni et al., 2017; Weinberg & Creed, 2000), which is a "state of emotional suffering characterised by symptoms of depression, anxiety and burnout" (Arvidsdotter et al., 2016, p.687). Aside from its impact on personal health, psychological distress among HCW has also been associated with decreased quality of care and patient

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satisfaction (Welp et al., 2015). Furthermore, it can lead to increased rates of staff turnover, which results in greater costs incurred by the healthcare system (Jones, 2008). However, a recent systematic review revealed a lack of evidence from studies, particularly qualitative, conducted during or after disease outbreaks that can help inform healthcare organizations about how they can better support and promote well-being among their staff (Pollock et al., 2020).

### **1.2. Problem Statement**

Due to heightened occupational stress during infectious disease outbreaks, such as the COVID-19 pandemic, obstetrical nurses are at an increased risk of experiencing psychological distress. They hold a vital role in the maternal care sector and need to be offered the necessary resources and adequate support to cope with increased job stress. However, the specific factors and circumstances surrounding job stress among Ontarian obstetrical nurses, which could provide insight into their specific needs, remain unclear. Moreover, there is limited data on the interventions that healthcare organizations can provide to HCW during major disease outbreaks, despite the rising global concern over their mental and physical well-being during these times.

### **1.3. Research Objectives**

The main goal of this thesis is to gain insight into how healthcare organizations can better support and meet the needs of obstetrical nurses during disease outbreaks by understanding the perspectives and experiences of labour and delivery nurses who have worked during the COVID-19 pandemic. More specifically, this thesis aims to answer the following research questions:

1. What are the specific occupational stressors obstetrical nurses faced while working throughout COVID-19 and how did they cope with this stress?
2. From the nurses' perspective, what additional support mechanisms could the hospital have offered to HCW throughout the COVID-19 pandemic?

## Chapter 2: Literature Review

### 2.1. Key Concepts and Studies

#### 2.1.1. Impact of COVID-19 on healthcare workers

The COVID-19 pandemic has had a significant negative impact on the physical and mental well-being of HCW. A meta-analysis examining psychological distress experienced during COVID-19 among HCW in Asia, Europe, South America, and North America found the pooled prevalence of anxiety, depression, stress, post-traumatic stress syndrome, insomnia, and burnout to be 34.4%, 31.8%, 40.3%, 11.4%, 27.8%, and 37.4%, respectively (Batra et al., 2020). However, various studies show rates are often highest among nurses and those with direct patient contact (Santarone et al., 2020; Tomlin et al., 2020). An online survey of 315 HCW from the United States found that nurses experienced greater emotional and physical exhaustion in addition to increased fear in relation to COVID-19 compared to physicians and those in other healthcare roles (Rose et al., 2021). Nurses have experienced extensive stress throughout the pandemic, and consequently, many have reached their limits. A survey involving over 5000 nurses conducted by the Registered Nurses' Association of Ontario (RNAO) found that 69% of nurses plan to leave their current positions, with 42% of those wanting to leave the profession altogether (RNAO, 2022). According to Statistics Canada, job vacancies for registered and psychiatric nurses rose by 85.8%, the largest increase of all occupations surveyed over the last two years (Statistics Canada, 2021). Losing so many nurses, including those from within the maternity care sector, can have long-lasting and detrimental effects on people's health and the Canadian healthcare system. Collectively, these alarming statistics point to the situation surrounding Ontario's nursing crisis and highlight the need for hospitals to improve working

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conditions for nurses that will be employed during future waves of the ongoing COVID-19 pandemic and other future major disease outbreaks.

### **2.1.2. The Job Demands - Resources model**

The Job Demands-Resources (JD-R) model, developed by Demerouti et al. (2001), can be applied to understand how the COVID-19 work environment in hospitals has influenced HCW' well-being and performance. The JD-R model relies on the assumption that every occupation has its own risk factors associated with occupational stress and these factors can be classified into two categories, job demands and job resources (Bakker & Demerouti, 2007). Job demands, which can be stated as job stressors when extreme, refer to "physical, social, or organizational aspects of the job that require sustained physical or mental effort and are therefore associated with certain physiological and psychological costs" (Demerouti et al., 2001, p.501). For example, this can include increased workload, physical demands, time pressures, or interacting with emotionally demanding patients. Whereas job resources refer to:

Physical, psychological, social, or organizational aspects of the job that may do any of the following: (a) be functional in achieving work goals; (b) reduce job demands at the associated physiological and psychological costs; (c) stimulate personal growth and development. (Demerouti et al., 2001, p.501)

Examples of job resources include performance feedback, opportunities for growth, and autonomy. However, it was recently found that personal resources, such as optimism and self-efficacy, can also help buffer and reduce the psychological costs associated with increased job demands (Xanthopoulou et al., 2007). Personal resources are aspects of the self, often linked to resilience, and refer to an individual's sense of their ability to control and impact their environment. According to Epstein & Krasner (2013) resilience can be defined as "the capacity

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to respond to stress in a healthy way such that goals are achieved at minimal psychological and physical cost" (p.301). Resilience is critical in helping nurses positively adapt to occupational stressors, avoid psychological distress and continue providing safe, high-quality patient care (Cooper et al., 2020).

The primary premise of the JD-R model is that extreme job demands exhaust employees' mental and physical needs and if mixed with a lack of job resources can lead to a state of exhaustion and eventually result in health problems. Moreover, the interaction between job demands and resources can indirectly impact organizational outcomes. A secondary premise of the JD-R model explains the effect that job demands and job resources have on strain and motivation. It is assumed that job resources have motivational potential and lead to high work engagement and commitment. Whereas overwhelming job demands can strain individuals resulting in job-related anxieties, health complaints, and decreased job performance.

### **2.1.3. Worksite stress management**

Given the negative psychological impact COVID-19 has had on HCW, hospitals can use stress management interventions (SMI) to help provide adequate job resources which will offset the strain and lack of well-being among their staff. SMI are defined as programs or activities initiated by an organization that focus "on reducing the presence of work-related stressors or on assisting individuals to minimize the negative outcomes of exposure to these stressors" (Ivancevich et al., 1990, p.252). According to Ivancevich et al.'s (1990) framework for worksite stress management, interventions can focus on the: (a) individual, (b) organization, or (c) a combination of the individual and organization. Individual interventions enhance worker coping strategies aiming to change their physiological, emotional, or behavioural reactions to stressors and can include the promotion of various cognitive-behavioural exercises and relaxation

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practices (Giga et al., 2018). In contrast, organizational interventions refer to efforts initiated by the management team intended to reduce the sources of stress and can include changes in resources, work tasks, working methods or working environment (Ivancevich & Matteson, 1987). However, there is evidence that individual interventions are only temporary and do not have long-lasting effects (Ganster et al., 1982). Additionally, organizational interventions have the ability to help a greater number of individuals simultaneously (Brief & George, 2020).

Ivancevich et al.'s (1990) framework for worksite stress management also shows that both individual and organizational interventions can be grouped into 3 levels: primary, secondary, and tertiary. Primary level interventions aim to reduce the intensity and number of job stressors by focusing on redesigning tasks and the work environment. For example, offering flexible work hours or reducing workload. Secondary level interventions help individuals modify their perception of potentially stressful situations by improving their coping strategies. For example, this can include offering cognitive behavioural therapy or training sessions to improve coping skills. Tertiary level interventions seek to rehabilitate those already suffering from psychological distress as a direct result of job demands. For example, this can include employee assistance programs or time-off. Primary interventions are often considered the most effective, followed by secondary, and lastly tertiary (LaMontagne et al., 2007).

Organizational SMI commonly used within the healthcare sector include reduced work hours, increased participation in decision making, peer support groups, leadership development, team building, and improved communication (Ruotsalainen et al., 2015). Among nurses, organizational support has been found to help promote a positive work attitude, make ethical decisions, increase their commitment, and reduce turnover rates (Khrais et al., 2018). Additionally, a positive link has been found between increased organizational support and

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resilience, which provides nurses with the ability to cope with their work environment, and maintain healthy and stable psychological functioning (Al-Omar et al., 2019; Labrague & Santos, 2020). This link stems from Hobfoll's (2002) conservation of resources theory, which is also closely associated with the JD-R model and implies that job resources, when readily available, can accumulate and lead to positive outcomes.

In summary, greater organizational support, particularly during times of increased job stress such as major disease outbreaks, can serve as a protective factor against psychological distress that can occur among HCW. However, there is limited literature on the interventions used by healthcare organizations during times of major disease outbreaks. To develop these targeted interventions, organizations must first understand the factors contributing to job stress among their staff during these times (Gray et al., 2019).

### **2.1.4. COVID-19 occupational stressors**

According to the person-environment fit model, understanding sources of occupational stress is done by investigating an individual's subjective view of their work environment (Furnham & Schaeffer, 1984). A survey completed by 126 nurses in Alabama investigating COVID-19 stressors found that 71% of participants were concerned about increased workload from taking care of infected individuals, 82% worried about infecting family and friends, and 77% were concerned about the lack of specific treatment for COVID-19 (Ali et al., 2020). Another survey completed by 657 HCW in New York identified uncertainty about colleagues' COVID-19 status, lack of control, and maintaining social distance from family as highly distressing factors (Shechter et al., 2020). A variety of other studies were conducted investigating COVID-19 job demands and stressors among HCW; however, the majority were also done through surveys, of which development was primarily influenced by stressors identified in

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previous disease outbreaks (e.g. severe acute respiratory syndrome pandemic). Therefore, for unique COVID-19 occupational stressors to be identified, qualitative studies that utilize open-ended questions should be employed as they allow respondents to provide more options and opinions, creating a more diverse data set than with forced-choice survey measures (Allen, 2017).

Literature investigating COVID-19 occupational stressors among maternity staff using qualitative methods is limited. A study using a combination of focus groups and interviews was done focusing on the experiences of nurses working within maternity care in 5 South Korean cities (Kang et al., 2021). The study found that nurses were afraid of being infected and transmitting the virus to pregnant individuals, newborns, and their family members. The nurses also discussed various additional work tasks caused by the pandemic, such as conducting pre-admission COVID-19 testing, sharing COVID-19 related information with perinatal individuals, and limiting visitors' access to the maternal care wards. Another study interviewed 15 patient participants and 14 perinatal nurse participants from the United States to determine how COVID-19 impacted the experiences of pregnancy and birth (Altman et al., 2021). The study reported nurses felt their ability to provide care was impacted by inconsistent hospital policies. Furthermore, nurses reported they felt they were not supported by the hospital and that they were sacrificing themselves for their patients due to the risk of exposure. The nurses also reported that they needed to create their own personal workarounds to protect themselves due to an ineffective hospital response. Lastly, a survey sent to 1,276 labour and delivery nurses investigating factors associated with low-risk caesarean birth in the United States included one additional open-ended question asking how their roles have changed as a result of the COVID-19 pandemic (George et al., 2021). Of the 1,276 nurses who received the study, 757 responded to the open-ended

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question. It was found that nearly half of the respondents reported changes in their roles and responsibilities, such as having an increased workload due to more work tasks and limited staffing. Additionally, they noted that such changes had a negative effect on patient care. To the best of my knowledge, there are currently no qualitative studies that have been conducted investigating the impact of working during the COVID-19 pandemic among Ontarian labour and delivery nurses.

