FIRST-TIME MOTHERS' EXPERIENCES OF BREASTFEEDING SUPPORT DURING THE COVID-19 PANDEMIC: AN INTERPRETIVE DESCRIPTION STUDY

HANNAH MARCOTTE, RN, BScN

Thesis submitted to the University of Ottawa
in partial fulfillment of the requirements for the
Master of Science degree in Nursing

School of Nursing
Faculty of Health Sciences
University of Ottawa

Preface

Ethical Approval Obtained to Conduct Research

I received ethical approval from the University of Ottawa Research Ethics Board (see Appendix A).

Statement of Contributions and Co-Authorship

Multiple authors contributed to this thesis to which I have outlined the contributions of each author below.

1. Hannah Marcotte RN, BScN

   Master of Science in Nursing Candidate, School of Nursing, Faculty of Health Sciences.

   I completed this research for my master's thesis. I selected and conducted the research design, completed a literature review, and data analysis using the qualitative research method, Interpretive Description. I wrote and revised Chapters 1, 2,3 and 5 and I am the primary author of the manuscript in Chapter 4.

2. Wendy Peterson RN, PhD

   Associate Professor, School of Nursing, Faculty of Health Sciences, University of Ottawa

   Dr. Wendy Peterson is my thesis supervisor. She provided support and feedback throughout the two years I completed this research. She also contributed to the research design and data analysis and revised every draft of my manuscript.

3. Dr. Christine McPherson RN, PhD

   Dr. Christine McPherson, thesis committee member, provided her experience and guidance regarding qualitative research methodology. She offered input and feedback within the data analysis and critically revised every chapter within this manuscript.

4. Dr. Rosann Edwards, RN, IBCLC, MScN, PhD

Thesis committee member, Dr. Rosann Edwards, offered her expertise on breastfeeding and literature pertaining to this topic. She offered input and feedback within the data analysis and critically revised every chapter within this manuscript.

Abstract

During the COVID-19 pandemic, it was difficult for mothers in Ontario to obtain the breastfeeding support they required due to pressure on the healthcare system, social restrictions, and redeployment of healthcare professionals from perinatal services to the pandemic response (Canadian Institute for Health Information [CIHI], 2022; Jack et al., 2021; Rudrum, 2021). The purpose of this interpretive description study was to better understand the impact of the COVID-19 pandemic upon first-time mothers' experiences and perceptions of breastfeeding support in Ontario, Canada. Eligible participants were recruited using purposeful and snowball sampling. Thirteen one-on-one, semi-structured interviews were conducted using a video-conferencing software. One over-arching theme, *on their own*, and three major themes were identified by the researchers. The first theme, *lack of support*, is broken down into subthemes *lack of practical support, lack of informational support, lack of social support* and *lack of emotional and esteem-building support*. The second theme, *figuring it out*, is further categorized into the subthemes *understanding*, *taking risks*, and *motivation and resourcefulness*. The third theme, *emotional hardships*, is broken down into two sub-themes, *isolation* and *it was difficult*. The findings from this study have implications for nursing practice, policy, and research, that support the need for more effective pandemic preparedness from the province, including, consistent access to formal and informal breastfeeding support services.

Acknowledgement

First and foremost, I would like to thank the first-time mothers who gave their time and shared their experiences with me.

I would also like to thank my thesis supervisor, Dr. Wendy Peterson, for her ongoing support and encouragement throughout the last few years. I am very grateful that I had such a kind and supportive mentor to guide me through this process.

Thank you to my two committee members, Dr. Christine McPherson and Dr. Rosann Edwards for providing their expertise, invaluable input, and words of encouragement.

And lastly, thank you to my husband, Seb. Becoming a mother, while completing my thesis, was not an easy undertaking, and it would not have been possible without your unwavering support and partnership.

Table of Contents

Chapter 1: Introduction

Breastmilk provides the optimal nutrition for the healthy growth and development of infants (World Health Organization [WHO], 2003). A series of systematic reviews and meta-analyses have shown that breastfeeding has many short and long-term health benefits for both infants and their mothers (Bowatte et al., 2015; Chowdhury et al., 2015; Sankar et al., 2015; Victora et al., 2016). Based on this literature, the incidence of gastroenteritis, respiratory tract infections, otitis media, obesity, and other conditions are significantly reduced among children who have been exclusively breastfed for the first six months of life. The immune components in breastmilk help protect infants from numerous diseases and support the developing immune system (Walker, 2010). Furthermore, antibodies from mothers vaccinated against a specific disease-causing bacterium or virus can be transferred through breastmilk to infants and protect them from infections (Caballero-Flores et al., 2019). Benefits for the breastfeeding mother include, a decreased risk of breast and ovarian cancer, type two diabetes, osteoporosis, and postpartum depression (Victora et al., 2016). For these reasons, the World Health Organization (WHO) recommends that breastfeeding be initiated within the first hour after a healthy birth and infants should be exclusively breastfed for the first six months (WHO, 2015). Thereafter, infants should receive nutritionally adequate and safe complementary foods while breastfeeding continues for up to 24 months of age or older (WHO, 2015). Exclusive breastfeeding is defined as the consumption of only breastmilk, no water, infant formula, or other solids or liquids, excluding drops and syrups such as vitamins, minerals, or medicines when recommended (WHO, 2017). Breastfeeding is not recommended for only a few medical conditions, such as infants with classic galactosemia and maternal HIV infection (for mothers living in developed countries) (Macdonald, 2006). Additionally, mothers receiving cytotoxic chemotherapy (Macdonald, 2006),

radioactive isotopes, or radiation therapy should discontinue breastfeeding for the duration of their treatment (WHO, 2009).

The WHO's breastfeeding recommendations are widely supported in Canada by the Canadian Nurses Association, Canadian Paediatric Society, Public Health Agency of Canada, and Health Canada (Canadian Nurses Association, 2008; Canadian Paediatric Society, 2020; Government of Canada, 2023; WHO, 2017). Despite widespread consensus regarding the health benefits of breastfeeding, low exclusive breastfeeding rates and early cessation rates are observed worldwide. Only 37% of infants worldwide are exclusively breastfeed for six months, and this rate has not changed meaningfully in nearly 20 years (WHO, 2017). Consequently, promoting breastfeeding has been identified as a major global health priority (WHO, 2015). In 2018, only 33% and 42% of Canadian women ages 18 to 24 and 35 to 49, respectively, exclusively breastfed until their infant was six months old (Statistics Canada, 2021).

Even though breastfeeding is a natural act, it is also a learned behavior (WHO, 2017); thus, some women require support to optimize their chances of breastfeeding in line with the WHO's recommendations (McFadden et al., 2017). Breastfeeding support refers to the help and encouragement to breastfeed provided by lay-persons/peers or professionals, including, nurses, certified lactation consultants, registered dieticians, and physicians (Feldman-Winter, 2013). Breastfeeding can be supported most effectively by practices that keep the mother and baby together, provide quality peer and professional support, and promote positive maternal mental health and well-being (Gavine et al., 2017; McFadden et al., 2017; Pérez-Escamilla et al., 2016).

COVID-19 Pandemic and Breastfeeding

In late 2019, a novel coronavirus, SARS-CoV-2, was first identified in Wuhan, China. By early 2020, COVID-19, the disease caused by SARS-CoV-2, began to spread in communities

throughout the world. The WHO classified COVID-19 as a pandemic on March 11, 2020 (WHO, 2021). The COVID-19 pandemic had a profound impact on the health, social, and economic well-being of people around the world**.** To minimise the spread of the respiratory virus and reduce the burden on health care systems, governments in most countries, including Canada, implemented varying levels of "lockdowns", and requested citizens to "stay at home" (Government of Canada, 2023). In Ontario, Canada, a provincial state of emergency was declared on March 17, 2020, initiating subsequent orders to limit direct social contact. These orders included limits to the number of people allowed to gather indoors and outdoors, closures of schools and daycares, bars and restaurants, health services that were deemed non-essential, recreational facilities, and other non-essential businesses (Canadian Institute for Health Information [CIHI], 2022). This led to an unprecedented level of isolation, with certain population groups, including mothers and their infants, being disproportionately affected (Shidhaye et al., 2020). Furthermore, there were significant changes to perinatal health services throughout the pandemic, such as, restrictions on the attendance of support persons during appointments, telephone, or online appointments instead of in-person (Dib et al., 2020). Many public health nurses, including those who provide perinatal services and breastfeeding support to families in the community, were redeployed to the pandemic response (Jack et al., 2021). While this was necessary in the context of the pandemic, these changes, coupled with reduced face-to-face support from family, friends, and peers, negatively affected many women's breastfeeding experiences and their perceptions of breastfeeding support during the COVID-19 pandemic (Dib et al., 2020).

Research Problem

The COVID-19 pandemic exposed gaps in Ontario's healthcare system and emergency preparedness planning, leaving vulnerable populations struggling to receive important health services (Udell et al., 2022). For example, the reduction of perinatal services, particularly the re-deployment of public health nurses providing breastfeeding support services throughout the pandemic, reflects a lack of emergency preparedness planning from our governments and public health units. Thus, further research is needed to establish a more thorough understanding of the breastfeeding support experiences among women in Ontario during the COVID-19 pandemic. Understanding mothers' experiences of breastfeeding and breastfeeding support during the pandemic is key to providing more appropriate and effective support during future pandemics.

Thesis Objective

The purpose of my research was to better understand the impact of the COVID-19 pandemic upon first-time mothers' ability to breastfeed, specifically, women's perceptions of breastfeeding support in Ontario, Canada during this unprecedented time. My research question was therefore, "What are the breastfeeding support experiences of first-time mothers in Ontario who gave birth during the COVID-19 pandemic?". My goal was to provide understanding of mothers' breastfeeding support experiences during the COVID-19 pandemic to inform improved interventions and policies during future pandemics or extended emergencies.

Thesis Layout

This thesis follows a thesis-by article format comprising of five chapters. In this first chapter, I have introduced the topic, described the research problem, and defined my thesis objectives. The second chapter is a literature review that outlines key literature relating to the research problem. To provide background information relevant to this topic, I briefly summarize the breastfeeding recommendations during the pandemic, followed by an outline of the

redeployment of public health nurses from Ontario public health units. To better understand breastfeeding support, I define and describe relevant literature pertaining to this topic. I then discuss the literature relating to the impact of the COVID-19 pandemic on breastfeeding experiences and perceived support received among women who gave birth during the COVID-19 pandemic. I discuss the findings from my review of the literature in the following sections: positive breastfeeding experiences and negative breastfeeding experiences. The third chapter describes the methodology and methods of this study. The fourth chapter describes the findings from this interpretive description study. Through my analysis of interview data collected from first-time mothers who had a baby during the COVID-19 pandemic I answer the research question, "What are the breastfeeding support experiences of first-time mothers in Ontario who gave birth during the COVID-19 pandemic?". This chapter is presented as a manuscript prepared to be submitted for publication in the "Journal of Community Health". Lastly, the fifth chapter of this thesis is a discussion of the study findings. My study is compared to current literature, and future implications for nursing research, practice, and policy are discussed.