### **2.2. Gaps in Existing Knowledge**

There has been a clear link established between COVID-19 and its negative impact on the physical and mental well-being of HCW. Thus, hospitals need to ensure they are offering adequate job resources to better support those working during major disease outbreaks to reduce the strain on their well-being. Yet, studies investigating which interventions hospitals should be offering during these times are limited. To better understand which interventions would be beneficial for obstetrical nurses during disease outbreaks, the sources of job stress must first be understood. However, by reviewing the literature, most studies investigating COVID-19 occupational stressors have been done primarily using quantitative research methodology, limiting the participants' responses. Furthermore, there is a lack of studies investigating COVID-19 occupational stressors among obstetrical nurses within the Canadian context.

## Chapter 3: Methods

### 3.1. Research Setting and Context

The study took place in Ottawa, Ontario, the fourth largest city in Canada, with a census metropolitan population of 1.4 million (Statistics Canada, 2022). It was conducted at The Ottawa Hospital (TOH) and done in partnership with The OMNI Research Group. TOH is a multi-site tertiary-care facility with two obstetrical wards across the city, located at the Civic and General campuses. In 2021, TOH delivered a total of 6,489 babies (The Ottawa Hospital, 2022). According to the 2021-2022 Annual Report, TOH has 12,430 employees, of which 4,687 positions are held by nurses (The Ottawa Hospital, 2022). As of August 25<sup>th</sup>, 2022, the cumulative number of confirmed COVID-19 cases in Ottawa is 80,677, with a total of 2,857 individuals needing hospitalization throughout the entirety of the pandemic (Ottawa Public Health, 2022). This is, and consistently has been, the 4<sup>th</sup> highest cumulative case count of all Public Health Units in Ontario, following Toronto, Peel, and York (Public Health Ontario, 2022).

TOH was specifically selected as this study was an extension of OMNI's Psychological Impacts study, which surveyed labour and delivery workers from both the Civic and General campuses (Ross et al., 2022). OMNI's survey asked about the psychological impacts of working throughout COVID-19, with main measures being job satisfaction, job stress, and coping behaviours. The survey also asked about the impact of assisting with a universal COVID-19 screening study of pregnant individuals. During the summer of 2021, I had the opportunity to work with The OMNI Research Group as an intern student and thus was able to review the study's preliminary results. I was particularly interested in the high levels of job stress and job dissatisfaction among the nursing staff and was given the opportunity to pursue a study investigating the specific stressors among this population.

## **3.2. Research Design**

The study was conducted using a qualitative approach, with data collection occurring through semi-structured interviews involving obstetrical nursing staff. The study relied on a pragmatic research philosophy as it focused primarily on experiences as opposed to the nature of reality and sought practical insights to inform actions (Patton, 2015a). This design was suitable as it allowed participants to share their individual perspectives on what occupational factors they believed to have been most stressful throughout the pandemic. This was particularly important as COVID-19 was a unique circumstance never experienced before, and thus, we could not have assumed stressors to be identical to those identified in previous major disease outbreaks. Overall, the design offered a holistic view of the research phenomenon through in-depth data collection and exploration of the participants' unique experiences and perspectives. Furthermore, qualitative methods have proven to be essential for improving the management, planning, and provision of health services (Bourgeault et al., 2010).

## **3.3. Recruitment**

The study population included nurses from the Department of Obstetrics, Gynecology, and Newborn Care at TOH. Participants were required to have worked for a minimum of six months prior to the COVID-19 pandemic and a minimum of two months during COVID-19 (start date of the pandemic being March 11<sup>th</sup>, 2020). Language requirements included the ability to speak, write, and read in English. These criteria were required to ensure that the gathered data captured the experiences and perspectives of obstetrical nursing staff and were specific to COVID-19 occupational stressors. Recruitment occurred through the help of nurse department managers. A recruitment email, [Appendix A](#), was sent to the head nurse of each campus, who then forwarded the information to all department members. The email included contact

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information for those who had any questions regarding the study or were interested in participating.

Based on recent studies that used qualitative approaches to investigate the impact of COVID-19 among HCW, in addition to the study timeline, the estimated number of participants was between 15 and 20 individuals (Alizadeh et al., 2020; Kackin et al., 2020; Leo et al., 2021). However, to ensure that a sufficient sample size was in fact achieved, I verified that code saturation was met (Hennink et al., 2016). This occurred at interview number 16, given that no new codes were developed when analyzing interviews 17,18,19, and 20.

### **3.4. Data Collection**

I conducted data collection from January to June in 2022, using semi-structured interviews in English over a video-conferencing platform. Conducting the interviews remotely reduced the threat of COVID-19 exposure for both parties involved and offered more flexibility in scheduling. Furthermore, online data collection had been proven to help create a non-threatening and comfortable environment for the participants (Creswell & Poth, 2017). An interview guide, [Appendix B](#), was used to ensure the same questions and relevant topics were pursued with each interviewee (Patton, 2015b). Additionally, the guide helped manage the amount of time required for each interview, as it was designed to last no longer than 45 minutes given the participants' busy schedules.

Interview questions were open-ended and non-leading, reducing the possibility of introducing interviewer bias and allowing participants to express the opinions they believed to be most important (Patton, 2015b). Aside from general demographic questions, participants were asked about their experiences and perceived stressors of working throughout COVID-19. Furthermore, they were asked about what coping strategies they used to mitigate the additional

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job stress experienced during the pandemic and what resources they wished were provided by the hospital. Probes were designed with OMNI's preliminary study results in mind and used to increase the richness and depth of responses. For example, knowing that most participants reported increased physical activity as a coping mechanism, I questioned what activities they specifically used and how they helped. The interviews were audio recorded, transcribed verbatim, and then anonymized. Moreover, following each interview I created a Contact Summary Form (Miles et al., 2014, p.124) that summarized key takeaways and suggestive points on how I thought future interviews could be improved.

### **3.5. Data Analysis**

Theoretical thematic analysis was used to identify, organize, describe, and report themes from the data (Braun & Clarke, 2006). The JD-R model was used to develop the initial coding framework which helped group data into 3 out of the 4 main themes found in the study. The model helped with the formation of main themes surrounding job stressors, personal resources, and constructive feedback surrounding job resources. An inductive approach was then used to capture any themes not identified by the model. Initial codes, which consisted primarily of descriptive and in-vivo codes, were applied to help condense the data into analyzable units. For example, the in-vivo code "working short" was used as it captures the concept of working with not enough staff and was the terminology most often used by participants. A code list, which included code descriptions and quote examples, was used to help reference all codes developed during the analysis process and was modified throughout. Once the initial coding process was complete, merging and sorting the various codes was undertaken to condense units into more abstract themes. For example, "helping with COVID-19 research", "enforcing COVID-19 policies", and "increased patient support" all contributed to the nurses' increasing workload, and

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therefore were grouped under this theme. Themes and subthemes were then reviewed using an iterative approach moving between the transcripts and various coding levels to ensure they were supported by enough data and not overly diverse (Hennink et al., 2020). This resulted in certain themes needing to be collapsed (merged two themes into one) while others needed to be expanded (one theme became two). A thematic map, [Figure 1](#), was created to help with this process as it allows for the relationship between codes and themes to be easily visualized (Braun & Clarke, 2006). Additionally, NVivo qualitative data analysis software, released in March 2020, was used throughout analysis to aid in data management and quote retrieval (QSR International Pty Ltd., 2020). Once the refinement of data was complete, themes were defined and quotes were collated for each given section.

### **3.6. Trustworthiness of Findings**

To help ensure the quality of findings, I employed the following strategies: (1) checked for researcher effect, (2) got feedback from participants, (3) checked the meaning of outliers, and (4) sought supervisor review of my analysis and findings. Checking for researcher effect focused on reducing any influence my personal views (or existing knowledge about OMNI's survey results) could have had on data interpretation. This was done through the process of bracketing, which involved me noting preconceptions about the topic and remaining aware of these assumptions throughout the data collection and analysis processes (Lincoln & Guba, 1985). To receive feedback from participants, each nurse who participated in the study was sent a copy of the thematic map, results section, and a portion of the discussion. This allowed participants to review the data, provide feedback, and verify that the findings have captured their experiences (Miles et al., 2014, p.309). Feedback from member checks was then incorporated in the findings. Checking the meaning of possible outliers helped strengthen findings by offering unique

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explanations of the study phenomena (Miles et al., 2014, p.308). This was done by scanning for atypical COVID-19 experiences mentioned by participants and verifying if they were expressed by others. Lastly, my thesis supervisors (SY and SC) provided me with guidance during both the data collection and analysis processes. Moreover, they reviewed extensive portions of the coded data to provide feedback on the analysis which I had conducted.

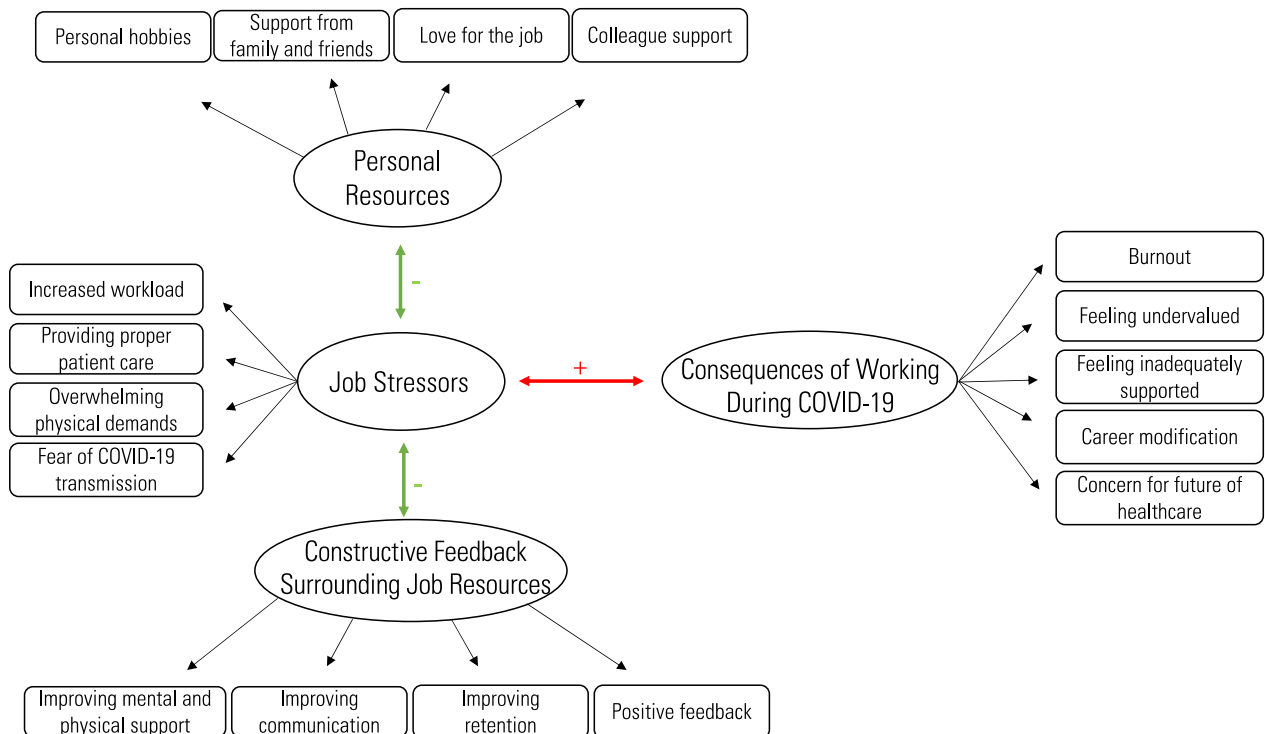
### **3.7. Ethical Considerations**

As an extension of an already approved OMNI study conducted at TOH, an amendment form for this research project was filed with the Ottawa Health Science Network Research Ethics Board (#20200640-01H) and approval was obtained on December 8<sup>th</sup>, 2021. An application for an administrative review was then submitted to the University of Ottawa Research Ethics Board (#H-12-21-7533) and approval was obtained on January 6<sup>th</sup>, 2022. The study was conducted in accordance with the Tri-Council Policy Statement guidelines. Once potential participants expressed interest in the study, they were sent a study information sheet, [Appendix C](#), which disclosed the study's purpose, risks, and benefits. Using a verbal consent script, [Appendix D](#), participants were able to provide consent verbally prior to starting the interview. This gave the opportunity for participants to raise any questions or concerns they may have had. It was made clear that participation was voluntary and that participants had an option to withdraw or stop the interview at any given point. Participants were compensated with a \$20 gift card, delivered electronically, to a local coffee shop as an appreciation token for their time.

**Chapter 4: Results**

A total of 20 perinatal nurses were interviewed in this study. The nurses' years of experience working in the field of labour and delivery ranged from 3-23 years. Additionally, each participant had experience working for a minimum of six months prior to the COVID-19 pandemic and a minimum of two months during the COVID-19 pandemic. The average interview length was approximately 40 minutes, with the shortest interview lasting 20 minutes and the longest lasting 64 minutes. Theoretical and inductive thematic analysis revealed 17 subthemes that I grouped into the following 4 main themes: (1) job stressors, (2) consequences of working during COVID-19, (3) personal resources, and (4) constructive feedback surrounding job resources. [Figure 1](#) shows the thematic map, which can also be viewed in a tabular format under [Appendix E](#). An analysis of each theme and subtheme is provided below.

**Figure 1. Thematic Map**



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### **4.1. Job Stressors**

This theme refers to overwhelming job demands (i.e., stressors) which arose as a direct result of the COVID-19 pandemic. There were 4 main subcategories of stressors consistently mentioned by participants: increased workload, fear of COVID-19 transmission, providing proper patient care, and overwhelming physical demands.

#### **4.1.1. Increased workload**

The participants reported a heavier workload during the pandemic due to a greater number of tasks, higher patient acuity, and having to work short. Workload became a major stressor as nurses could not physically keep up with the demands of the job. One of the most time-consuming tasks reported by the participants brought on by the pandemic was having to constantly enforce and explain COVID-19 policies to patients. However, participants noted they struggled to enforce certain policies more than others, such as having to tell a mother she will have to deliver alone: "Having to tell a patient that she's gonna have to have her baby by herself, that is devastating" (P2). Additionally, sending home a mother's support person only further increased nurses' workload as the patient now relied on them as their sole support: "When they weren't allowed visitors, your role really increased because you're no longer just the nurse, you're also their primary support person" (P16). Other reported tasks that arose during the pandemic were assisting with COVID-19 research, trying to stay up to date on all the changing protocols and procedures, cleaning rooms after COVID-19 patients, and finding workarounds due to the supply chain issues that caused medication and equipment shortages.

Participants noticed patient acuity increased during the pandemic, which resulted in nurses having to allocate more time in monitoring their patients, thus further increasing their

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workload. Moreover, having suspect-COVID or COVID-positive patients complicated the nurse's interaction with the patient and how they delivered care:

So many patients being on contact precautions, that's a lot of extra burden on a nurse, and organization wise - what you need to go into the room, and you're always having to think about everything you'll need and if the supplies are there. (P20)

“Working short”, known as having to work with less staff than required for a scheduled shift, was reported by participants as being a constant occurrence and stressor during the pandemic. Participants explained this was due largely to the fact that many nurses were choosing to leave the profession or hospital setting. Additionally, many nurses needed to take time off if they themselves contracted COVID-19 or had a close family member who did. Working short naturally increased a nurse's workload as they needed to take on a greater number of patients per shift than normally allocated to them. Moreover, senior nurses reported they frequently had to take on a heavier workload and a greater number of high-risk patients due to the lack of experience on the unit caused by the high staff turnover:

We don't have the experience anymore and those people [with less experience], not that it's their fault, but they don't have the ability to take high-risk patients, do triage, and work in the OR - so a lot of the stress does fall on the senior staff. (P17)

Consequently, senior nurses also reported they often needed to provide an increased amount of support to junior nurses who frequently got assigned tasks for which they had not yet acquired the necessary skills.

### **4.1.2. Fear of COVID-19 transmission**

Participants identified the fear of picking up the COVID-19 virus at work and transmitting it to family, friends, and colleagues as a major stressor. This stressor was most

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prominent at the start of the pandemic when there was little information about transmission patterns and the illness itself. Consequently, participants reported they needed to develop specific routines when coming home in the hopes of reducing transmission:

I come home and strip in the garage and my husband gives me a gown, the clothes are left in the garage, I go up take a shower before I even do anything in the house because it was scary. It was really scary. I was scared what I would bring home to my family. (P1)

Furthermore, participants noted they decreased their interactions with friends and extended family, particularly elderly parents, to reduce any risk of transmission. When asked about workplace self-isolation, participants reported they did not agree with the concept of coming into work while awaiting COVID-19 test results due to the possible risk of transmission to patients, particularly newborn babies on the unit: "That definitely created almost moral injury because you knew that in the community you wouldn't be allowed to go out but I had to come into work and care for a newborn baby who doesn't have any immunity" (P17).

Moreover, participants noted that patients often lied or omitted symptoms when undergoing COVID-19 screening which further increased the nurses' fear of exposure: "I noticed that a lot of people are lying to be able to have the experience that they want. About symptoms, they don't want to divulge symptoms - that way they can have their significant others with them" (P2). Participants reported they felt uneasy when entering a patient's room as they never knew if the patient disclosed the full truth and if they were unknowingly getting exposed to the virus.

### **4.1.3. Providing proper patient care**

Participants often worried about their ability to properly care for patients given the working conditions brought on by the pandemic. Participants reported that working short while having an overwhelming workload meant they often felt they had to rush through care or risk

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leaving a labouring patient without a nurse. Accordingly, many participants expressed a sense of guilt or concern over losing their licence:

I just want to be able to stay safe, take care of patients and not lose my license or think that I could lose my license every shift that I'm on - I don't know if I'm gonna do something or not do something that my patient requires because I can't be cloned. (P2)

Participants mentioned that equipment shortages also had a significant negative impact on care. Nurses reported they constantly stressed over finding alternatives for equipment such as epidural kits, amino hooks, saline bottles, monitoring belts and more. Moreover, participants noticed that once workarounds were found for the missing equipment it often resulted in patients receiving subpar care:

Things that we never have to think about and then suddenly we don't have any monitoring belts anymore to hold the fetal monitors. We were using sometimes tape or sometimes burn net (...) We would take a long piece to try and hold the monitors, which did not work very well if patients wanted to walk around. (P12)

Participants reported issues caused by PPE as another aspect which negatively impacted their ability to properly care for patients. For example, participants highlighted that donning full PPE meant nurses could not enter a patient's room as fast as they would like, which resulted in delayed care: "My ability to provide the care that they need, like when a patient calls and I can't get to them right away because I have to put PPE on" (P3). Participants also recognized that PPE created a physical barrier between them and the patient, hindering their ability to form close relationships.

### **4.1.4. Overwhelming physical demands**

Participants often emphasized that physical demands at work were becoming unbearable during the COVID-19 pandemic. For example, they mentioned this was due to the physical discomfort brought on by prolonged PPE use, the lack of breaks while on shift or the inability to take a vacation. Working 12-hour shifts wearing full protective gear was reported as being extremely challenging and uncomfortable:

Wearing all that [PPE] for a 12-hour shift is extremely challenging (...) It's almost like going to a gas chamber where you would have to work wearing all that and you're sweating underneath and you still have to perform your duties. (P6)

Wearing PPE for the entirety of shifts was highlighted as being particularly difficult during the hot summer months, especially when attending to patients in rooms lacking air conditioning. Participants noted they often needed to change their uniform halfway through a shift due to it being drenched in sweat.

It was not uncommon for participants to report missing breaks as a result of not having enough staff to cover break relief or simply due to the physical distancing rules of the break room itself. The inability to take breaks while at work often left nurses feeling physically unwell:

It is obviously so busy that you can't take a break and sometimes you can't leave the room. You're not drinking, you're not eating properly, and you might be wearing extra PPE. It's just a recipe for feeling physically unwell (...) Often I leave work with a headache, lots of headaches during the pandemic. (P20)

Participants mentioned there were even instances of nurses fainting because they were unable to have a drink of water or take a break to eat. Moreover, participants noted that the lack of breaks

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could have contributed to an increase of injuries seen among staff, particularly neck, shoulder, hip, and knee problems.

Participants often stressed that it was extremely difficult to receive any sort of vacation time granted over the course of the pandemic: "We're not getting vacation granted, I have [many] years of seniority and I get denied vacation left right and centre because of the way the union rules work and the shortages on the unit" (P5). They highlighted that this made it more difficult to cope with the overwhelming physical demands as they had no time for respite or to recharge. Consequently, it was not uncommon for participants to report having to use their sick time as a means to get some time off.

### **4.2. Consequences of Working During COVID-19**

This theme covers the impact, both physical and emotional, on frontline obstetrical nurses caused by working during the COVID-19 pandemic. There are 4 main subthemes: burnout, feeling undervalued, feeling inadequately supported, career modifications, and concern for the future of healthcare.