References

Bowatte, G., Tham, R., Allen, K., Tan, D., Lau, M., Dai, X., & Lodge, C. (2015). Breastfeeding and childhood acute otitis media: A systematic review and meta-analysis. *Acta Paediatrica*, *104*(S467), 85–95. https://doi.org/10.1111/apa.13151

Caballero-Flores, G., Sakamoto, K., Zeng, M. Y., Wang, Y., Hakim, J., Matus-Acuña, V., Inohara, N., & Núñez, G. (2019). Maternal immunization confers protection to the offspring against an attaching and effacing pathogen through delivery of IgG in breast milk. *Cell Host & Microbe*, *25*(2), 313–323.e4. https://doi.org/10.1016/j.chom.2018.12.015

Canadian Institute for Health Information. (2022, October 13). *Canadian COVID-19 Intervention Timeline.* https://www.cihi.ca/en/canadian-covid-19-intervention-timeline#resources

Canadian Nurses Association. (2008, March). *Joint Position Statement. Joint statement on breastfeeding*. https://www.cna-aiic.ca/~/media/cna/page-content/pdf-en/jps94_breastfeeding_march_2008_e.pdf

Canadian Paediatric Society. (2020, August). *Breastfeeding*. https://caringforkids.cps.ca/handouts/healthy-living/breastfeeding#:~:text=The%20Canadian%20Paediatric%20Society%20recommends,well%20into%20the%20toddler%20years.

Chowdhury, R., Sinha, B., Sankar, M. J., Taneja, S., Bhandari, N., Rollins, N., Bahl, R., & Martines, J. (2015). Breastfeeding and maternal health outcomes: a systematic review and meta-analysis. *Acta Paediatrica*, *104*(S467), 96–113. https://doi.org/10.1111/apa.13102

Dib, S., Rougeaux, E., Vázquez-Vázquez, A., Wells, J., & Fewtrell, M. (2020). Maternal mental health and coping during the COVID-19 lockdown in the UK: Data from the COVID-19 New Mum Study. *International Journal of Gynecology and Obstetrics*, *151*(3), 407–414. https://doi.org/10.1002/ijgo.13397

Feldman-Winter, L. (2013). Evidenced-based interventions to support breastfeeding. *The Pediatric Clinics of North America*, *60*(1), 169-187. http://doi.org/10.1016/j.pcl.2012.09.007

Gavine, A., McFadden, A., MacGillivray, S., & Renfrew, M. J. (2017). Evidence reviews for the ten steps to successful breastfeeding initiative. *Journal of Health Visiting*, *5*(8), 378–380. https://doi.org/10.12968/johv.2017.5.8.378

Government of Canada. (2021, November 11). *Breastfeeding your baby.* https://www.canada.ca/en/public-health/services/health-promotion/childhood-adolescence/stages-childhood/infancy-birth-two-years/breastfeeding-infant-nutrition.html

Government of Canada. (2023, April 14). *Coronavirus disease (COVID-19): Measures to reduce COVID-19 in your community.* https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/prevention-risks/measures-reduce-community.html

Jack, S.M., Gonzalez, A., Orr, E., Campbell, K., Carsley, S., Croswell, L., Proulx, J., & Strohm, S. (2021). Impacts of the COVID-19 pandemic on Ontario's public health home visitation programs for families with young children: An environmental scan. School of Nursing, McMaster University. https://phnprep.ca/research/environmental-scan/

MacDonald, N. (2006). Maternal infectious diseases, antimicrobial therapy or immunizations: Very few contraindications to breastfeeding. *Paediatrics & Child Health*, *11*(8), 489–491. https://doi.org/10.1093/pch/11.8.489

McFadden, A., Gavine, A., Renfrew, M., Wade, A., Buchanan, P., Taylor, J., Veitch, E., Rennie, A., Crowther, S., Neiman, S., MacGillivray, S., & McFadden, A. (2017). Support for healthy breastfeeding mothers with healthy term babies. *Cochrane Library*, *2017*(2), CD001141–CD001141. https://doi.org/10.1002/14651858.CD001141.pub5

Pérez-Escamilla, R., Martinez, J. L., & Segura-Pérez, S. (2016). Impact of the baby-friendly hospital initiative on breastfeeding and child health outcomes: A systematic review. *Maternal & Child Nutrition*, *12*(3), 402–417. https://doi.org/10.1111/mcn.12294

Sankar, M. J., Sinha, B., Chowdhury, R., Bhandari, N., Taneja, S., Martines, J., & Bahl, R. (2015). Optimal breastfeeding practices and infant and child mortality: a systematic review and meta-analysis. *Acta Paediatrica, 104*(S467), 3–13. https://doi.org/10.1111/apa.13147

Shidhaye, R., Madhivanan, P., Shidhaye, P., & Krupp, K. (2020). An integrated approach to improve maternal mental health and well-being during the COVID-19 crisis. *Frontiers in Psychiatry*, *11*, 598746–598746. https://doi.org/10.3389/fpsyt.2020.598746

Statistics Canada. (2021). *Table 13-10-0096-22. Exclusive breastfeeding, at least 6 months, by age group*. http://doi.org/10.25318/1310009601-eng

Udell, J. A., Behrouzi, B., Sivaswamy, A., Chu, A., Ferreira-Legere, L. E., Fang, J., Goodman, S. G., Ezekowitz, J. A., Bainey, K. R., van Diepen, S., Kaul, P., McAlister, F. A., Bogoch, I. I., Jackevicius, C. A., Abdel-Qadir, H., Wijeysundera, H. C., Ko, D. T., Austin, P. C., & Lee, D. S. (2022). Clinical risk, sociodemographic factors, and SARS-

CoV-2 infection over time in Ontario, Canada. *Scientific Reports*, *12*(1), 10534–10534. https://doi.org/10.1038/s41598-022-13598-z

Victora, C. G., Bahl, R., Barros, A. J. D., França, G. V. A., Horton, S., Krasevec, J., Murch, S., Sankar, M. J., Walker, N., & Rollins, N. C. (2016). Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect. *The Lancet (British Edition)*, *387*(10017), 475–490. https://doi.org/10.1016/S0140-6736(15)01024-7

Walker, A. (2010). Breast milk as the gold standard for protective nutrients. *The Journal of Pediatrics, 156*(2), S3–S7. https://doi.org/10.1016/j.jpeds.2009.11.021

World Health Organization. (2003). *Global strategy for infant and young child feeding.* https://www.who.int/publications/i/item/9241562218

World Health Organization. (2009). *Acceptable medical reasons for use of breast-milk substitutes.* https://www.who.int/publications/i/item/WHO_FCH_CAH_09.01

World Health Organization. (2015). *Global strategy for women's, children's, and adolescents' health (2016–2030). Survive, thrive transform.* https://www.who.int/publications/i/item/A71-19

World Health Organization. (2017). *Guideline: Protecting, promoting, and supporting breastfeeding in facilities providing maternity and newborn services.* https://www.who.int/publications/i/item/9789241550086

World Health Organization. (2021, January 29). *Timeline: WHO's COVID-19 response.* https://www.who.int/news/item/29-06-2020-covidtimeline

Chapter 2: Literature Review

The purpose of this literature review is to synthesize the literature relevant to the breastfeeding support experiences among mothers who gave birth during the COVID-19 pandemic. To begin, I provide background information on this topic by outlining the recommendations for breastfeeding during the COVID-19 pandemic. I then describe the Ontario public health units' responses to the pandemic and issues related to the redeployment of public health nurses. In the subsequent section, I define breastfeeding support and provide an overview on relevant literature pertaining to this topic. Next, I describe the published literature pertinent to the impact of the COVID-19 pandemic on breastfeeding experiences and perceived support received among women who gave birth during the pandemic. Lastly, I discuss positive breastfeeding experiences, negative breastfeeding experiences, and the impact of maternal mental health on breastfeeding in the context of the COVID-19 pandemic.

Breastfeeding Recommendations During the COVID-19 Pandemic

Throughout the course of the pandemic, postpartum women were given contradictory messages about the safety of breastfeeding because of the possibility of the virus being transmitted through breastmilk (Brown et al., 2020). A narrative review by Caparros-Gonzaelz and colleagues (2020) identified SARS-CoV-2 ribonucleic acid (RNA) genetic material in breastmilk, however the evidence was unclear whether the virus can be transmitted through this route. Subsequently, a systematic review and meta-analysis of SARS-CoV-2 antibodies in breastmilk of mothers with COVID-19 found that antibodies in breastmilk were commonly identified, and there is a likelihood of potential immune protection for breastfed infants (Zhu et al., 2021). The protective qualities of breastmilk cannot be replicated by artificial formula, thus, highlighting the importance of protecting and promoting breastfeeding during the COVID-19

pandemic (Mitoulas et al., 2020). Therefore, the WHO (World Health Organization [WHO], 2020) recommends mothers continue breastfeeding since it reduces the risk of infants developing severe respiratory symptoms (WHO, 2020).

COVID-19 Response from Ontario Public Health Units

When the states of emergency were declared in Ontario because of COVID-19, there was a rapid reorganization in health care to protect citizens and treat patients by streamlining health care toward the pandemic (Rudrum, 2021). Many non-essential health services were suspended (Rudrum, 2021) and some appointments were delivered by videoconferencing or telephone to limit in-person contact (Brown et al., 2020; Kolker et al., 2021; Rice et al., 2021; Vazquez-Vazquez et al., 2021). Ontario public health units had a significant role in the COVID-19 response throughout the pandemic, including, contact tracing, phone line management and case management work (Jack et al., 2021). As such, many public health nurses were redeployed to support these efforts. This greatly impacted the traditional delivery of many public health programs and services, including the home visiting program Healthy Babies, Healthy Children (HBHC) (Jack et al., 2021). Public health nurses working in the HBHC program provide health promotion and disease prevention services, including breastfeeding support, to families with young children (Jack et al., 2021). However, results from an environmental scan of the deployment of HBHC staff during the COVID-19 pandemic identified that 70% of public health units redeployed more than 50% of their public health nurses working in HBHC programs to the COVID-19 response (Jack et al., 2021). With only half the number of public health nurses available to serve HBHC clients, health units had to prioritize or triage services towards families with the most complex needs (Jack et al., 2021). Moreover, 76% of public health units recommended or required substantial cutbacks to in-person home visits (Jack et al., 2021), and

used video conferencing or telephone calls to ‘meet’ with clients. This reduction in service created a gap in care for families with young children, with a significant reduction in breastfeeding support services available in the community. In the following section I define breastfeeding support and discuss the literature on its importance to help women be successful with breastfeeding.

Breastfeeding Support

For mothers who choose to breastfeed, the support available can greatly influence breastfeeding exclusivity and duration (Public Health Agency of Canada, 2019). There is a large body of nursing literature concluding that breastfeeding support improves the duration of breastfeeding (Britton et al., 2007; McFadden et al., 2017). A Cochrane review found that any form of breastfeeding support resulted in improved breastfeeding rates at six months (Britton et al., 2007). This support could be provided by either lay-persons/peers or professionals, however, a combination of both was reported to have the greatest impact on breastfeeding practices (Britton et al., 2007). The professional’s role in breastfeeding support is to offer information and practical support, while the lay-person/peer provides emotional support that is typically based on experiential knowledge (Dennis, 2003). Similarly, a systematic review of breastfeeding support for healthy breastfeeding, mothers reported that when breastfeeding support is provided to women, the duration of any breastfeeding and exclusive breastfeeding increases (McFadden et al., 2017). Again, support was found to be effective when offered by professionals or lay-persons/peers, or a combination of both. These findings suggest that mothers benefit from breastfeeding support offered by both professionals and lay-persons/peers to overcome difficulties and be able to breastfeed successfully.