#### **4.2.1. Burnout**

Participants reported feeling mentally, physically, and emotionally exhausted from the unfavourable working conditions brought on by the COVID-19 pandemic. They noted that they struggled to feel the same level of job satisfaction as they did pre-pandemic and even noticed they were feeling less empathetic towards patients: "We are so burnt out that we just don't care anymore - we still care for our patients, but we've just given so much that I feel now it's just less" (P11). Loss of sleep, increased anxiety, lack of motivation and the inability to maintain a healthy work-life balance were other symptoms of burnout reported by participants. Furthermore, participants expressed a severe sense of dread about going to work: "We've really stretched

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ourselves thin, so when you come home you just sit on the couch, and you can't even move your limbs and all you're thinking is I just wanna die so I don't have to go back" (P6). Participants consistently noted that burnout amongst their colleagues was very evident and that the morale of the entire unit was extremely low.

### **4.2.2. Feeling undervalued**

Participants indicated that they felt severely underappreciated and undervalued while working during the pandemic. The concept of feeling disposable was common amongst those interviewed for the study: "We feel like we're numbers. We're just another person filling the numbers to quotas. I don't feel like we're valued" (P2). Moreover, participants felt that because they worked specifically in labour and delivery, they were often overlooked by the hospital as they believed the department was frequently forgotten. Participants disclosed that they felt particularly hurt during the staff COVID-19 vaccination rollout as they waited a long time to receive their vaccines and constantly had to push management for this to happen. They indicated that they felt neglected by not being categorized as a high-risk group even though their department has both triage and operating room aspects, which increased the likelihood of virus exposure. Furthermore, participants reported that the unit was often last to know about changes regarding PPE protocols and updates to various COVID-19 policies: "Where's our update? We're part of the hospital. [There] should be a unified standard of care but we're the last ones to know about anything. I feel like somehow, they always forgot about the obstetric nurses" (P13).

Participants expressed feeling disappointed during Nursing Week with the level of appreciation and recognition from the hospital: "The years of the pandemic, I felt less appreciated during Nursing Week specifically than any other years" (P17). Specifically, it was mentioned that discount vouchers offered during the pandemic often required nurses to spend

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their own money first and then receive a discount (e.g. buy one get one), as opposed to fully discounted in previous years. Additionally, it was noted that in order to take advantage of many of the perks or benefits that the hospital did offer, you specifically had to be working on the daytime weekday shift. Those working nighttime shifts or solely on the weekends were often not able to access many of the benefits during Nursing Week(s). Overall, participants noted that they felt the hospital had not attempted to implement any noteworthy acts of appreciation or gratitude throughout the pandemic.

### **4.2.3. Feeling inadequately supported**

Participants reported feeling inadequately supported by the hospital over the course of the COVID-19 pandemic. They acknowledged that the hospital attempted to offer wellness support by promoting the use of the Employee Assistance Program (EAP) and the Wellness Navigator. However, participants expressed that these resources were not very beneficial as they were often self-directed and placed an onus on the workers to take action. Moreover, certain participants noted it was difficult to find a balance between one's home and work life given the lack of support from the hospital directed towards nurses with children: "Childcare for my children - when the schools closed down and I had to send my kids away for six weeks. How about supporting me then?" (P13).

Participants highlighted they felt there was a strong sense of misunderstanding from upper management when it came to addressing frontline workers' needs. Providing cookies, free pizza, or coffee was often ill-received by participants as they noted it did not do anything to relieve nurse burden or address workplace stressors:

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It just feels like we are in the trenches and everyone else is so out of touch with what it really is like to be working in our unit and not attempting to help us, or if they are, they're throwing us little cookies or a pizza. We don't need a pizza. We need help. (P5)

Participants stressed that they felt their concerns were not getting heard and that upper management had no sense of how difficult it was working on the frontlines during the pandemic. Furthermore, participants noted the hospital operating on a Monday-Friday schedule had not been conducive for shift workers. They reported feeling particularly not supported during night shifts and weekends, for example, by not getting a response when seeking clarification about COVID-19 policies outside of regular management hours:

It was just white noise and I really felt not supported by that because for one, I felt our concerns didn't matter because we weren't being acknowledged and two, I felt as though we were having to navigate these uncharted waters alone, not supported by management. (P17)

### **4.2.4. Career modifications**

Participants disclosed that during the pandemic, they often sought to reduce the amount of time spent in the hospital either through reducing work hours or taking leave: "Now I'm rarely picking up overtime because I don't want to spend any more time in the hospital than I have to. I don't look forward to going to work" (P4). Moreover, it was not uncommon for participants to disclose that they were looking to change careers altogether as a result of the extreme work conditions brought on by the pandemic: "Some of the jobs I applied I didn't get, I'm just continuing to apply. Some lucky nurse was able to get that job and that's okay. It's just I need to get out of there, it's killing me slowly" (P2). Those who wished to change careers often stated

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they hoped to remain in the healthcare field but emphasized that bedside nursing in a hospital setting was no longer a sustainable career.

### **4.2.5. Concern for the future of healthcare**

Given their experiences and firsthand knowledge of what was going on in healthcare during the COVID-19 pandemic, participants often reported they felt concerned about the future of the Canadian healthcare system: "I'm concerned about the future of healthcare and who's going to work in the hospital" (P20). They noted they had never seen such a high turnaround in staffing and were particularly concerned for how a hospital can function without an adequate number of nurses: "I think that a lot of people don't realize that without us in healthcare, there is no healthcare" (P18). It was highlighted that the working conditions were unrealistic, and consequently, there was an inability to retain staff. Many participants specifically worried and feared for younger nurses, particularly those just starting their careers: "You see young nurses just starting their career and they're full of energy and enthusiasm and they crumble - it really makes you concerned that there is something wrong with the system" (P6).

### **4.3. Personal Resources**

This theme refers to resources highlighted by participants that they personally used to help ease the stress and emotional burden of working during the COVID-19 pandemic. Relying on the following 4 mechanisms were most common: personal hobbies, support from family and friends, colleague support, and love for the job.

#### **4.3.1. Personal hobbies**

Participants identified a large range of personal hobbies such as exercising, knitting, reading, gardening, listening to music, and engaging in team sports as outlets to help reduce the impact of stress. The given choice of activity was dependent on the participants' individual areas

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of interest. However, these activities were often noted as ways to help disconnect from work and improve one's physical, mental, and emotional well-being: "I picked up exercising in January 2020, which has been super consistent till now. Physical activity - I definitely use that as an outlet to stay healthy and help with stress" (P17).

### **4.3.2. Support from family and friends**

Relying on the support of friends and family was widely acknowledged amongst participants as an important aspect that helped improve resiliency among participants. Increasing family time, going on walks with friends, partaking in virtual game nights, and spending time with pets were mechanisms reported by participants which helped them decompress. However, given the unique and challenging circumstances nurses faced at work during the pandemic, participants expressed difficulty sharing their experiences with those outside of the healthcare system:

I find we like to keep to ourselves a lot because if you don't get other people to walk in your shoes and actually know what it's like, you wanna shut down and not talk to those people because they have no empathy to understand and they start giving you all kinds of advice that actually makes you even more angry. (P6)

Nevertheless, family and friends remained a key component of a nurse's support system. Many participants highlighted the importance of having someone who is a good listener and a reliable helping presence:

I live with my partner, [they] are very supportive and a good resource if I just need [them] to listen or if I need help with keeping things okay at the house. My friends, my family are super supportive and a really good network that I can rely on to help with any stress I have. (P17)

### **4.3.3. Colleague support**

Participants expressed that relying on their colleagues for support was an essential coping mechanism to manage the stress of working during the pandemic. The concept of "venting" to other nurses on the unit was key as those sharing similar experiences could easily empathize and understand each other's emotional struggles:

I feel like the team has really pulled together and we just really lean on each other - you can vent to each other in a room where nothing leaves the room, no names are mentioned but you can sort of get your feelings out. Have a good cry together in a small personal space. (P7)

Participants mentioned they would try to avoid, when possible, talking about COVID-19 at work and instead focus on positive aspects of each other's personal lives. Furthermore, the use of humour was commonly mentioned as a means to improve the unit's morale: "We still have good giggles once in a while and good laughs (...) it's not always doom and gloom - it is a lot of the time when we're in the thick of it - but there's still time to have a good chuckle and laugh" (P18). A strong sense of camaraderie and appreciation for their colleagues was evident when talking with all participants.

### **4.3.4. Love for the job**

One of the driving forces keeping certain participants motivated to continue coming to work and overcome various stressors with ease is the continuous love they have for their work. Reminding themselves why they entered this profession and chose to work in this specific field helped many nurses cope: "I think I just kept trying to tell myself and remind myself how much you still enjoy this and keep going, that this too shall pass" (P18). There was a strong sense of love for the field of maternal care among participants. It was also highlighted that they enjoyed

coming to work for the social interactions with patients and co-workers, particularly when the pandemic first started and there were province-wide lockdowns.

### **4.4. Constructive Feedback Surrounding Job Resources**

This theme focuses on suggestions directed to the hospital to improve job resources, which participants in turn believe could have improved the working conditions for obstetrical nurses working during the COVID-19 pandemic. The suggestions revolved around the following subthemes: improving mental and physical support, improving communication, improving retention, and positive feedback.

#### **4.4.1 Improving mental and physical support**

As nurses felt inadequately supported throughout the COVID-19 pandemic, participants identified several supports and resources that they believed should have been provided. One key area participants highlighted that needed to be improved to help staff feel supported was access to better wellness resources. Suggestions to improve wellness resources included offering mental health days, access to onsite stress management specialists and a greater number of debriefing sessions on the unit. Additionally, it was noted that it would have been beneficial for staff to be automatically enrolled for sessions with counsellors or psychologists and simply be provided the option to opt-out as opposed to personally having to register:

I feel like opting out rather than opting in would be a truly better way to place some importance. Not just put it back on the employee again (...) If you realize this is a workplace issue - you fit us for N95s but if you know there's psychological harm that could happen why not do those type of mental health wellness evaluations? (P20)

Another key resource participants highlighted that would have been a big help during the pandemic was receiving more physical help on the unit. Acknowledging it was difficult to

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hire/retain obstetrical nurses, participants said simply having people who could have helped with non-nursing tasks would have been a big relief. For example, having patient care technicians or personal support workers who could have helped with tasks like restocking, passing medication or equipment into a patient's room, cleaning, or offering support to patients. Additionally, participants highlighted they would have liked it if those working in management came down and helped relieve strain on the unit:

Things that would be more helpful would be coming to help us (...) When we're drowning and barely keeping our head above water and the unit is falling apart at the seams, pitching in saying I'll stay at the desk, you go and help out your nurses, go help them get off to break, go help them with the things they need help with I'll man the desk - that would be something that would be far more tangible and in the moment be much more helpful. (P5)

Ensuring proper breaks were given each shift and making it easier for staff to have taken a vacation was another point identified by participants that could have helped improve both their physical and mental well-being. Participants believed they should have been given access to more areas to use as break rooms, given they were only allowed a certain amount of people in a room due to social distancing rules. Additionally, it was suggested that offering quick 5-minute breaks would have been beneficial to help with things like getting to the bathroom or having a drink of water: "[It] would have been beneficial if we could have somehow scheduled more quick breaks because we can't bring drinks out at the desk nor do you wanna be lowering your mask around everyone" (P15). Acknowledging vacation time was difficult to provide throughout the pandemic because of limited staffing, participants suggested a good alternative would have been allowing one or two nurses to be sent home early from a shift if the unit was slow that day.