Various breastfeeding support interventions have been developed to encourage mothers to initiate and maintain the recommended breastfeeding practices. Support interventions are complex and multi-dimensional. Support interventions are conducted on an individual or group basis, and include, home visiting programs, peer education programs, or appointments in a clinical setting (Bengough et al., 2018). The breastfeeding challenges addressed by support can include unrealistic expectations, difficulties with latch and positioning at the breast, pain, concerns about milk supply, and strategies for managing others' responses to breastfeeding (Feldman-Winter et al., 2013). Breastfeeding support can incorporate several elements such as emotional and esteem-building support (including reassurance and praise), practical support (including direct assistance), informational support (including responding to mother's questions) and social support (including directing mothers to support groups and networks) (Dykes, 2006; McFadden et al., 2017; Schmied et al., 2011). A systematic review of support for healthy breastfeeding mothers found that characteristics of effective support include regularly scheduled appointments so that the mother is aware of when support will be offered, trained personnel who provide support during the antenatal and postnatal period, and support that is tailored to the setting and needs of the individual (McFadden et al., 2017). It was also reported that strategies and interventions that require face-to-face support, rather than by telephone, are more likely to help women with their breastfeeding practices and to exclusively breastfeed (McFadden et al., 2017). However, this remains inconclusive as a systematic review of breastfeeding interventions in high-income countries did not identify online help as an effective way of delivering breastfeeding education or support (Skouteris et al., 2014). Therefore, it is unclear whether online or virtual breastfeeding support is an appropriate delivery method for breastfeeding support.

Breastfeeding Support During the COVID-19 Pandemic

Thirty-two articles pertaining to breastfeeding support and breastfeeding support in the context of COVID-19 pandemic were reviewed in detail. All peer-reviewed articles related to this topic were reviewed considering the pandemic was ongoing while the literature was conducted in late 2021and early 2022. These include national and international guidelines from the WHO (2), PHAC (1), and Canadian Nurses Association (1). While systematic reviews (5) and multinational studies (6) were available in the literature, they were conducted in the United States (7), European countries (7), Australia (2), and Canada (4). In the following sections, I synthesize this body of literature under the headings positive breastfeeding experiences and negative breastfeeding experiences, including the impact of these experiences on maternal mental health.

Positive Breastfeeding Experiences

While the literature mostly describes negative breastfeeding experiences during the COVID-19 pandemic, some studies described the positive aspects, including time for mothers to bond with their infant and partner, practice breastfeeding, and decreased stress related to not having visitors following birth and at home (Sakalidis et al., 2021; Shuman et al., 2022; Yip et al., 2022). The COVID-19 pandemic even motivated some women to continue to breastfeed because of concerns of infectious disease risks and formula shortages during the lockdown (Hull et al., 2020; Snyder et al., 2021). Hull and colleagues (2020) conducted a survey with the Australian Breastfeeding Association and found that the pandemic may have increased the perceived importance of breastfeeding and encouraged Australian mothers to seek out breastfeeding support. Interestingly, there was a significant increase in the number of women

seeking support for re-lactation because of infectious disease risk and concerns regarding infant formula availability (Hull et al., 2020).

For some mothers who breastfed, the COVID-19 pandemic did not impact their breastfeeding practices. A cross-sectional study performed in Belgium assessed the mental health of women who were pregnant and breastfeeding up to three months postpartum (Ceulemans et al., 2020). Here, it was found that more than 90% of respondents did not believe that the pandemic affected their breastfeeding practices or led to early breastfeeding cessation, and half of the women considered breastfeeding longer (Ceulemans et al., 2020). However, the authors acknowledged that selection bias might have occurred in this study since respondents were slightly older, highly educated, and more professionally active, compared to population data (Ceulemans et al., 2020). Similarly, results from a cross-sectional study regarding breastfeeding in Australia and New Zealand suggest the COVID-19 pandemic did not impact breastfeeding rates, with 82% of participants reporting exclusively breastfeeding (Sakalidis et al., 2021). It was found that the incidence and types of breastfeeding problems reported during the pandemic were consistent with those reported before the pandemic (Sakalidis et al., 2021). Despite the high rate of exclusive breastfeeding in the study sample, the findings support the need for accessible formal breastfeeding support during the pandemic (Sakadidis et al., 2021).

The COVID-19 pandemic allowed some mothers to spend more time at home with their infants (Fry et al., 2021; Hull et al., 2020; Siwik et al., 2022), which may be associated with improved maternal mental health outcomes among mothers (Pacheo et al., 2021). Participants from a Canadian study regarding the experiences of at-risk postpartum women accessing breastfeeding support during the pandemic described feelings of connectedness from having more quality time with their infants and partners (Siwik et al., 2022). Additionally, participants

from this study spoke about moments of resiliency and strength that affected their breastfeeding experiences (Siwik et al., 2022). For example, by focusing on the health of their family, participants were able to appreciate their postpartum experience in a different way by remaining optimistic. This optimism allowed some participants to cope more successfully and overcome the breastfeeding challenges they faced (Siwik et al., 2022). Having few visitors and a slower pace of life contributed positively towards maternal mental health among participants in a study conducted in Hong Kong (Yip et al., 2021). However, it is important to note that participants acknowledged their financial privilege, as well as having more support from partners who were working at home during the pandemic (Yip et al., 2021).

Negative Breastfeeding Experiences

In contrast to the findings from the studies in the previous paragraphs, the COVID-19 pandemic and resulting public health restrictions had negative repercussions for mothers and their infants (Loenwnthal et al., 2020). For example, in northeastern Italy, the COVID-19 pandemic and associated lockdowns contributed to a reduction in exclusive breastfeeding by 15% compared to women who gave birth in the previous year (Zanardo et al., 2021). Throughout the course of pandemic, a prevailing concern for women were accessing postnatal breastfeeding support. Numerous studies found the ability to obtain breastfeeding support was negatively impacted by the COVID-19 pandemic due to barriers to accessing traditional lactation support services and limited or no face-to-face appointments or interactions; typical of breastfeeding support (Brown et al., 2021; Costantini et al., 2021; Deyoung et al., 2021; Dib et al., 2020; Hull et al., 2020; Kolker et al., 2021; Rice et al., 2021; Siwik et al., 2022; Snyder et al., 2021; Vazquez-Vazquez et al., 2021; Yip et al., 2022).

The reduction of breastfeeding support was identified in a report pertaining to hospital practices implemented during the COVID-19 pandemic in the United States. Here, it was found that infant feeding was a common concern, and many patients indicated that they did not get the breastfeeding support they needed in the hospital due to reduced lactation support and early hospital discharge (Perrine et al., 2020). The apparent difficulties accessing breastfeeding support during the pandemic were also identified in an exploratory study completed in the United Kingdom (Costantini et al., 2021). Results from this study showed a significant reduction in healthcare support and advice for women who were breastfeeding during the first wave of the COVID-19 lockdown in the United Kingdom (Costantini et al., 2021).

Following discharge from the hospital, women experienced difficulties getting help with breastfeeding (Fry et al., 2021). In this cross-sectional study conducted in Nova Scotia, participants reported having concerns about access to postnatal health care and breastfeeding support in the community (Fry et al., 2021). They reported that follow up appointments with doctors and lactation consultant were often cancelled (Fry et al., 2021). Women who chose to breastfeed emphasized the need for more in-person formal and informal practical support for breastfeeding during the COVID-19 pandemic (Synder et al., 2021). In several studies, women reported the inability to access in-person practical support for breastfeeding as a reason for changing their method of feeding and breastfeeding cessation (Brown et al., 2021; Deyoung et al., 2021; Dib et al., 2020; Hull et al., 2020; Rice et al., 2021; Shuman et al., 2022).

There is further evidence from the literature to suggest difficulties accessing breastfeeding support during the COVID-19 pandemic contributed to breastfeeding difficulties and poor breastfeeding outcomes (Shuman et al., 2022). Women who took part in this study, had concerns related to initiating or continuing their breastfeeding practices, which they attributed to

a lack of breastfeeding support and resources during the pandemic (Shuman et al., 2022). Furthermore, studies indicate that women believed the heightened stress caused by the pandemic and lack of formal breastfeeding support contributed to a decrease in their milk supply (Hull et al., 2020; Shuman et al., 2022; Viswanath et al., 2020) and reduction in breastfeeding confidence (Viswanath et al., 2020). Additional feeding concerns were reported by Australian mothers seeking breastfeeding support for insufficient infant weight gain, painful breasts, re-lactation and reducing supplemental milk (Hull et al., 2020). While these are common breastfeeding concerns, some women attributed the stress associated with the pandemic to their reduced milk supply, and concerns about their milk supply were exacerbated by a delay in seeking medical treatment and the inability to have their baby weighed in a clinical setting (Hull et al., 2020).

Some healthcare providers switched to online or phone call appointments to help women with breastfeeding, however, in two Canadian studies, participants found online breastfeeding supports to be ineffective at helping women successfully breastfeed (Kolker et al., 2021; Rice et al., 2021). While some described positive aspects of virtual care, more described its inadequacies, such as the lack of hands-on practical support was challenging and did not meet their needs (Kolker et al., 2021). This resulted in women having many questions about breastfeeding and few opportunities for effective support (Kolker et al., 2021).

The COVID-19 pandemic had a particularly negative impact upon first-time mothers. A multi-national study conducted in Europe in April 2020 found that women's medical counseling and social support were negatively affected by the lockdown, and this was especially burdensome for women without previous breastfeeding experience (Ceulemans et al., 2020). Similarly, it was found that first-time mothers may be at higher risk of early breastfeeding cessation due to lack of support during the lockdown (Ceulemans et al., 2020; Snyder et al.,

2021). Further, a descriptive phenomenological study conducted in Hong Kong regarding breastfeeding experiences during the COVID-19 pandemic found the lack of in-person support for breastfeeding was especially challenging among first-time mothers (Yip et al., 2022).

Maternal Mental Health

Evidence from the literature review suggests that the COVID-19 pandemic negatively impacted the mental health and well-being among women who gave birth during the pandemic (Deyoung et al., 2021; Dib et al., 2020; Ceulemans et al., 2021; Gonzalez et al., 2021; Harrison et al., 2021; Yip et al., 2022). In their multi-national study, Ceulemans and colleagues (2021) reported a severe increase in maternal mental health issues such as anxiety and depression during the COVID-19 pandemic. Perceived social support is crucial to postnatal psychological well-being (Harrison et al, 2021) and the isolation associated with the pandemic contributed to poor maternal mental health (Fry et al., 2021; Kolker et al., 2021; Shuman et al., 2022; Snyder et al., 2021; Yip et al., 2022). Additionally, limited access to breastfeeding supports during the postpartum period resulted in women experiencing isolation, depression, and anxiety (Silverman et al., 2020; Viswanath et al., 2020). These results are not surprising, considering social isolation and difficulties with breastfeeding are associated with an increased risk of postpartum depression and anxiety (Demirici, 2020; Pacheco et al., 2021).

A comparative study examining the psychological effects caused by the COVID-19 pandemic on women who were pregnant, found more psychopathology and stress symptoms (higher levels of depression and phobic anxiety) in women pregnant during the pandemic compared to a comparative pre-pandemic group (Puertas-Gonzalez et al., 2021). This finding is relevant to breastfeeding outcomes as mood disorders may exacerbate breastfeeding difficulties and lead to early breastfeeding cessation (Demirici, 2020).

The pandemic not only contributed to higher levels of emotional distress for women postpartum but the 'stay at home' orders and social distancing measures made it difficult for them to use their typical coping mechanisms, such as visiting friends or going to the gym (Shuman et al., 2022). Thus, women who gave birth during the COVID-19 pandemic described having difficulties navigating postpartum life (Shuman et al., 2022). For example, participants from a study conducted in Nova Scotia reported that not having access to public health drop-ins, breastfeeding support groups, and worrying about their baby getting sick contributed to feelings of isolation, stress, and anxiety (Fry et al., 2021). The lack of support due to pandemic social restrictions resulted in women feeling a profound sense of loss of what they thought their pregnancy and postpartum period should have been (Kolker et al., 2021; Shuman et al., 2022).

In two Canadian studies, women reported the separation from their friends and family during the COVID-19 pandemic greatly impacted their mental health (Fry et al., 2021; Kolker et al., 2021), and resulted in an absence of much-needed support for them and their baby (Kolker et al., 2021). The importance of family support for maternal wellbeing was further highlighted in a study by Sakalidis and colleagues. Here, it was found that lower scores of family function were related to lower levels of mental wellbeing among participants (Sakalidis et al., 2021).

As discussed, evidence from the literature review suggest the lack of both formal and informal support with breastfeeding during the pandemic was burdensome for many women who chose to breastfeed. Despite social restrictions during the pandemic, participants from two studies reported allowing friends and family into their homes to get the support they needed (Kolker et al., 2021; Rice et al., 2021). However, participants recounted this caused them feelings of stress and guilt (Rice et al., 2021), and risked their baby becoming infected with COVID-19 (Kolker et al., 2021).

Conclusion

Breastfeeding research has been found to improve lives and advance health (WHO, 2017), making it an important topic for nursing research. Nurses have a direct role in providing breastfeeding support to this population in settings such as primary care, obstetrical units, and public health. The pandemic has forced many healthcare professionals, including nurses, to implement and adapt to new and innovative ways to provide support to families, such as through virtual platforms or telephone appointments (Pasadino et al., 2020). Breastfeeding support delivered through these means differs from traditional in-person lactation support (Demirci, 2020), therefore, it is important to understand women's perception of this support in this new context. As previously stated, lack of perceived support and poor maternal mental health can negatively impact breastfeeding practices (Deyoung et al., 2021). Without access to critical lactation support, achieving the WHO's recommendations for breastfeeding becomes unattainable for many (Demirci, 2020). In the discussion of women's breastfeeding experiences throughout the pandemic, breastfeeding support was a key phenomenon mentioned throughout the literature. Furthermore, results from the literature found that women's perceptions and experiences of breastfeeding and breastfeeding support during the COVID-19 pandemic varied across settings and contexts, reflecting both positive and negative experiences (Brown et al., 2021; Snyder et al., 2021; Vazquez-Vazquez et al., 2021; Zanardo et al., 2021). There are limited qualitative studies and research in general conducted in Ontario pertaining to this topic, therefore, my research will help to fill this gap in the literature. This thesis provides insight into women's experiences of breastfeeding support in Ontario during this unprecedented time in history.

References

Bengough, T., Von Elm, E., Heyvaert, M., & Hannes, K. (2018). Factors that influence women's engagement with breastfeeding support: a qualitative evidence synthesis. *Cochrane Database of Systematic Reviews*, *2018*(9). https://doi.org/10.1002/14651858.CD013115

Britton, C., McCormick, F., Renfrew, M., Wade, A., & King, S. (2007). Support for breastfeeding mothers. *Cochrane Database of Systematic Reviews*, *1*, CD001141–CD001141.

Brown, A., & Shenker, N. (2021). Experiences of breastfeeding during COVID-19: Lessons for future practical and emotional support. *Maternal and Child Nutrition*, *17*(1), e13088–n/a. https://doi.org/10.1111/mcn.13088

Caparros-Gonzalez, R. A., Pérez-Morente, M. A., Hueso-Montoro, C., Álvarez-Serrano, M. A., & de la Torre-Luque, A. (2020). Congenital, intrapartum, and postnatal maternal-fetal-neonatal SARS-CoV-2 infections: A narrative review. *Nutrients, 12*(11), 3570–. https://doi.org/10.3390/nu12113570

Ceulemans, M., Verbakel, J., Van Calsteren, K., Eerdekens, A., Allegaert, K., & Foulon, V. (2020). SARS-CoV-2 infections and impact of the COVID-19 pandemic in pregnancy and breastfeeding: Results from an observational study in primary care in Belgium. *International Journal of Environmental Research and Public Health*, *17*(18), 1–10. https://doi.org/10.3390/ijerph17186766

Ceulemans, M., Foulon, V., Ngo, E., Panchaud, A., Winterfeld, U., Pomar, L., Lambelet, V., Cleary, B., O'Shaughnessy, F., Passier, A., Richardson, J., Hompes, T., & Nordeng, H. (2021). Mental health status of pregnant and breastfeeding women during the COVID-19

pandemic-A multinational cross-sectional study. *Acta Obstetricia et Gynecologica Scandinavica*. https://doi.org/10.1111/aogs.14092

Costantini, C., Joyce, A., & Britez, Y. (2021). Breastfeeding experiences during the COVID-19 lockdown in the United Kingdom: An exploratory study into maternal opinions and emotional states. *Journal of Human Lactation*, *37*(4), 649–662. https://doi.org/10.1177/08903344211026565

Demirci, J. (2020). Breastfeeding support in the time of COVID-19. *The Journal of Perinatal & Neonatal Nursing*, *34*(4), 297–299. https://doi.org/10.1097/JPN.0000000000000521

Dennis, C. (2003). Peer support within a health care context: a concept analysis. *International Journal of Nursing Studies*, *40*(3), 321–332. https://doi.org/10.1016/S0020-7489(02)00092-5

DeYoung, S., & Mangum, M. (2021). Pregnancy, birthing, and postpartum experiences during COVID-19 in the United States. *Frontiers in Sociology*, *6*. https://doi.org/10.3389/fsoc.2021.611212

Dib, S., Rougeaux, E., Vázquez-Vázquez, A., Wells, J., & Fewtrell, M. (2020). Maternal mental health and coping during the COVID-19 lockdown in the UK: Data from the COVID-19 New Mum Study. *International Journal of Gynecology and Obstetrics*, *151*(3), 407–414. https://doi.org/10.1002/ijgo.13397

Dykes, F. (2006). The education of health practitioners supporting breastfeeding women: time for critical reflection. *Maternal and Child Nutrition, 2*(4), 204–216. https://doi.org/10.1111/j.1740-8709.2006.00071.x

Feldman-Winter, L. (2013). Evidenced-based interventions to support breastfeeding. *The Pediatric Clinics of North America*, *60*(1), 169-187. http://doi.org/10.1016/j.pcl.2012.09.007

Fry, H. L., Levin, O., Kholina, K., Bianco, J. L., Gallant, J., Chan, K., & Whitfield, K. C. (2021). Infant feeding experiences and concerns among caregivers early in the COVID-19 state of emergency in Nova Scotia, Canada. *Maternal and Child Nutrition, 17*(3), e13154–n/a. https://doi.org/10.1111/mcn.13154

Harrison, V., Moulds, M., & Jones, K. (2021). Support from friends moderates the relationship between repetitive negative thinking and postnatal wellbeing during COVID-19. *Journal of Reproductive and Infant Psychology*, 1–16. https://doi.org/10.1080/02646838.2021.1886260

Hull, N., Kam, R. L., & Gribble, K. D. (2020). Providing breastfeeding support during the COVID-19 pandemic: Concerns of mothers who contacted the Australian Breastfeeding Association. Breastfeeding Review, 28(3), 25–35.

Jack, S.M., Gonzalez, A., Orr, E., Campbell, K., Carsley, S., Croswell, L., Proulx, J., & Strohm, S. (2021). Impacts of the COVID-19 pandemic on Ontario's public health home visitation programs for families with young children: An environmental scan. School of Nursing, McMaster University. https://phnprep.ca/research/environmental-scan/

Kolker, S., Biringer, A., Bytautas, J., Blumenfeld, H., Kukan, S., & Carroll, J. C. (2021). Pregnant during the COVID-19 pandemic: an exploration of patients' lived experiences. *BMC Pregnancy and Childbirth*, *21*(1), 851–851. https://doi.org/10.1186/s12884-021-04337-9

Loewenthal, G., Abadi, S., Avram, O., Halabi, K., Ecker, N., Nagar, N., Mayrose, I., & Pupko, T. (2020). COVID-19 pandemic-related lockdown: response time is more important than its strictness. *EMBO Molecular Medicine*, *12*(11), e13171–n/a. https://doi.org/10.15252/emmm.202013171

McFadden, A., Gavine, A., Renfrew, M., Wade, A., Buchanan, P., Taylor, J., Veitch, E., Rennie, A., Crowther, S., Neiman, S., MacGillivray, S., & McFadden, A. (2017). Support for healthy breastfeeding mothers with healthy term babies. *Cochrane Library*, *2017*(2), CD001141–CD001141. https://doi.org/10.1002/14651858.CD001141.pub5

Mitoulas, L. R., Schärer-Hernández, N. G., & Liabat, S. (2020). Breastfeeding, human milk and COVID-19-what does the evidence say? *Frontiers in Pediatrics*, 8, 613339–613339. https://doi.org/10.3389/fped.2020.613339

Pacheco, F., Sobral, M., Guiomar, R., de la Torre-Luque, A., Caparros-Gonzalez, R., & Ganho-Ávila, A. (2021). Breastfeeding during COVID-19: A narrative review of the psychological impact on mothers. *Behavioral Sciences*, *11*(3), 34–. https://doi.org/10.3390/bs11030034

Pasadino, F., DeMarco, K., & Lampert, E. (2020). Connecting with families through virtual perinatal education during the COVID-19 pandemic. *MCN, the American Journal of Maternal Child Nursing*, *45*(6), 364–370. https://doi.org/10.1097/NMC.0000000000000665

Perrine, C., Chiang, K., Anstey, E., Grossniklaus, D., Boundy, E., Sauber-Schatz, E., & Nelson, J. (2020). Implementation of hospital practices supportive of breastfeeding in the context of COVID-19 - United States, July 15-August 20, 2020. *MMWR. Morbidity and*

Mortality Weekly Report, *69*(47), 1767–1770. https://doi.org/10.15585/mmwr.mm6947a3

Public Health Agency of Canada. (2019). *Chapter 6: Breastfeeding-Family-Centred Maternity and Newborn Care: National Guidelines*. https://www.canada.ca/en/public-health/services/publications/healthy-living/maternity-newborn-care-guidelines-chapter-6.html

Puertas-Gonzalez, J. A., Mariño-Narvaez, C., Peralta-Ramirez, M. I., & Romero-Gonzalez, B. (2021). The psychological impact of the COVID-19 pandemic on pregnant women. Psychiatry Research, 301, 113978–113978. https://doi.org/10.1016/j.psychres.2021.113978

Rice, K., & Williams, S. (2021). Women's postpartum experiences in Canada during the COVID-19 pandemic: a qualitative study. *CMAJ Open*, *9*(2), E556–E562. https://doi.org/10.9778/cmajo.20210008

Rudrum, S. (2021). Pregnancy during the global COVID-19 pandemic: Canadian experiences of care. *Frontiers in Sociology*, 6, 611324–611324. https://doi.org/10.3389/fsoc.2021.611324

Sakalidis, V. S., Rea, A., Perrella, S. L., McEachran, J., Collis, G., Miraudo, J., Prosser, S. A., Gibson, L. Y., Silva, D., & Geddes, D. T. (2021). Wellbeing of breastfeeding women in Australia and New Zealand during the COVID-19 pandemic: A cross-sectional study. *Nutrients, 13*(6), 1831–. https://doi.org/10.3390/nu13061831

Shuman, C. J., Morgan, M. E., Chiangong, J., Pareddy, N., Veliz, P., Peahl, A. F., & Dalton, V. K. (2022). Mourning the experience of what should have been: Experiences of

peripartum women during the COVID-19 pandemic. *Maternal and Child Health Journal*, *26*(1), 102–109. https://doi.org/10.1007/s10995-021-03344-8

Silverman, M. E., Burgos, L., Rodriguez, Z. I., Afzal, O., Kalishman, A., Callipari, F., Pena, Y., Gabay, R., & Loudon, H. (2020). Postpartum mood among universally screened high and low socioeconomic status patients during COVID-19 social restrictions in New York City. *Scientific Reports*, *10*(1), 22380–22380. https://doi.org/10.1038/s41598-020-79564-9