### **4.4.2. Improving communication**

Participants believe communication between hospital management and frontline staff could have been improved. Nurses said they struggled to stay updated with the constantly changing policies and found the updates sent by email to be ineffective. Rather than repeatedly verifying the latest rules and policies with the charge nurse on shift, participants wished there had been a central streamlined system they could have accessed easily and quickly. Furthermore, many participants stated it would have been beneficial for the public and patients to have access to such a system so they could have been aware of rules and procedures when coming into the hospital. Participants also believed this could have helped solve the problem of mixed messaging, which was a particular problem when nurses from other departments were floated to obstetrics. One suggestion to help keep updated about policy changes while at work was using the printer system to send updates, similar to how a code yellow is announced when there is a missing patient in the hospital. Other suggestions included having team huddles while on shift to go over any updates or sending them through EPIC, the electronic information system used throughout the hospital. Overall, participants believed there was a need to be more transparent and open with frontline staff about the constantly changing COVID-19 policies and procedures:

I think transparency was a big one and releasing information, even if you didn't have an answer, saying that you didn't have an answer - being transparent that we acknowledge that this is a concern, and we are going to get you an answer. (P17)

### **4.4.3. Improving retention**

It was highlighted by participants that retaining staff had become a major issue. Many obstetrical nurses were choosing to leave due to the lack of staff appreciation and unfavourable working conditions brought on by the COVID-19 pandemic. Participants suggested one of the

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ways to improve retention could have been through offering more flexibility in scheduling. For example, offering more employment agreements aside from just strictly full-time, part-time, or casual:

There's no wiggle room from the organization to help us with different staffing abilities. I think I wouldn't work full time if I could have an option to do a 0.7 or 0.8, where I'd be guaranteed 5 shifts a pay - make it flexible, work it around my kids and my husband and I think I'd be much happier in my job. (P5)

Other options suggested to increase flexibility included offering a greater number of job share positions or making it easier to work only days or only nights if desired. Participants believed increasing opportunities for continuing education and general growth within the organization could have also helped retain staff. It was suggested that offering workshops or mock training days could have helped nurses feel more confident in their roles and prepared for anomalous situations that occurred during the pandemic. However, it was highlighted that if additional training or workshops were in fact offered, they should be offered during regular working hours and nurses should get paid while taking part.

Above all else, participants highlighted that to help with retention, staff appreciation needed to be improved. Often this was linked to simply listening and considering the concerns of those on the frontlines, acknowledging how difficult these past years have been, and attempting to provide more physical help on the unit to relieve nurse burden. However, specific suggestions to help staff feel more appreciated during the pandemic included covering nurses' yearly licensing fees, offering personalized gifts during Nursing Week, and increasing wages or providing incentives when being required to work short. Furthermore, participants expressed that

they would have liked to see more recognition and gratitude for long years of service at the hospital.

#### **4.4.4. Positive feedback**

Participants highlighted a few areas which they believed the hospital handled well in response to the pandemic. Positive comments were made in regard to the hospital limiting the number of visitors permitted on site, which helped reduce virus exposure and ease flow on the unit: "I did enjoy the restricted visitors, not having people in and out all the time and through the hallways made me feel safer and a little bit better" (P18). Closely linked to reduced visitors was the screening put forth at hospital entrances which participants also acknowledged as a good idea. However, it was often noted that screening could have been more strict as individuals could easily evade certain questions or simply sneak up to the unit when they should not have been allowed entry. Participants highlighted the hospital did well managing PPE levels as there was never a dire shortage. Furthermore, participants were appreciative of the free parking the hospital provided to staff, although they wished this was offered for a longer period of time given the length of the pandemic: "They did do for periods the [free] parking, which really helped. I think it could have been extended for different times, but that helped for sure. That's a stress off " (P14). When asked about positive feedback, it was common for participants to acknowledge that the hospital is restricted to a certain degree by provincial and federal regulations; therefore, it was noted that many things were beyond the hospital's control. Consequently, participants suggested the need for a top-down change, which would include changes to funding and various nursing regulations starting at the provincial level and moving down through the regional health authorities, hospitals, and finally hospital upper management. Specifically, participants would

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want this to start with revoking Bill 124 that has capped a nurse's total compensation at 1% for each 12-month period.

## **Chapter 5: Discussion**

This study sought to examine the specific factors contributing to job stress among obstetrical nurses during the COVID-19 pandemic. It also looked at how obstetrical nurses personally coped with the increased stress. Moreover, participants shared their perspectives on which job resources they believe should have been provided to them. This chapter will discuss study findings in light of the JD-R model and expand on existing literature surrounding the experiences of HCW during the COVID-19 pandemic. The chapter concludes with recommendations for practice.

### **5.1. Job stressors**

From examining the JD-R model, it is clear every individual has to manage various job demands while at work. However, these demands can quickly turn into job stressors when they require extraordinary efforts that are associated with certain physiological and/or psychological costs (Bakker & Demerouti, 2007). The findings from this study help to better understand the physical, psychological, social, and organizational aspects that obstetrical nurses struggled with at work over the COVID-19 pandemic. Specifically, the findings of this thesis show that obstetrical nurses struggled with the following job stressors during COVID-19: increased workload, fear of COVID-19 transmission, providing proper patient care, and overwhelming physical demands. Having an increased workload due to staffing shortages, a greater number of tasks, and increased patient acuity was consistent with workplace stressors identified by labour and delivery nurses in other studies (George et al., 2021; Kang et al., 2021). However, when discussing staffing shortages, participants in my study highlighted it was often as a result of many nurses choosing to leave the profession or hospital setting, whereas other studies mainly highlight the lack of staff for reasons such as COVID-19 infection or staff being floated to other

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departments. This finding highlights the importance of staff retention and points to future research opportunities aimed at better understanding the circumstances that caused obstetrical nurses in Ontario to leave the profession.

Fear of COVID-19 transmission to family, friends, colleagues, and patients was a stressor commonly shared among HCW, both in Canada and worldwide (Ali et al., 2020; Brophy et al., 2020; Kang et al., 2021). This thesis expands on the existing literature by showcasing that "workplace self-isolation" contributes to this fear. Many participants noted that they were uncomfortable coming to work while awaiting COVID-19 test results as it increased stress levels surrounding possible transmission risks. Given this discovery and the fact that this policy was not as widespread as other COVID-19 related policies in healthcare, it is important future research be done to have a more in-depth understanding of the impact that "workplace self-isolation" had on nursing staff.

Research has shown most maternity care providers felt changes due to the COVID-19 pandemic had resulted in a reduced capacity to provide safe and effective care (Flaherty et al., 2022). This is consistent with the findings in this study; however, this study helps to position this specific phenomenon as a COVID-19 job stressor. Learning that participants worried about their ability to provide proper patient care and feared that they would lose their nursing licence during the COVID-19 pandemic helped to illuminate the impact that reduced quality of patient care had had on obstetrical nurses. It also shows that the fear of losing their license was associated with policies or practices that were enacted in organizations and yet were beyond the nurses' control, further exacerbating the weight of job demands.

This study also highlighted that obstetrical nurses felt physically overwhelmed while working during the COVID-19 pandemic. Specifically, participants highlighted the unfavourable

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working conditions which arose from prolonged PPE use and from the inability to take a proper work break or vacation. Studies have found that prolonged PPE use may cause dizziness, nausea, adverse skin reactions, dehydration and exhaustion (Jose et al., 2021; Xia et al., 2020).

Moreover, literature on occupational health indicates that long hours and consecutive shifts without breaks can have negative psychological and health impacts for HCW (Witkoski & Dickson, 2010). Hence, these findings highlight the importance of creating a healthy physical working environment for obstetrical nurses during major disease outbreaks.

Chronic exposure to job stressors can exhaust an employee's mental and physical needs (Demerouti et al., 2001). It is worth noting that several findings from this section of the study are consistent with the JD-R model. Specifically, increased workload and overwhelming physical demands are well-established job stressors found to coincide with burnout, depersonalization, and absenteeism (Bakker & Demerouti, 2016). Moreover, fear of COVID-19 transmission has been found to be associated with emotional exhaustion when conceptualized as a job demand in the context of the JD-R model (Falco et al., 2021). Interestingly, understanding that nurses worried about their ability to provide proper patient care can help position this phenomenon as a job stressor in the context of the JD-R model and may suggest that nurses who feel they are unable to meet their duty in providing safe, compassionate, and ethical care are at an increased risk of developing psychological problems. In summary, the stressors identified above should be recognized as risk factors that contribute to health problems, increased job stress, and decreased job satisfaction among obstetrical nurses during the COVID-19 pandemic.

### **5.2. Consequences of working during COVID-19**

Participants described the impact, both physical and emotional, of working as a nurse in labour and delivery during the COVID-19 pandemic. Specifically, they described feeling burned-

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out, undervalued, inadequately supported, a need to make career modifications, and a general concern over the future of healthcare. Although HCW burnout during the COVID-19 pandemic has been documented (Batra et al., 2020; Brophy et al., 2020), this study helps to better understand the circumstances surrounding burnout among obstetrical nurses in Ontario. Specifically, findings show participants experienced a decrease in job satisfaction, lack of motivation, lack of sleep, and a decrease in empathy towards patients. Feeling underappreciated, undervalued, and disposable were emotions also frequently mentioned by participants. This finding is consistent with Altman et al.'s (2021) study involving 14 perinatal nurses from the United States that found nurses were feeling de-valued and expendable during the COVID-19 pandemic. However, my study also helps shed light on how obstetrical nurses felt about the level of appreciation specifically offered during National Nursing Week(s) over the pandemic. Moreover, the findings in my study indicate that feeling undervalued as a nurse could have been exacerbated if working in the field of labour and delivery. Participants noted that they felt the Department of Obstetrics, Gynecology and Newborn Care was often forgotten by upper management, especially when it came to updating staff on COVID-19 policies or the COVID-19 vaccination rollout. These findings suggest it may be beneficial for hospital upper management to work closely with each department to ensure policy updates are properly disseminated and vaccinations are offered in an order which will help all staff feel safe and protected.