Siwik, E., Larose, S., Peres, D., Jackson, K. T., Burke, S. M., & Mantler, T. (2022). Experiences of at-risk women in accessing breastfeeding social support during the COVID-19 pandemic. *Journal of Human Lactation*, *38*(3), 422–432. https://doi.org/10.1177/08903344221091808

Skouteris, H., Nagle, C., Fowler, M., Kent, B., Sahota, P., & Morris, H. (2014). Interventions designed to promote exclusive breastfeeding in high-income countries: A systematic review. *Breastfeeding Medicine*, *9*(3), 113–127. https://doi.org/10.1089/bfm.2013.0081

Schmied, V., Beake, S., Sheehan, A., McCourt, C., & Dykes, F. (2011). Women's perceptions and experiences of breastfeeding support: A metasynthesis. *Birth, 38*(1), 49–60. https://doi.org/10.1111/j.1523-536X.2010.00446.x

Snyder, K., & Worlton, G. Social support during COVID-19: Perspectives of breastfeeding mothers. *Breastfeed Med, 16*(1),39-45. http://doi.org/10.1089/bfm.2020.0200

Vazquez-Vazquez, A., Dib, S., Rougeaux, E., Wells, J., & Fewtrell, M. (2021). The impact of the COVID-19 lockdown on the experiences and feeding practices of new mothers in the UK: Preliminary data from the COVID-19 New Mum Study. *Appetite*, *156*, 104985–104985. https://doi.org/10.1016/j.appet.2020.104985

Viswanath, S., & Mullins, L. B. (2021). Gender responsive budgeting and the COVID-19 pandemic response: a feminist standpoint. *Administrative Theory & Praxis*, *43*(2), 230–244. https://doi.org/10.1080/10841806.2020.1814080

World Health Organization. (2020, June 23). *Breastfeeding and COVID-19.* https://www.who.int/news-room/commentaries/detail/breastfeeding-and-covid-19

Yip, K.-H., Yip, Y.-C., & Tsui, W.-K. (2022). The lived experiences of women without COVID-19 in breastfeeding their infants during the pandemic: A descriptive phenomenological study. *International Journal of Environmental Research and Public Health*, *19*(15), 9511–. https://doi.org/10.3390/ijerph19159511

Zanardo, V., Tortora, D., Guerrini, P., Garani, G., Severino, L., Soldera, G., & Straface, G. (2021). Infant feeding initiation practices in the context of COVID-19 lockdown. *Early Human Development*, *152*, 105286–105286. https://doi.org/10.1016/j.earlhumdev.2020.105286

Zhu, F., Zozaya, C., Zhou, Q., De Castro, C., & Shah, P. S. (2021). SARS-CoV-2 genome and antibodies in breastmilk: a systematic review and meta-analysis. Archives of Disease in Childhood. *Fetal and Neonatal Edition, 106*(5), 514–521. https://doi.org/10.1136/archdischild-2020-3210

Chapter 3: Methodology

Research Design

The qualitative approach of interpretive description was used for this study. Qualitative research is an approach to scientific inquiry that seeks to generate knowledge for which depth and contextual understanding would be valuable and measurement is unsuitable or even possibly misleading (Thorne, 2016). Qualitative researchers in the discipline of nursing tend to focus upon patterns and themes representative of individual human experience of health or illness (Thorne, 2016). Thorne (2016) states, "Nursing is a professional discipline explicitly mandated to apply knowledge to the resolution of human health and illness problems within society" (p. 47). The methodological assumptions which guided this study are in line with Sally Thorne's interpretive description (ID) (Thorne, 1997). ID methodology is an analytical, inductive approach that can be applied to qualitative inquiry into human health and illness experiences that have consequences for the clinical context and practice in health, for the purpose of developing nursing knowledge of interest to nursing researchers (Thorne et al., 1997). Having roots in phenomenology, ethnography, and data-based theory, ID borrows methodological tools common to these methods (Thorne, 2016). However, in contrast to these methods, ID uses these tools to propose practical solutions to the health problems in a clinical context, with less concern of theorizing the results (Teodoro et al., 2018). ID developed from the need to make understanding of complex experiential clinical phenomenon that would be applicable and useful to the practice of nursing concerned with questions from a practical or clinical context (Thorne, 2016). For this reason, this approach fits well within my research interests and will contribute directly to an understanding of women's breastfeeding support experiences during the COVID-19 pandemic and what healthcare professionals and policymakers can do to make a difference. A recent

systematic review and meta-analysis reported that qualitative research has not been widely used in the evaluation of breastfeeding support interventions and has importance in examining intervention processes (Meedya et al., 2017). Qualitative research can help identify women's feelings and experiences during educational and supportive interventions. This type of research is needed to capture the interpersonal processes in breastfeeding support interventions (Meedya et al., 2017).

In the following paragraphs I describe how I formulated my research question and design for this study. I then describe the expertise of my thesis committee members, as they assisted me throughout the research process.

Reflexivity

According to Thorne (2016), it is essential that the researcher practice reflexivity to create a high-quality interpretive description study. This involves questioning one's own personal values and assumptions by reflecting on factors that may have influenced the research process (Thorne, 2016). Working in the field of public health in Ontario during the COVID-19 pandemic inspired this research. In my role as a public health nurse, I noticed an abrupt and drastic reduction in the delivery of public health programs and services because most nursing staff were being deployed to pandemic-related work. I was concerned about how pregnant women and families with young children were impacted by the reduction of health services pertaining to this population. Home visits with public health nurses and lay-persons through the Healthy Babies Healthy Children (HBHC) program were suspended, likewise, peer-to-peer support groups for parents of young children. Appointments at breastfeeding clinics were mostly conducted over the telephone, with in-person appointments being either cancelled entirely at times or limited to those experiencing serious and complex feeding issues such as infant weight

loss. In addition, it seemed as though women and their infants were being discharged from the hospital earlier than usual. It became apparent that this population was experiencing a reduction in both professional and peer support. This ultimately had me questioning the impact of the COVID-19 pandemic on maternal and infant health, particularly around infant feeding. I defined my research questions and chose my research design with the help of my thesis supervisor, Dr. Wendy Peterson (WP). This allowed me to further understand and explore the literature pertaining to this topic. WP assisted me in assembling my thesis committee, comprising of two additional members, Dr. Christine McPherson (CM), and Dr. Rosann Edwards (RE). Combined, these three individuals have extensive knowledge and experience that support my research interests. WP leads a program of research that critically examines the quality of perinatal health services, with a particular focus on identifying areas for improvement from the experiences of pregnant people and their families. She has research expertise in perinatal health care services, qualitative and mixed methods research. CM has extensive knowledge of research methods. In addition to teaching research methods at both the undergraduate and graduate levels for many years, she conducts her own qualitative research and supervises students' theses using ID. RE spent nearly 15 years as a frontline public health nurse and Lactation Consultant (IBCLC) working with at-risk perinatal women and families in Eastern Ontario and was redeployed from that role to the public health unit's pandemic response in March of 2020. RE's current program of research focuses on giving voice to vulnerable system-involved mothers and their children in Atlantic Canada. She is also a member of the International Lactation Education Accreditation and Approval Review Committee board and co-editor of the 8th edition of "Counseling the Nursing Mother."

After selecting this topic for my thesis, I became pregnant and gave birth to my first child during the COVID-19 pandemic. Most participants were aware I became a mother during the pandemic which put me in a unique position as a researcher, since I could relate to many of their experiences navigating motherhood and breastfeeding during the pandemic. Throughout data collection I was careful not to disclose too much of my breastfeeding journey as I did not want to influence their responses in any way. Therefore, I continuously reflected on my own beliefs and potential biases in field notes throughout the data collection and data analysis in the form of a reflective diary. This allowed me to demonstrate how conclusions and interpretations were made during this iterative process. Through reflection as well as recognizing influential factors throughout my research, I have produced a high-quality interpretive description study.

Sampling

Purposeful sampling was used for this study. This is a sampling strategy commonly used in qualitative research to identify and select individuals or groups of individuals that are particularly knowledgeable about or have experiences with a phenomenon of interest. (Creswell et al., 2011). I identified in advance of the study the main groupings or conditions to be included in the study (Robinson, 2014). Research participants included first-time mothers who resided in Ontario and gave birth during the COVID-19 pandemic, that being, on or after March 11, 2020. Inclusion criteria comprised of first-time mothers, since women with other children may have previous breastfeeding experience, therefore may be more comfortable in their breastfeeding practice and less reliant on support. Results from the literature, support this sampling, as it was found women without previous breastfeeding experience reported that medical counseling and social support were negatively affected by the lockdown and first-time mothers may be at higher risk of early breastfeeding cessation due to lack of support (Ceulemans et al., 2020; Snyder et al.,

2021). Additional inclusion criteria included women who have any experience breastfeeding their child (by breast, pumped breastmilk, mixed-feeding, or donor milk) and women who tried to breastfeed but were unsuccessful. Participants could speak, read, and/or comprehend English. Exclusion criteria are first-time mothers whose babies were born premature and/or admitted to the NICU. A systematic review supports this, as infants born prematurely and admitted to the NICU are more likely to experience complex feeding difficulties that often continue after hospital discharge (Ross et al., 2013). Additionally, I did not interview anyone who I have a personal relationship with beyond social media or anyone who I have a professional relationship with.

Recruitment

After posting the recruitment post (see Appendix B) on my personal Instagram and Facebook accounts, I received direct messages on these platforms from women who expressed interest in participating in this study. Further communication occurred through e-mail using my University of Ottawa e-mail address. When a participant contacted me, the inclusion criteria was first reviewed with them by e-mail to ensure they met the criteria as previously described. If they met the inclusion criteria, I then sent them the consent form via e-mail attachment (see Appendix C). Once the consent form was signed by myself and the participant, I scheduled a date and time for the interview that was mutually agreed upon and convenient for the participant. I conducted interviews using Microsoft Teams over the months of April and May 2021.

In addition to purposeful sampling, snowball sampling was used in the recruitment of participants. This sampling strategy occurs when participants refer other potential participants (Polit et al., 2021). Snowball sampling occurred naturally following posting my recruitment post as several participants asked if they could share my recruitment post with other mothers who

may be interested in participating in the study. I agreed and was able to recruit other participants using this sampling strategy.

I used social media to recruit participants for this study. Social media refers to digital platforms that allow users to create and share content, online profiles, and to interact with other users on the platform (Schimmele et al., 2021). There are a wide variety of social media platforms, such as Facebook, Instagram, Snapchat, Twitter, LinkedIn, and YouTube. Social media use is prevalent across people of childbearing age, with 90% of Canadians ages 15 to 34 reporting regular social media use, and roughly 80% of those ages 35 to 49 (Schimmele et al., 2021). Given the extraordinary rate at which social media platforms are used for daily information exchange, social media is becoming increasingly relevant to research with humans (Arigo et al., 2018). A recent study conducted in the US, pertaining to the experiences of women who gave birth during the COVID-19 pandemic recruited participants through social media (Shuman et al., 2022). Using social media for recruitment into clinical studies may increase reach to a broader, more diverse audience (Arigo et al., 2018). Another benefit of using social media to recruit participants is there is no cost associated with it.

The social media platforms I used to recruit participants for this study are Facebook and Instagram, since these are the two social media platforms with which I am most familiar. I posted the recruitment post (see Appendix B) on my personal Facebook and Instagram accounts twice, two-weeks apart. Prior to posting, I sent a modification request to ethics to have the option to re-post my recruitment post two and four weeks after the initial post-date if I was unsuccessful at obtaining the desired number of participants. This was suggested by a member of my thesis advisory committee. After the second post, I had scheduled interviews with thirteen women who met the inclusion criteria. I chose to not post a third time since the sample size had enough

variability for an interpretive descriptive study (Thorne, 2016). I allowed the post to be shared by my Facebook "friends" and Instagram "followers", with the hope that it would reach a larger audience.

Sample Size

The sample size in ID may vary, although, as with most qualitative research, many studies within this approach use relatively small sample groups ranging from five and 30 participants (Thorne, 2016). Thorne (2016) states that patients theoretically represent infinite variation in relation to their experiences with health care, therefore data saturation is not a desired outcome in ID studies. In line with the disciplinary context of health research, I focused on obtaining a deeper understanding of the participants' perspectives while acknowledging that outliers may exist, in which there may be individuals with characteristics that differ from others. For my research, I planned to interview between 5-15 participants. Nineteen people expressed interest in participating in the study but only fourteen met the inclusion criteria. Of those, I did not hear back from one person therefore I interviewed thirteen participants. The demographic information collected from participants during interviews are displayed in Table 1.

Table 1. Participant Demographics

Characteristic	Number (N = 13)
Age	
< 25	1
26-30	7
31-36	2
36-40	2
>40	1
Geographic area	
Rural	5
Urban	8
Highest level of education completed:	
Secondary School	1
College or University	11
University graduate degree/certificate	1
Household income	
$50,000-$100,000	3
$100,000-$150,000	7
> $150,000	3
Prenatal intention to breastfeed	
Yes	13
No	0
Healthcare provider during childbirth	
Obstetrician	8
Midwife	5
Mode of delivery	
Vaginal	10
Caesarean	3
Partner/support person postpartum	
Yes	12
No	1

Data Collection

Data were collected through one-on-one semi-structured interviews using the video-conferencing software Microsoft Teams. Interviews lasted between 15 minutes to one hour in duration. I prepared an interview guide prior to conducting the interviews (see Appendix D). The interview guide consisted of ten demographic questions followed by eight open-ended questions to gain insight into the phenomenon of interest. For participating in this study, participants

received a token gift of $10 to Walmart in the form of an e-gift-card. If participants chose to withdraw from the study at any point, they would still receive the e-gift-card, however, this did not occur. I took field notes immediately following each interview to capture observations and the contexts in which they occurred, such as participants' reactions and non-verbal language. This helped maintain the integrity of the participants' responses and stories, note emerging themes, and helped to contextualize the data during the analysis (Thorne, 2016). I also used field notes as a reflective diary to keep track of my personal responses to the ongoing research (Thorne, 2016).

Data Analysis

Interviews were audio-recorded using a digital recording device and transcribed verbatim following each interview. As with most qualitative research, I used inductive rather than deductive analysis in this study (Thorne, 1997). In the preliminary stages of analysis, I avoided premature coding, and what codes in general represented. Instead, I focused on grasping a comprehensive picture of the data. Keeping in line with Thorne et al.'s recommendations regarding data analysis, I read each transcript several times and asked myself broader questions such as, "What is happening here?" (Thorne et al., 2004 p. 7). This helped keep the contextual data intact, allowing me to concentrate on and engage in the process of intellectual inquiry, which is the foundation of qualitative data analysis (Thorne et al., 2004). I printed the transcripts and highlighted quotes I felt were important; organizing them into two categories: positive and negative breastfeeding support experiences. Next, I uploaded the transcripts to the qualitative data analysis software NVivo. Here, I read the highlighted fragments and wrote notes in the margins about the meaning of that passage to form initial codes. I re-read the highlighted fragments and the notes, then re-read the transcripts, to see if my codes made sense. I repeated

this process several times until I produced patterns which developed into initial themes and sub-themes. During data collection and upon completion of the interviews I met with my supervisor (WP) several times to discuss the transcripts and field notes I took following each interview. She encouraged me to develop a deeper understanding of the data and find a relationship between the themes by creating a visual representation. I developed a flow chart to create a visual representation of the themes and how they connected. Following completion of the interviews, I had meetings with my thesis committee to discuss my data analysis. Prior to the initial meeting I sent CM and RE each a de-identified transcript to review. During our meetings I discussed the transcripts and my findings from the on-going data analysis. They discussed their interpretations and provided feedback which I deliberated and drafted my themes. In collaboration, we agreed on the properties of the themes and thematic structure.

Rigor and Credibility

Attention to rigor and credibility in the process and the reporting of that process is critical to ID studies (Thorne et al., 1997). Prion et al. (2014) define rigor as the "criteria for trustworthiness of data collection, analysis and interpretation" (p. 107). To enhance rigour, I included members of my thesis advisory committee throughout the research process. For example, after reading over several interview transcripts, we met to discuss and compare our analyses and themes.

Credibility can be defined as, "the truthfulness of the data and its subsequent interpretation" (Prion et al., 2014, p. 107). Credibility can be ensured through methods such as validating interpretations throughout the analysis. To increase validity of the results, I carefully read over all transcribed data several times to develop a sense of the data as a whole. It then became possible for me to obtain a broad overview of the data to consider similarities and

differences in relation to the variations between interviews (Thorne, 2016). According to Thorne et al. (2004), the credibility of findings is achieved when "complexities are made visible through the analytic process and are articulated with an openness or "criterion of uncertainty" that acknowledges a certain tentativeness about the final research outcome" (p. 7). Thorne (1997) acknowledges the individual bias that a researcher brings to a study and proclaims the influence of bias must clearly be accounted for in the research findings. I reinforced the credibility of my findings and potential biases by using reflective journals in the form of field notes, to record the development of abstractions and ensure the analytic directions are justifiable (Thorne et al., 1997).

Transferability in qualitative research refers to the degree to which the results can be generalized or transferred to other contexts or settings (Lincoln et al., 1985). Although purposeful sampling does not grant transferability, it does provide in-depth information from different individuals representing valuable and unique perspectives, which helped strengthen the research findings (Nkulu-Kalengayi et al., 2012).

Ethics

I received ethical approval from the Health Sciences Research Ethics Board at the University of Ottawa. Regarding agency requirements and administrative approvals, I followed the University of Ottawa's Research Ethics Board (REB) Evaluation Checklist for the project description, recruitment process, participants, risks and benefits, privacy, confidentiality and data conservation, consent process and consent documents (see Appendix E). I used the University of Ottawa's guidelines for the informed consent form and e-mailed the form (see Appendix C) to those who expressed interest in participating in the study and met the inclusion criteria. I used pseudonyms for the participants, and responses were kept confidential and not linked to

participants. I e-mailed the de-identified transcripts to my thesis committee members by the form of a password protected word document from the University of Ottawa's One Drive. I stored the interview recordings, transcripts, and consent forms on my University of Ottawa's One Drive account on a password protected laptop. My supervisor Wendy Peterson (WP) also has copies of the transcripts saved on a password protected laptop.

References

Arigo, D., Pagoto, S., Carter-Harris, L., Lillie, S., & Nebeker, C. (2018). Using social media for health research: Methodological and ethical considerations for recruitment and intervention delivery. *Digital Health*, *4*, 2055207618771757–2055207618771757. https://doi.org/10.1177/2055207618771757

Ceulemans, M., Foulon, V., Ngo, E., Panchaud, A., Winterfeld, U., Pomar, L., Lambelet, V., Cleary, B., O'Shaughnessy, F., Passier, A., Richardson, J., Hompes, T., & Nordeng, H. (2021). Mental health status of pregnant and breastfeeding women during the COVID-19 pandemic-A multinational cross-sectional study. *Acta Obstetricia et Gynecologica Scandinavica*. https://doi.org/10.1111/aogs.14092

Creswell, J.W., & Plano Clark, V.L. (2011). *Designing and conducting mixed method research.* (Second Edition). SAGE

Lincoln, YS., & Guba, EG. (1985). *Naturalistic inquiry*. Sage Publications Inc.

Meedya, S., Fernandez, R., & Fahy, K. (2017). Effect of educational and support interventions on long-term breastfeeding rates in primiparous women: a systematic review and meta-analysis. *JBI Database of Systematic Reviews and Implementation Reports*, *15*(9), 2307–2332. https://doi.org/10.11124/JBISRIR-2016-002955

Nkulu Kalengayi, F. K., Hurtig, A.-K., Ahlm, C., & Ahlberg, B. M. (2012). "It is a challenge to do it the right way": an interpretive description of caregivers' experiences in caring for migrant patients in Northern Sweden. *BMC Health Services Research*, *12*(1), 433–433. https://doi.org/10.1186/1472-6963-12-433

Polit, D. F., & Beck, C.T. (2021). *Nursing research: Generating and assessing evidence for nursing practice* (11th ed.). Philadelphia, PA: Wolters Kluwer.

Prion, S., & Adamson, K. (2014). Making sense of methods and measurement: Rigor in qualitative research. *Clinical Simulation in Nursing*, *10*(2), e107–e108. https://doi.org/10.1016/j.ecns.2013.05.003

Robinson, O. (2014). Sampling in interview-based qualitative research: A theoretical and practical guide. *Qualitative Research in Psychology*, *11*(1), 25–41. https://doi.org/10.1080/14780887.2013.801543

Ross, E., & Browne, J. (2013). Feeding outcomes in preterm infants after discharge from the neonatal intensive care unit (NICU): A systematic review. *Newborn and Infant Nursing Reviews*, *13*(2), 87–93. https://doi.org/10.1053/j.nainr.2013.04.003

Schimmele, C., Fonberg, J., & Schellenberg, G. (2021). Statistics Canada. *Economic and Social Reports. Canadians' assessments of social media in their lives.* https://doi.org/10.25318/36280001202100300004-eng

Shuman, C. J., Morgan, M. E., Chiangong, J., Pareddy, N., Veliz, P., Peahl, A. F., & Dalton, V. K. (2022). "Mourning the experience of what should have been": Experiences of peripartum women during the COVID-19 pandemic. *Maternal and Child Health Journal*, *26*(1), 102–109. https://doi.org/10.1007/s10995-021-03344-8

Snyder, K., & Worlton, G. Social support during COVID-19: Perspectives of breastfeeding mothers. *Breastfeed Med, 16*(1),39-45. http://doi.org/10.1089/bfm.2020.0200

Teodoro, I., Rebouças, V., Thorne, S., Souza, N., Brito, L., & Alencar, A. (2018). Interpretive description: a viable methodological approach for nursing research. *Escola Anna Nery Revista de Enfermagem*, *22*(3). https://doi.org/10.1590/2177-9465-ean-2017-0287

Thorne S, Kirkham, SR. &, MacDonald-Emes, J. (1997). Interpretive description: A noncategorical qualitative alternative for developing nursing knowledge. *Research in*

Nursing & Health, *20*(2), 169–177. https://doi-org.proxy.bib.uottawa.ca/10.1002/(SICI)1098-240X(199704)20:2<169::AID-NUR9>3.0.CO;2-I

Thorne, S., Kirkham, S., & O'Flynn-Magee, K. (2004). The analytic challenge in interpretive description. *International Journal of Qualitative Methods*, *3*(1), 1–11. https://doi.org/10.1177/160940690400300101

Thorne, S. (2016). *Interpretive description: qualitative research for applied practice* (Second edition.). Routledge. https://doi.org/10.4324/9781315545196

Chapter 4

First-time Mothers' Experiences of Breastfeeding Support During the COVID-19 Pandemic: An Interpretive Description Study

This chapter is an unpublished manuscript prepared for submission to Journal of Community Health

Authors

Hannah Marcotte RN, BScN

School of Nursing, Faculty of Health Sciences, University of Ottawa

Wendy Peterson RN, PhD

Full Professor (Retired), School of Nursing, Faculty of Health Sciences, University of Ottawa

Christine McPherson RN, PhD

Associate Professor, School of Nursing, Faculty of Health Sciences, University of Ottawa

Rosann Edwards RN, IBCLC, MScN, PhD

Assistant Professor, School of Nursing, Faculty of Health Sciences, University of New Brunswick

Abstract

Introduction

During the COVID-19 pandemic, it was difficult for mothers in Ontario, Canada, to obtain the breastfeeding support they required due to pressure on the healthcare system, social restrictions, and redeployment of healthcare professionals from perinatal services to the pandemic response (Canadian Institute for Health Information [CIHI], 2022; Jack et al., 2021; Rudrum, 2021). The purpose of this study was to better understand the impact of the COVID-19 pandemic upon first-time mothers' experiences and perceptions of breastfeeding support in Ontario, Canada.