The circumstances surrounding the physical and emotional impacts of the pandemic on the participants in this study can be better understood when viewed through the lens of the JD-R model. Specifically, it is crucial to understand that job stressors have a direct effect on burnout, absenteeism, and other negative psychological outcomes. However, such adverse effects can be alleviated through the implementation of appropriate job resources (Demerouti et al., 2001). Yet,

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participants frequently emphasized that they felt inadequately supported by the hospital over the course of the COVID-19 pandemic, suggesting that their needs were commonly overlooked or misunderstood by upper management. Moreover, many participants disclosed that working during the COVID-19 pandemic had resulted in them seeking a career change or departure from the hospital. This is particularly interesting considering that many participants also frequently highlighted their love for working in labour and delivery, and may suggest that working conditions had simply become unbearable. Together, the findings from this section suggest that the job resources provided to obstetrical nurses during the COVID-19 pandemic were not sufficient to alleviate the negative impacts of the job stressors which they encountered.

### **5.3. Personal resources**

Personal resources have been found to buffer the negative effects of job stressors (Xanthopoulou et al., 2007). This study found that relying on personal hobbies, support from family, friends and colleagues, career modifications, and their own love for the job were mechanisms participants personally used to help them manage the increased job stress caused by the pandemic. One of the most common personal hobbies discussed by obstetrical nurses was increasing physical exercise during the COVID-19 pandemic. Several studies have documented the benefits of increased physical exercise in nurses. For example, a clinical trial conducted with 60 nurses found aerobic exercise to be associated with decreased work stress and improved mental health (Mohebbi et al., 2019).

Existing literature has also shown that social support is one of the most effective ways individuals can cope with stress and it can come either from relatives, friends, a spouse, or co-workers (Ozbay et al., 2007). However, it is interesting to note that participants in my study frequently highlighted that support from colleagues was arguably the most beneficial form of

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social support. They noted this was namely due to the fact that they were able to easily empathize with one another given their shared similar experiences. These findings suggest that the experiences of obstetrical nurses were unique in the sense that outsiders may not have been able to comprehend the extent of their hardships. Additionally, given the nurses' high level of appreciation for their colleagues' support, the findings in my study could point to a need for hospitals to implement peer-support programs.

One of the driving forces which helped many participants persevere through the difficulties they faced while working during the COVID-19 pandemic was the love they had for maternal care. Participants often emphasized their love for being a labour and delivery nurse and described it as a strong motivational factor to continue working through such difficult times. Existing literature shows that HCW with a sense of "higher calling" and commitment to their work are more resilient to burnout (Yoon et al., 2016). However, to date and to the best of my knowledge, there have been no studies which identified a sense of higher calling among labour and delivery nurses during the COVID-19 pandemic as a possible coping mechanism. Given that "love for the job" could be indicative of a sense of "higher calling", further research may be warranted to gather a deeper understanding of this concept.

Provided that personal resources are often linked with resilience (Cooper et al., 2020), the findings of this section could suggest that obstetrical nurses who utilized the resources above and held a great love for working in labour and delivery were able to withstand higher levels of job stress throughout the COVID-19 pandemic. Moreover, the findings may help support Xanthopoulou et al.'s (2007) study which found that personal resources help buffer the psychological cost associated with increased job demands.

### **5.4. Recommendations**

The following are recommendations for practice to improve working conditions for obstetrical nurses during major disease outbreaks which are based on the study findings, participant recommendations, and the literature. Specifically, the recommendations focus on organizational stress management interventions (Ivancevich et al., 1990) as they have been proven to be more effective and provide longer lasting effects (Brief & George, 2020; Ganster et al., 1982).

#### **5.4.1. Provide additional psychological support**

Given the negative toll of working during major disease outbreaks on a nurse's mental well-being, hospitals need to ensure they are offering adequate levels of psychological support during these times. Providing various formats of psychological support can help nurses feel more supported and provide variety for nurses to seek support from whichever method works best for them. For example, supports could include scheduling regular debriefing sessions, offering onsite counseling sessions with mental health specialists or providing training workshops on how to improve coping skills (Ivancevich & Matteson, 1987). Moreover, it could be beneficial to provide nurses with a set amount of mental health days for the duration of the disease outbreak so they can take time off when they are feeling overwhelmed due to stress.

#### **5.4.2. Foster peer support groups**

As highlighted by participants in this study, discussing emotions and experiences with colleagues during the pandemic is instrumental in helping to ease stress levels and reduce the risk of psychological distress. Therefore, hospitals should try to encourage peer support amongst staff members. For example, they can implement formal peer support groups by: (1) creating a designated peer support role for staff members eager to help their fellow peers, (2) providing the

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designated peer supporters with training to improve their communication skills and knowledge surrounding psychological distress and how to minimize it, (3) offering a safe space to encourage the group sessions (Dennis, 2003).

### **5.4.3. Alleviate physical demands**

It is important to acknowledge the physical strain that working during a pandemic has on nurses. Hospitals should try to alleviate some of this strain by providing self-care stations, ensuring proper breaks are taken, and that vacation time is offered. Self-care stations could be placed around the hospital and offer an area for nurses to quickly get a drink of water or snack (Wilson et al., 2021). Additionally, hiring extra staff to complete non-nursing tasks, such as personal support workers or patient care technicians, could decrease workload and potentially offer more opportunities for nurses to take their breaks.

### **5.4.4. Implement central communication system**

Considering the vast amount of policy changes within a hospital during disease outbreaks, it would be beneficial to create a central system to easily update staff. As suggested by participants, if a hospital is already using an electronic information system to manage and store patient records, they could configure it to send updates as soon as they are implemented. This would allow nurses to stay up to date as they already need to make use of the system to provide patient care. Alternatively, if a central system is not feasible, managers could provide group huddles while on shift to disclose any policy changes as they are made.

### **5.4.5. Allow flexibility in work schedules**

With the increased workload nurses face during major disease outbreaks, multiple 12-hour shifts per week become unsustainable. Therefore, hospitals should provide their staff with increased flexibility in their schedules. For example, offering more job share positions for staff

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would help distribute the requirements to fill full-time positions and allow staff to reduce the number of hours they work per week. Additionally, hospitals could implement shorter shift times for the duration of the outbreak or be more accommodating when workers request to work solely on nights, days, weekends etc.

### **5.4.6. Provide disease training**

Given the many unknowns surrounding a novel disease, both in terms of impact on an individual's health and transmission risks, obstetrical nurses need to be provided with adequate training to ensure they are ready to safely provide and deliver care. As opposed to simply sending out written protocols, hospitals can offer simulation training. This would involve offering a controlled environment to practice processes or procedures before applying them to patient care (Adib-Hajbagheri & Sharifi, 2017). Moreover, to reduce the possibility of disease transmission, nurses should be provided with up-to-date training on how to properly don and doff PPE.

### **5.4.7. Increase staff appreciation**

Provided that obstetrical nurses face increased health risks, both physical and emotional, during major disease outbreaks, acts of appreciation during these times should be increased. As highlighted by participants, this could involve offering personalized gifts or increasing pay premiums for times of extreme hardship. Another method to help obstetrical nurses feel more appreciated could be as simple as ensuring their department remains properly staffed and they are provided with the proper tools to complete their jobs.

### **5.4.8. Retain staff**

Hospitals need to ensure they are actively working to retain staff given the high rate of nurse turnaround during major disease outbreaks. As noted by participants, creating a safe and

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positive working environment is key for retention and can be done by employing the suggestions above. However, it would be beneficial for hospitals to create a task force that is focused solely on nurse retention/recruitment (RNAO, 2022) as they could work closely with upper management to ensure these necessary changes are implemented.

## Chapter 6: Conclusion

### 6.1. Limitations

The following limitations need to be considered. Firstly, given that statistical inference is not the purpose of qualitative research, and the recruited participants were from labour and delivery departments within only one Ontario hospital, the results of this study are not generalizable. However, I believe the high-level themes discovered are transferable and relevant to obstetrical nurses in other Ontario hospitals, other jurisdictions that enacted similar policies to Ontario, and healthcare settings where nursing shortages were experienced. For example, the Canadian Nurses Association has also identified increased workload and overwhelming physical demands as contributors to the high rate of burnout seen among nurses during COVID-19 and underline the importance of improving working conditions for nurses Canada-wide (CNA, 2022). Another limitation that must be considered is the fact that interviews conducted at a single point in time may fail to capture feelings, experiences, and perceptions as they evolve over time (Read, 2018). Therefore, findings may be specific to how nurses felt at the time of data collection (i.e. during the Omicron wave of the pandemic). Lastly, the study sought to provide an in-depth exploration of COVID-19 job stressors among obstetrical nurses given their connection to psychological distress. However, there may be other factors, such as personal demands, that also had an impact on stress levels during the COVID-19 pandemic that the study did not capture. Future research would benefit from investigating the personal circumstances of obstetrical nurses who worked during COVID-19 to gather an all-encompassing understanding of the factors contributing to psychological distress among this population.

### **6.2. Contributions**

This study has contributed to the current body of knowledge on the experiences and stressors faced by HCW during major disease outbreaks. Specifically, the use of qualitative methodology allowed for a rich exploration into the details and complexities of the working conditions and lived experiences of Ontarian obstetrical nurses during the COVID-19 pandemic. As a result, the study was able to provide an in-depth understanding of COVID-19 job stressors unique to obstetrical nurses such as an increase in workload due to the lack of support person(s) for mothers, having to manage patients lie about COVID-19 symptoms in order to have their desired birthing experience, and a fear of transmitting COVID-19 to a newborn with no immunity. Additionally, the study was able to provide insight into the personal resources used by obstetrical nurses to help manage the strain of increased job stress and their needs for various job resources.

Conducting this research remotely allowed me to complete the study in real-time which helped to decrease the possibility of recall bias and provide relevant, immediate, and actionable information relevant to the context of the pandemic. To my knowledge, there have been no studies to date which captured COVID-19 job stressors unique to obstetrical nurses within Canada. Moreover, I have not found any studies which have applied the JD-R model to better understand the influencing factors surrounding COVID-19 working conditions of obstetrical nurses and thus no studies that have positioned the inability to provide proper patient care as a job stressor in relation to the model. Therefore, the findings of this thesis have made a novel contribution to the literature.

Overall, the findings of this study point to a lack of adequate job resources to help obstetrical nurses manage the job stressors which they encounter during the COVID-19

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pandemic. However, the perspectives and experiences shared by participants offer a deeper understanding of the factors contributing to job stress and their needs and desires for support. Thus, the study findings could guide hospital management on the development and implementation of job resources which could help mitigate the risk of psychological distress and improve working conditions for those working in maternal care during future waves of the COVID-19 pandemic and future major disease outbreaks.

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**Appendix A: Recruitment Email**

Subject Line: Private/Confidential: Invitation to participate in research

Hello,

We are recruiting participants for a new research study about the impacts of infectious disease outbreaks on healthcare workers!