Methods

This study used interpretive description methodology. Eligible participants were recruited using purposeful and snowball sampling. Thirteen one-on-one, semi-structured interviews were conducted using a video-conferencing software.

Results

We identified one over-arching theme, *on their own*, and three major themes. The first theme, *lack of support*, is broken down into subthemes *lack of practical support, lack of informational support, lack of social support* and *lack of emotional and esteem-building support*. The second theme, *figuring it out*, is further categorized into the subthemes *understanding*, *taking risks*, and *motivation and resourcefulness*. The third theme, *emotional hardships*, is broken down into two sub-themes, *isolation* and *it was difficult*.

Discussion

These findings emphasize the need for more effective pandemic preparedness from the province, including, prioritizing consistent access to formal and informal breastfeeding support services to protect and support breastfeeding.

Introduction

Breastmilk provides the ideal nutrition for the healthy growth and development of infants (World Health Organization [WHO], 2003). Several systematic reviews and meta-analyses have shown that breastfeeding has many short and long-term health benefits for both infants and their mothers (Bowatte et al., 2015; Chowdhury et al., 2015; Sankar et al., 2015; Victora et al., 2016). Based on this literature, the incidence of health problems, including, gastroenteritis, respiratory tract infections, otitis media, and obesity, are significantly reduced among children who have been exclusively breastfed for the first six months of life. The immune components in breastmilk help protect infants from diseases and support the developing immune system (Walker, 2010). Furthermore, antibodies from mothers vaccinated against a particular disease-causing bacterium or virus can be transferred through breastmilk to infants and protect them from infections (Caballero-Flores et al., 2019).

Benefits for mothers who breastfeed include, a decreased risk of breast and ovarian cancer, type two diabetes, osteoporosis, and postpartum depression (Victora et al., 2016). For these reasons, the World Health Organization (WHO) (WHO, 2017) recommends that mothers initiate breastfeeding within the first hour after birth and infants exclusively breastfed for the first six months of life. Thereafter, it is recommended that infants receive nutritionally adequate and safe complementary foods while breastfeeding continues for up to 24 months of age or older (WHO, 2017). Despite the established health benefits of breastfeeding, in Canada, only 38.9% and 42.9% of people ages 18-34 and 35-49, respectively, exclusively breastfed their infant for six months (Statistics Canada, 2021).

Even though breastfeeding is a natural act, it is also a learned behavior, and many women experience difficulties (WHO, 2017). Common challenges for new mothers are difficulties with

latch and positioning at the breast, pain, and concerns about milk supply and about the baby's behaviour (McFadden et al., 2017). Thus, women may require support to meet the WHO's recommendations for breastfeeding (McFadden et al., 2017). Breastfeeding support refers to the help and encouragement provided by lay-persons/peers (friends and family) or professionals, including, nurses, certified lactation consultants, registered dieticians, and physicians (Feldman-Winter, 2013). A systematic review found breastfeeding support to be most effective when offered by professionals or lay-persons/peers, or a combination of both (McFadden et al., 2017). Interventions can be delivered on an individual or group basis, and include, home visiting programs, peer education programs, or appointments in a clinical setting (Bengough et al., 2018). Interventions that use face-to-face support are more likely to help women succeed with exclusive breastfeeding (McFadden et al., 2017). In a recent systematic review and meta-analysis, Oliveira and colleagues recommend that breastfeeding support be offered to both the mother and her social network (Oliveira et al., 2017). Support can include several components such as emotional and esteem-building support (including reassurance and praise), practical support (including direct assistance), informational support (including responding to mother's questions) and social support (including directing mothers to support groups and networks) (Dykes, 2006; McFadden et al., 2017; Schmied et al., 2011).

COVID-19 Response from Ontario Public Health Units

When the states of emergency were declared in Ontario because of COVID-19, there was a rapid reorganization in health care to protect citizens and treat patients by streamlining health care toward the pandemic (Rudrum, 2021). Many non-essential health services were suspended (Rudrum, 2021) and some appointments were delivered by videoconferencing or telephone to limit in-person contact (Brown et al., 2020; Kolker et al., 2021; Rice et al., 2021; Vazquez-

Vazquez et al., 2021). Ontario public health units had a significant role in the COVID-19 response throughout the pandemic, including, contact tracing, phone line management and case management work (Jack et al., 2021). As such, many public health nurses were redeployed to support these efforts. This greatly impacted the traditional delivery of many public health programs and services, including the home visiting program Healthy Babies, Healthy Children (HBHC) (Jack et al., 2021). Public health nurses working in the HBHC program provide perinatal health promotion and disease prevention services, including breastfeeding support, to families with young children (Jack et al., 2021). However, results from an environmental scan identified that 70% of public health units redeployed more than 50% of their public health nurses working in HBHC programs to the COVID-19 response (Jack et al., 2021). With a small number of public health nurses available to serve clients, many public health units had to prioritize services for families with the most complex needs (Jack et al., 2021). Moreover, 76% of public health units recommended or required substantial cutbacks to in-person home visits and used video conferencing or telephone calls with clients (Jack et al., 2021). This reduction in service created a gap in care for families with young children, with a significant reduction in breastfeeding support available in the community. The lack of breastfeeding support services available, coupled with reduced in-person support from family and peers due to social restrictions imposed during the pandemic, negatively affect women's experiences of breastfeeding support (Dib et al., 2020).

Breastfeeding Support During the COVID-19 Pandemic

Throughout the COVID-19 pandemic, mothers across the globe experienced difficulties getting help with breastfeeding due to barriers to accessing breastfeeding support services and limited in-person interactions where breastfeeding support is typically provided (Brown et al.,

2021; Costantini et al., 2021; Deyoung et al., 2021; Hull et al., 2020; Kolker et al., 2021; Rice et al., 2021; Siwik et al., 2022; Snyder et al., 2021; Vazquez-Vazquez et al., 2021; Yip et al., 2022). Participants from a study conducted in the Canadian province of Nova Scotia struggled to get help with breastfeeding during the COVID-19 State of Emergency as their postpartum appointments with doctors and lactation consultants were often cancelled (Fry et al., 2021). Additionally, Shuman and colleagues found the lack of breastfeeding support and resources available in the United States during the pandemic may have contributed to breastfeeding difficulties related to initiating or continuing breastfeeding (Shuman et al., 2022). For some women, the stress caused by the pandemic and lack of formal breastfeeding support was perceived to contribute to a decrease in their milk supply (Hull et al., 2020; Shuman et al., 2022; Viswanath et al., 2020). In several studies, limited in-person support for breastfeeding was found to be as a reason for formula supplementation or breastfeeding cessation (Brown et al., 2021; Deyoung et al., 2021; Dib et al., 2020; Hull et al., 2020; Rice et al., 2021; Shuman et al., 2022).

Social distancing not only affected formal breastfeeding support but separated mothers and their infants from much-needed informal sources of support from family and friends (Harrison et al., 2021; Kolker et al., 2021). Breastfeeding difficulties were exacerbated by limited access to informal breastfeeding supports and this lack of support was found to contribute to feelings of isolation, depression, and anxiety (Demirici, 2020; Fry et al, 2021; Pacheco et al., 2021; Silverman et al., 2020; Viswanath et al., 2020). Amidst the isolation, women described having difficulties navigating postpartum life and felt a deep sense of loss of what they expected and hoped their postpartum life to be (Kolker et al., 2021; Shuman et al., 2022).

To mitigate issues with access to in-person breastfeeding support due to COVID-19 social distancing measures, some services were offered virtually (Kolker et al., 2021; Rice et al.,

2021; Yip et al., 2022). However, in two Canadian studies examining the perspectives of new mothers to virtual services, online breastfeeding supports were found to be unhelpful and were described as challenging due to difficulties understanding health teaching over the phone and the inability to have a hands-on assessment (Kolker et al., 2021; Rice et al., 2021).

While the literature mostly describes negative breastfeeding experiences during the COVID-19 pandemic, other studies suggest the pandemic did not always negatively affect women's breastfeeding practices, such as early cessation (Ceulemans et al., 2020; Sakalidis et al., 2021). Positive impacts of the pandemic included more time at home for parents to bond with their infant (Fry et al., 2021; Hull et al., 2020), practice breastfeeding, and decreased stress related to not having visitors (Sakalidis et al., 2021; Shuman et al., 2022; Yip et al., 2022). The pandemic even motivated some women to continue to breastfeed because of concerns about the risk of COVID-19 infection and formula shortages (Hull et al., 2020; Snyder et al., 2021). Indeed, Hull and colleagues (2020) concluded that the pandemic may have increased the perceived importance of breastfeeding since there was a significant surge in the number of women seeking formal breastfeeding support in Australia.

Overall, this body of literature suggests that women's perceptions of support during the COVID-19 pandemic varied across settings and contexts, reflecting both positive, but mostly negative experiences (Brown et al., 2021; Snyder et al., 2021; Vazquez-Vazquez et al., 2021; Zanardo et al., 2021). Those most affected by the pandemic lockdowns were first-time mothers without prior breastfeeding experience who needed counseling and support to initiate breastfeeding and were at higher risk of early breastfeeding cessation (Ceulemans et al., 2020; Snyder et al., 2021). To date, there are limited studies conducted in Canada pertaining to this

topic, and none using a qualitative approach to explore first-time mothers' experiences and perspectives.

Research Purpose and Question

The primary purpose of this qualitative study was to better understand first-time mothers' experiences and perceptions of breastfeeding support in Ontario, Canada during the COVID-19 pandemic. The secondary purpose of this study was to help inform the creation of better protection of breastfeeding supports and services in future times of crisis and public health emergencies. The research question is, "What are the breastfeeding support experiences of first-time mothers in Ontario who gave birth during the COVID-19 pandemic?".

Materials and Methods

Design

The study used Sally Thorne's interpretive description (ID) methodology (Thorne, 1997). ID is an analytical, inductive approach that can be applied to qualitative inquiry into human health and illness experiences that have consequences for the clinical context and practice in health, for the purpose of developing nursing knowledge of interest to nursing researchers (Thorne et al., 1997). ID arose from the need to make understanding of complex experiential clinical phenomenon that would be applicable and useful to the practice of nursing concerned with questions from a practical or clinical context (Thorne, 2016). For this reason, this approach fits well with the purpose of the research and will contribute directly to an understanding of women's breastfeeding support experiences during the COVID-19 pandemic and what healthcare professionals and policymakers can do to improve breastfeeding support interventions.

Setting

The WHO declared COVID-19 as a pandemic on March 11, 2020 (WHO, 2021). Throughout the course of the COVID-19 pandemic, the Government of Canada, and the Ontario

provincial government implemented varying levels of "lockdowns" and ordered citizens to "stay at home" (Government of Canada, 2023). The setting of this study is the Canadian province of Ontario, where a provincial state of emergency was declared on March 17, 2020, initiating subsequent orders to limit direct social contact. These orders included limits to the number of people allowed to gather indoors and outdoors, closures of schools and daycares, bars and restaurants, non-essential health services, recreational facilities, and other non-essential businesses (Canadian Institute for Health Information [CIHI], 2022).