Participation is voluntary. Your participation in this study will not impact your employment at The Ottawa Hospital. Only the research study team will be aware of your involvement.

Briefly, our goal is to gain insight into how healthcare organizations can better support and meet the needs of obstetrical nurses working during infectious disease outbreaks. Our findings may be shared with TOH Management Teams, and more broadly to help mitigate occupational stressors during the ongoing COVID-19 pandemic and plan for future outbreaks.

This study will involve one-on-one semi-structured interviews with nursing staff who worked for a minimum of six months prior to the COVID-19 pandemic and a minimum of two months during COVID-19 (start date of the pandemic being March 11<sup>th</sup>, 2020). The interviews will be conducted virtually and last approximately 45 minutes. They can be scheduled at any time based on your availability.

As a token of our appreciation, you will be given a \$20 gift card to a local coffee shop if you choose to participate. The gift card will be sent to you by e-mail after completing the interview.

If you are interested in participating or have any questions, please contact the study team by e-mail at [copenetwork@ohri.ca](mailto:copenetwork@ohri.ca).

*Note: Email is considered a non-secure form of communication as it may be accessed by unauthorized third parties.*

Thank you,

**Julia Dobrowolski, BSc**

Graduate Student

**Dr. Darine El-Chaâr, MD**

Principal Investigator at The Ottawa Hospital

OMNI Research Group, Clinical Epidemiology Program

Ottawa Hospital Research Institute



501 Smyth Road, CPRC, Box 241, Ottawa, ON, K1H8L6  
Working remotely during COVID-19

## Appendix B: Interview Guide

### Introduction:

Thank you for agreeing to take part in the interview. Just a reminder, the session is being recorded; however, you have the option to turn off your camera if preferred and then only audio will get transcribed. All responses will be confidential and your name will not be used. Furthermore, you may decline to answer any question or stop the interview at any point. The recording will start now.

As you have read in the information sheet, the purpose of this study is to better understand the occupational stressors experienced by obstetrical nurses throughout the COVID-19 pandemic within Ontario. We are especially interested in your perspectives and experiences, so there are no right or wrong answers.

Do you have any questions before we begin?

### Background questions:

Transition - I am going to start by asking you a few questions about yourself and your background.

1. Can you tell me a little bit about where you work?  
- Probe: current position? department? Part-time vs full-time? Retired?
2. How long have you been working there?  
- Probe: current position vs previous departments?
3. What are the central roles that your job involves?  
-Probe: day to day tasks?

### COVID-19 questions:

Transition - Now that I understand more about your job and where you work, the next set of questions will be geared toward changes that occurred due to COVID-19.

4. What are some of the main changes that have occurred within your department since the start of COVID-19?  
- Probe: has your role changed due to the pandemic? COVID-19 testing/ increased help required for research/new protocols or safety measures, management changes
5. What did you find most challenging about these changes?
6. How did you experience these changes?
7. Overall, did you feel an increase in job stress since the start of the pandemic? If so, what did you find stressful?  
-Probe: communication, staffing, extra tasks, worry about COVID-19 infection, longer/shorter hours, shift changes, COVID-19 testing and isolation procedures

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8. Has your view about nursing changed while working throughout the pandemic? If yes, how?
  - Probe: changing department or career paths (healthcare vs non-healthcare or patient facing vs. not patient facing), changing to a job with less stress
9. Have you considered making any changes to your work life? If yes, explain.
  - Probe: retirement plan, modifying work hours, taking leave (unpaid or paid)

### **Coping questions:**

Transition - Next I am going to ask you about possible coping mechanisms used to deal with the stress.

10. How did you cope with the stress while at work?
  - Probe: ask about each stressor mentioned above
11. How did you cope with stress outside of work?
  - Probe: increased physical exercise, increased substance consumption (what substances)
12. Are there other coping strategies you used that you have not already mentioned?

### **Support questions:**

Transition - Now that we talked about the stressors of COVID-19 and various coping techniques, I am going to ask you a few questions about supports offered by the hospital.

13. Did the hospital/department offer any support for staff members throughout the pandemic? If so, how?
  - Probe: was there more/less support provide since the outbreak, open communication with staff and management
14. The study will focus on organizational interventions, which refer to efforts initiated by the management team that are intended to reduce the sources of stress and can include changes in resources, work tasks, working methods or working environment. Can you think of any specific interventions that would have been beneficial during COVID-19?
15. What could the hospital have done differently to ease the stress on healthcare workers?
  - Probe: what would you have liked to see done? Are you aware of other techniques that were done at other institutions that you may have like?

### **Closing questions:**

16. Is there anything else you would like to add about the topics we discussed?
17. What did I not ask but should have?
18. If I have any questions or points that need clarifying, is it okay to contact you?

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I would like to thank you on behalf of myself and The OMNI Research Group for meeting with me today and taking the time out of your day to support this research. As a token of our appreciation, we will be sending you a gift card to the e-mail you have provided.

### **Appendix C: Study Information Sheet**

**Study Title:** Occupational Stressors and Coping Mechanisms among Obstetrical Nursing Staff throughout the COVID-19 Pandemic (UNIVERSE-OB Follow-up)

**Principal Investigator:**

Dr. Darine El-Chaâr, MD, MSc

Clinical Epidemiology Program, Ottawa Hospital Research Institute

Dept. Obstetrics, Gynecology and Newborn Care, The Ottawa Hospital

Dept. Obstetrics and Gynecology, University of Ottawa Ottawa Hospital Research Institute, 613-737-8551

IS THERE A CONFLICT OF INTEREST?

There are no conflicts of interest to declare related to this study.

WHY IS THIS STUDY BEING DONE?

The main goal of the study is to gain insight into how healthcare organizations can better support and meet the needs of obstetrical nurses during disease outbreaks.

WHAT WILL HAPPEN DURING THIS STUDY?

Semi-structured interviews with nursing staff who worked for a minimum of six months prior to the COVID-19 pandemic and a minimum of two months during COVID-19 from the Department of Obstetrics, Gynecology and Newborn Care (start date of the pandemic being March 11th, 2020). The interviews will be recorded, transcribed verbatim and analyzed using thematic analysis.

WHAT ARE THE RESPONSIBILITIES OF STUDY PARTICIPANTS?

Your participation in the study would involve a one-time virtual interview. During the interview, you will meet with a member of the research team. The interview will be about 45 minutes in length and will take place via Microsoft Teams. You will be asked about experiences and perceived stressors of working throughout COVID-19. Additionally, you will be asked about coping strategies and what resources you wish were provided by the hospital to help mitigate the additional job stress.

VOLUNTARY PARTICIPATION AND WITHDRAWAL

Taking part in this study is voluntary. You have the option to not participate at all, or you may choose to leave the study at any time (this is called withdrawal), without having to provide a reason. Your decision will not affect your employment at The Ottawa Hospital.

Since the information being collected for this study will be de-identified, you may withdraw permission for us to use the data while you are actively participating; however, once the data has been analyzed, it won't be possible to withdraw it, but no further information will be collected.

HOW LONG WILL PARTICIPANTS BE IN THE STUDY?

Your participation in the study would involve a one-time virtual interview planned at the time of your convenience.

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### CAN PARTICIPANTS CHOOSE TO LEAVE THE STUDY?

You may choose to leave the study at any time, without having to provide a reason. Your decision will not affect your employment at The Ottawa Hospital.

### WHAT ARE THE RISKS OR HARMS OF PARTICIPATING IN THIS STUDY?

Taking part in this study may make you feel uncomfortable as certain questions asked during the interview involve sharing potentially stressful experiences. You may choose not to answer questions or leave the interview at any time if you experience any discomfort. Furthermore, if you are in need of additional support please refer to the following resources specifically designed for those impacted by stress due to COVID-19. These resources are available to you regardless of your participation in this research study:

- <https://theottawahospital.sharepoint.com/sites/ObsGynWellnessCommittee?OR=Teams-HL&CT=1635433926097>
- <https://www.ottawahospital.on.ca/en/patients-visitors/wellness-resources/>
- <https://www.theroyal.ca/covid-frontline-wellness>

### WHAT ARE THE BENEFITS OF PARTICIPATING IN THIS STUDY?

You may not receive direct benefit from participating in this study. However, we hope the information learned from this study will help hospital management with the development and implementation of organizational interventions to mitigate potential psychological distress experienced by those working in maternal care during future waves of the COVID-19 pandemic and future major disease outbreaks.

### HOW WILL PARTICIPANT INFORMATION BE KEPT CONFIDENTIAL?

If you decide to participate in this study, we will only collect the information needed for this study.

Records identifying you at this centre will be kept confidential by the study team and, to the extent permitted by the applicable laws, will not be disclosed or made publicly available, except as described in the consent document.

Authorized representatives of the following organizations may look at your original (identifiable) research records at the site where these records are held, to check that the information collected for the study is correct and follows proper laws and guidelines.

- The Ottawa Health Science Network Research Ethics Board who oversees the ethical conduct of this study.
- Ottawa Hospital Research Institute, the study Sponsor who oversees the conduct of research at this location.

Information that is collected about you for the study (called study data) may also be sent to the organizations listed above. Your name, address, email, or other information that may directly identify you will not be used. The records received by these organizations may contain your participant study ID.

## COVID-19 OCCUPATIONAL STRESSORS AMONG OBSTETRICAL NURSES

Communication via e-mail is not absolutely secure. We do not recommend that you communicate sensitive personal information via e-mail.

During the discussions, you will be encouraged to refrain from using names. If names or other identifying information is shared during the discussion, it will not be included in the written records.

The audio/video recordings will be stored in a secure location and listened to/viewed only by members of the research team. The recordings and transcriptions will be kept up to 10 years, and then they will be destroyed.

If the results of this study are published, your identity will remain confidential. It is expected that the information collected during this study will be used in analyses and will be published and presented to the scientific community at meetings and in journals.

Your de-identified data from this study may be used for other research purposes. If your study data is shared with other researchers, information that links your study data directly to you will not be shared.

Even though the likelihood that someone may identify you from the study data is very small, it can never be completely eliminated.

### WHAT IS THE COST TO PARTICIPANTS?

Participation in this study will not involve any additional costs to you.

### ARE STUDY PARTICIPANTS PAID TO BE IN THIS STUDY?

As a token of our appreciation, you will be given a \$20 gift card to a local coffee shop for your participation in this study. The gift card will be sent to you by e-mail after completing the interview. If you choose to withdraw from the study, you will still receive compensation if the interview has been completed.

### WHAT ARE THE RIGHTS OF PARTICIPANTS IN A RESEARCH STUDY?

You will be told, in a timely manner, about new information that may be relevant to your willingness to stay in this study. You have the right to be informed of the results of this study once the entire study is complete. If you would like to be informed of the results of this study, please contact the research team. Your rights to privacy are legally protected by federal and provincial laws that require safeguards to ensure that your privacy is respected.

### WHOM DO PARTICIPANTS CONTACT FOR QUESTIONS?

For questions about your rights as a research participant or about ethical issues related to the study, you can contact The Ottawa Health Science Network Research Ethics Board at 613-798-5555, extension 16719, and speak to someone who isn't involved in the study at all.

For any questions specifically about the research study, please contact the study team by e-mail at [copenetwork@ohri.ca](mailto:copenetwork@ohri.ca).

**Appendix D: Verbal Consent Script**

**Study Title:** Occupational Stressors and Coping Mechanisms among Obstetrical Nursing Staff throughout the COVID-19 Pandemic (UNIVERSE-OB Follow-up)

<b>Participant name:</b>	<b>Person calling:</b>
<b>Date Called:</b>	<b>Time Called:</b>

**Conflicts of Interest:**

There are no conflicts of interest to declare related to this study.

**Research Activities:**

Your participation in the study would involve a one-time virtual interview. During the interview, you will meet with a member of the research team. The interview will be about 45 minutes in length and will take place via Microsoft Teams. You will be asked about experiences and perceived stressors of working throughout COVID-19. Additionally, you will be asked about coping strategies and what resources you wish were provided by the hospital.

The interview will be audio-video recorded, but you may turn off your camera during the recording if you prefer. Although we encourage the use of your video camera to keep our discussion as natural as possible, you do not have to keep your camera on if you do not want to. The video recordings will not be analyzed. The audio recording will be used to create scripts of our discussion. Only the audio script will be saved for future analysis.

Do you have questions about the activities this study involves?

- No **\*If no** → *Continue with script below*
- Yes **\*If yes** → *Answer questions and document all questions and answers before continuing with script below*

Questions: \_\_\_\_\_

Answers: \_\_\_\_\_

Other Comments: \_\_\_\_\_

**Voluntary Participation and Withdrawal:**

Taking part in this study is voluntary.

You have the option to not participate at all, or you may choose to leave the study at any time (this is called withdrawal), without having to provide a reason. Your decision will not affect your

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employment at The Ottawa Hospital.

Since the information being collected for this study will be de-identified, you may withdraw permission for us to use the data while you are actively participating; however, once the data has been analyzed, it won't be possible to withdraw it, but no further information will be collected.

Do you have questions about the voluntary nature and ability to withdraw from of this study?

- No **\*If no** → *Continue with script below*
- Yes **\*If yes** → *Answer questions and document all questions and answers before continuing with script below*

Questions: \_\_\_\_\_

Answers: \_\_\_\_\_

Other Comments: \_\_\_\_\_

### **Potential Risks, Harms, Discomforts:**

Taking part in this study may make you feel uncomfortable based on the questions the study team will ask.

You may become uncomfortable while discussing your experiences. You may choose not to answer questions or leave the interview at any time if you experience any discomfort. Furthermore, if you are in need of additional support we encourage you to refer to the resources provided in the information sheet, available to all healthcare workers impacted by the stress of COVID-19.

Do you have questions about the potential risks this study involves?

- No **\*If no** → *Continue with script below*
- Yes **\*If yes** → *Answer questions and document all questions and answers before continuing with script below*

Questions: \_\_\_\_\_

Answers: \_\_\_\_\_

Other Comments: \_\_\_\_\_

### **Potential Benefits:**

You may not receive direct benefit from participating in this study. However, we hope the information learned from this study will help to inform hospital management with the development and implementation of organizational interventions to mitigate potential

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psychological distress experienced by those working in maternal care during future waves of the COVID-19 pandemic and future major disease outbreaks.

Do you have questions about the potential benefits this study involves?

- No **\*If no** → *Continue with script below*
- Yes **\*If yes** → *Answer questions and document all questions and answers before continuing with script below*

Questions: \_\_\_\_\_

Answers: \_\_\_\_\_

Other Comments: \_\_\_\_\_

### **Privacy/Confidentiality:**

If you decide to participate in this study, we will only collect the information needed for this study.

Records identifying you at this centre will be kept confidential and, to the extent permitted by the applicable laws, will not be disclosed or made publicly available, except as described in this consent document.

Authorized representatives of the following organizations may look at your original (identifiable) research records at the site where these records are held, to check that the information collected for the study is correct and follows proper laws and guidelines.

- The Ottawa Health Science Network Research Ethics Board who oversees the ethical conduct of this study.
- Ottawa Hospital Research Institute, the study Sponsor who oversees the conduct of research at this location.

Information that is collected about you for the study (called study data) may also be sent to the organizations listed above. Your name, address, email, or other information that may directly identify you will not be used. The records received by these organizations may contain your participant study ID.

Communication via e-mail is not absolutely secure. We do not recommend that you communicate sensitive personal information via e-mail.

During the discussions, you will be encouraged to refrain from using names. If names or other identifying information is shared during the discussion, it will not be included in the written records.

## COVID-19 OCCUPATIONAL STRESSORS AMONG OBSTETRICAL NURSES

The audio/video recordings will be stored in a secure location and listened to/viewed only by members of the research team. The recordings and transcriptions will be kept up to 10 years, and then they will be destroyed.

If the results of this study are published, your identity will remain confidential. It is expected that the information collected during this study will be used in analyses and will be published and presented to the scientific community at meetings and in journals.

Your de-identified data from this study may be used for other research purposes. If your study data is shared with other researchers, information that links your study data directly to you will not be shared.

Even though the likelihood that someone may identify you from the study data is very small, it can never be completely eliminated.

Do you have questions about the how your privacy will be protected?

- No **\*If no** → *Continue with script below*
- Yes **\*If yes** → *Answer questions and document all questions and answers before continuing with script below*

Questions: \_\_\_\_\_

Answers: \_\_\_\_\_

Other Comments: \_\_\_\_\_

### **Cost to participation:**

Participation in this study will not involve any additional costs to you.

### **Payment or Reimbursement:**

As a token of our appreciation, you will be given a \$20 gift card to a local coffee shop for your participation in this study. The gift card will be sent to you by e-mail after completing the interview. If you choose to withdraw from the study, you will still receive compensation if the interview has been completed.

Do you have questions about the costs of participation or payment/reimbursement?

- No **\*If no** → *Continue with script below*
- Yes **\*If yes** → *Answer questions and document all questions and answers before continuing with script below*

Questions: \_\_\_\_\_

Answers: \_\_\_\_\_

## COVID-19 OCCUPATIONAL STRESSORS AMONG OBSTETRICAL NURSES

Other Comments: \_\_\_\_\_

### Participant Rights:

You will be told, in a timely manner, about new information that may be relevant to your willingness to stay in this study.

You have the right to be informed of the results of this study once the entire study is complete. If you would like to be informed of the results of this study, please contact the research team.

Your rights to privacy are legally protected by federal and provincial laws that require safeguards to ensure that your privacy is respected.

### Questions:

In case you have any questions, here are some contact numbers that are good to have. Do you have a pen and paper ready?

For questions about your rights as a research participant or about ethical issues related to the study, you can contact The Ottawa Health Science Network Research Ethics Board at 613-798-5555, extension 16719, and speak to someone who isn't involved in the study at all.

I can answer any questions that you may have about the research study right now, but if you think of additional questions later on, you can contact the study team at [copenetwork@ohri.ca](mailto:copenetwork@ohri.ca).

### Have all of your questions been answered?

No **\*If no** → *Answer questions and document all questions and answers before continuing with script below*

Questions: \_\_\_\_\_

Answers: \_\_\_\_\_

Other Comments: \_\_\_\_\_

Yes **\*If yes** → *Continue with script below*

### Documentation of Verbal Consent

**Study Title:** Occupational Stressors and Coping Mechanisms among Obstetrical Nursing Staff throughout the COVID-19 Pandemic (UNIVERSE-OB Follow-up)

**OHSN-REB Number:** 20200640-01H

COVID-19 OCCUPATIONAL STRESSORS AMONG OBSTETRICAL NURSES

Name of Participant: \_\_\_\_\_

Date of Discussion: \_\_\_\_\_

Duration of Discussion: \_\_\_\_\_

SIGNATURES

- The participant’s questions have been answered,
- The participant understands the information within this Verbal Consent Script,
- Each page of the Verbal Consent Script has been read to the participant.
- The participant agrees to take part in this study.

**Investigator or Delegate Statement**

I have carefully explained the study to the study participant. To the best of my knowledge, the participant understands the nature, demands, risks and benefits involved in taking part in this study.

_____ Signature of Person Conducting Consent Discussion	_____ Printed Name and Role	_____ Date
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# COVID-19 OCCUPATIONAL STRESSORS AMONG OBSTETRICAL NURSES

## Appendix E: Tabular Form of Thematic Map

Initial Codes	Subthemes	Main Themes
Enforcing policies	Increased workload	Job Stressors
Helping with COVID-19 research		
Increased patient support		
Increased acuity (COVID-19 patients)		
Supporting junior nurses		
Equipment/supply shortages		
"Working short"	Fear of COVID-19 transmission	
"Bringing it home to family"		
Transmission between colleagues		
"Workplace self-isolation"		
Patients lying about symptoms	Providing proper patient care	
Reduced quality of patient care		
PPE (delays care and negative interaction)		
Equipment shortages	Overwhelming physical demands	
Physical discomforts (PPE)		
Missing breaks		
No vacation		
"Burnt out"	Burnout	Consequences of Working During COVID-19
Exhaustion		
Loss of job satisfaction		
Drop in unit morale	Feeling undervalued	
"Just a number"		
Lack of recognition/appreciation		
"Labour and Delivery always forgotten"		
Vaccine rollout issue	Feeling inadequately supported	
Cookie competition		
"In the trenches"		
Lack of support		
Nursing week	Career modification	
No more picking up shifts		
Reduce work hours		
Changing career	Concern for future of healthcare	
Lack of nurses		
Future of healthcare	Personal hobbies	
Gardening		
Exercise		
Knitting		
Reading		
Sports	Support from family and friends	
Family time		
Pets		
Talking with friends		
Relying on my colleagues	Colleague support	
"Venting"		
Positivity on shift		
Use of humour	Love for the job	
Love my job		
Love labour and delivery		

## COVID-19 OCCUPATIONAL STRESSORS AMONG OBSTETRICAL NURSES

Initial Codes	Subthemes	Main Themes
Mental health days	Improving mental and physical support	Constructive Feedback Surrounding Job Resources
On site counsellors		
Increase debriefing sessions		
"Opting out of support"	Improving communication	
Huddles		
Main system to keep everyone updated		
Updates through EPIC (electronic information system)	Improving retention	
Workshops		
Team building		
Increase recognition/appreciation	Positive feedback	
More breaks/vacations		
More flexibility in scheduling		
Free parking*		
Reduced visitors		
Screening*		
"Beyond the hospitals control"		