Eligibility

Individuals were eligible to participate if they were first-time mothers who resided in Ontario and gave birth during the COVID-19 pandemic, that being, on or after March 11, 2020. Additional inclusion criteria include women who have any experience breastfeeding their child (by breast, pumped breastmilk, mixed-feeding, or donor milk) and women who tried to breastfeed but were unsuccessful. Exclusion criteria were individuals with whom the first author (HM) as a public health nurse had a professional or personal relationship, and first-time mothers whose babies were born prematurely and/or admitted to the Neonatal Intensive Care Unit (NICU). A systematic review supports the exclusion of babies born prematurely and/or admitted to the NICU in the current study, as these are more likely to experience complex feeding difficulties that often continue after hospital discharge (Ross et al., 2013).

Recruitment

The social media platforms Facebook and Instagram were used to recruit participants. A recruitment post was posted twice, two-weeks apart on the first author's (HM) personal Facebook and Instagram accounts. The main sampling strategy was purposeful sampling. This is a strategy commonly used in qualitative research to identify and select individuals or groups of

individuals that are particularly knowledgeable about or have experiences with a phenomenon of interest (Creswell et al., 2011). In addition to purposeful sampling, snowball sampling occurred following the recruitment post as several participants asked if they could share the post with other mothers who may be interested in participating in the study.

Data Collection

Data were collected by the first author (HM) using semi-structured interviews through the video-conferencing software Microsoft Teams. Interviews lasted between 15-60 minutes. The interview guide used for the interviews consisted of ten demographic questions followed by eight open-ended questions with prompts to gain insight into the phenomenon of interest. Keeping in line with Thorne's (2016) ID methods, field notes were taken following each interview to capture observations and the contexts in which they occurred, such as participants' reactions and non-verbal language. This helped maintain the integrity of the participants' responses and stories, note emerging themes, and contextualize the data during the analysis. Field notes were also used as a reflective diary to keep track of the first author's (HM) personal responses to the ongoing research.

Data Analysis

Interviews were audio-recorded using a digital recording device and transcribed verbatim following each interview. To increase credibility of the results, the transcribed data was read several times to develop a sense of the data as a whole, and to identify similarities and differences in relation to the variations between interviews (Thorne, 2016). To enhance rigour, the research team read over the interview transcripts. The principal investigator and first author (HM) was a graduate student and completed the research for her master's thesis. At the time of this study, the PI was working as a public health nurse and went on maternity leave following

birth of her first child in September of 2021. The research team comprised HM, her thesis supervisor (WP) and two committee members (CM and RE). All have experience in maternal-newborn research and/or qualitative research. The research team met regularly throughout the data analysis to discuss and compare interpretations of the data and themes, and to reach a consensus. Field notes and a reflective diary was kept throughout data collection and analysis for continuous reflection on the researcher's own beliefs and potential biases.

Results

Participant Characteristics

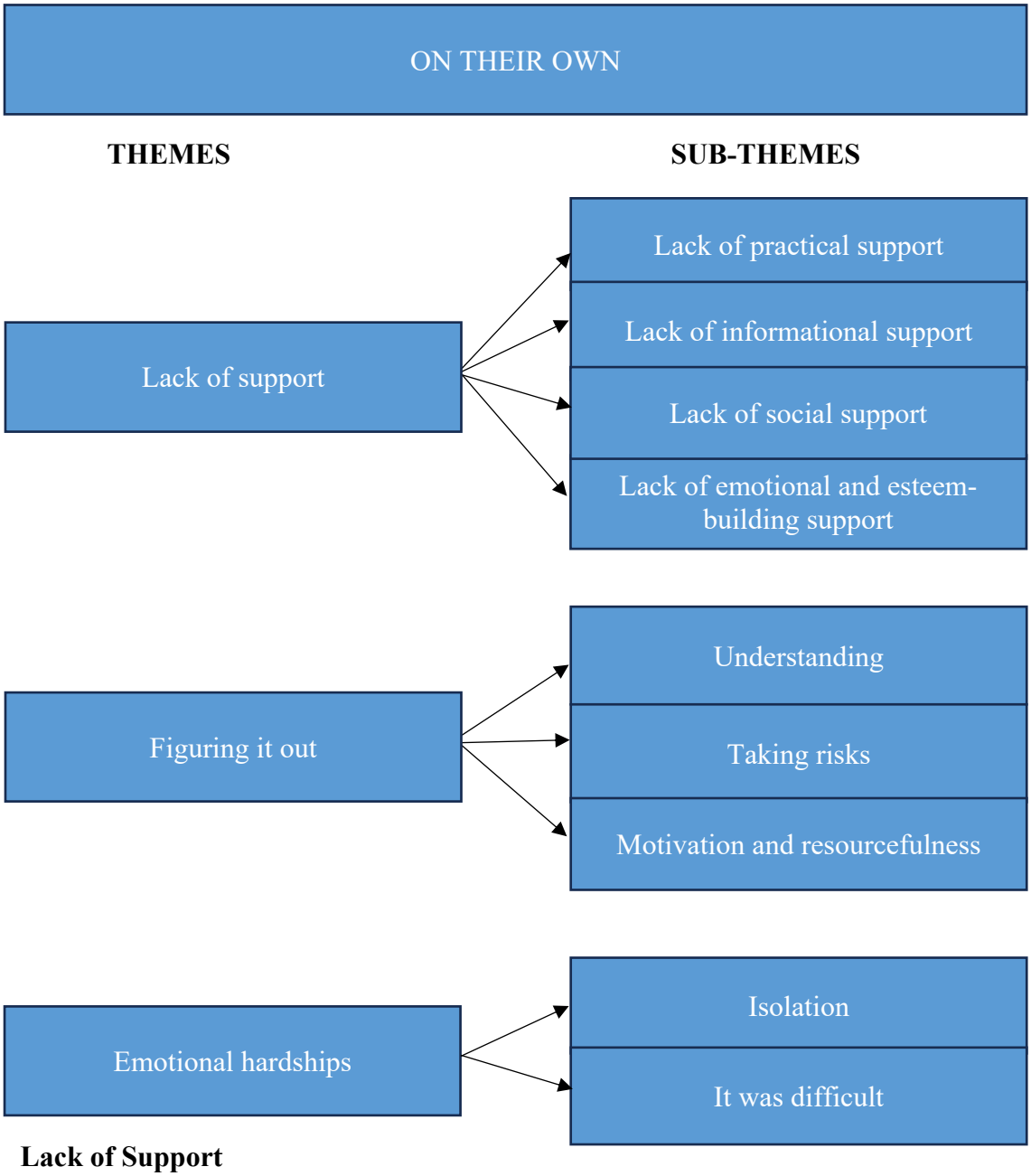
Thirteen women participated in interviews. One participant was younger than 25 years old, seven were between 26-30, two were between 31-25, two between were 36-40, one was older than 40. All but one participant had college or university diplomas or degrees. Three participants reported having an average income of C$50-100,000, seven participants reported C$100-150,000, and three reported more than C$150,000. Eight women resided in urban areas in Ontario, while five resided in rural areas. All thirteen participants had intended to breastfeed during pregnancy. Eight women received perinatal care from obstetricians and five from midwives. Ten women had vaginal deliveries and three had caesarean sections. Twelve reported having a partner or support person postpartum, and one did not. No one identified as a member of a minority group; participants were Caucasian and of European ancestry.

Themes

The overarching theme that ties the three main themes and their sub-themes together was participants being 'On their own' throughout their breastfeeding journey. The three themes that exemplify participants' experiences of being 'On their own' are: 'Lack of support', 'Figuring it out' and 'Emotional hardships' (Figure 1). These themes are not mutually exclusive but are all interrelated. Participants described receiving little support with breastfeeding in the hospital and

community and therefore had to figure out how to breastfeed mostly on their own. As a result, most participants experienced emotional hardships from having less support than what they needed and hope to have had. In the following sections, three main themes and their sub-themes are described with supporting verbatim quotations from participants' interviews.

Figure 1. *Over-arching Theme, Themes, and Sub-themes*



Lack of Support

When talking about their experiences of breastfeeding support postpartum, this group of first-time mothers recounted having little support from health professionals, peers, or family. Participants described a lack of practical, informational, social, and emotional and esteem-building support with breastfeeding. All these types of supports are interrelated and collectively support women with their breastfeeding practices. For example, informational support provides relief from uncertainty and can be emotionally supportive. Social visits provide several types of support: practical, informational, emotional and esteem-building. The mothers in this study both expected and needed more support with breastfeeding including, practical, informational, social, and emotional and esteem-building support.

Lack of Practical Support. Most participants described a lack of practical breastfeeding support from their nurses during their postpartum hospital stay**.** These participants reported that their nurses spent very little time providing hands-on help with breastfeeding. For one participant, no one helped her initiate breastfeeding following the birth of her baby. She expected help with breastfeeding upon delivering her baby, but she had to ask a nurse for help since it was not offered.

> So first of all, which was really strange, was that no one taught me breastfeeding. Like he'd been born for six hours maybe, and he hadn't, like no one had shown me how to latch him or anything so he like didn't eat for six hours after birth. And then so a nurse came in and I was like 'is someone going to show me how to breastfeed?' And she's like 'oh we can do just it right now'. So, I was like okay. So, it was just a random, one of the nurses and so she just kind of like literally picked him up and was like put him on me in the football hold and like thank God he latched right now. So that's where it came and ended. (Participant 2)

Several other participants also had to ask their nurses to help them with breastfeeding since they were struggling, and help was not offered. Participant 8 did not receive any help with breastfeeding for the duration of her hospital stay. She expressed being shocked that breastfeeding was never assessed by a healthcare professional in the hospital.

> But I did notice that, not one nurse in the hospital offered me help for breastfeeding…Someone just wrote on the board to feed him every 2-4 hours, so I just had to write on the board when I fed him, but nobody kind of said, you know, can I watch you? No one saw me breastfeed in the hospital. (Participant 8)

This woman did not experience any breastfeeding difficulties, but for others who did, the lack of breastfeeding support left them feeling uncertain about their ability to breastfeed their baby. As a result, they needed help with breastfeeding after discharge from the hospital.

In addition to the lack of support in the hospital, most participants described challenges in accessing breastfeeding support in their communities. Long-wait times for appointments were common, and according to the participants, health professionals were not accepting as many clients as usual because of infection control precautions and staff being redeployed to the pandemic response. For example, Participant 7 contacted a local lactation consultant in her community about having sore nipples and difficulty latching and was told the wait time for an initial appointment was several weeks.

Another example of 'lack of practical support' was the absence of follow-up appointments. Participant 5 was unable to obtain a follow-up appointment following her newborn's tongue-tie release, which was standard practice prior to the pandemic. Participant 10 also experienced challenges receiving follow-up with a lactation consultant from her local public health unit.

> I was lucky enough that it was before it got really bad, like COVID in November. It was right before that bad, really bad wave. So, I was able to go in I think twice and get help with positioning and reassuring me that he's getting enough to eat. She measured his weight like before and after and everything. But then when I needed it again in December they were closed because the nurses were helping with um, vaccinations I believe, or testing? One of them. So, I couldn't go, and I had to do it over the phone with a nurse which was, it was helpful but um, it was hard. (Participant 10)

This woman spoke about her experience of in-person breastfeeding support versus telephone support with a lactation consultant. She found it difficult to understand teaching over the phone and wanted the lactation consultant to do an oral assessment on her newborn, which requires an in-person assessment. For these reasons, she perceived the phone call appointment to be not as helpful as her previous appointments that took place in-person.

Lack of Informational Support. Most participants received little information and resources on breastfeeding and breastfeeding support services in the community in their hospital discharge packages. These women wanted more direction from their healthcare providers on where they could access breastfeeding support after leaving the hospital. They hoped the nurses would have helped coordinate breastfeeding support in the community, since it was unclear where they could go. Even among participants who did not experience breastfeeding difficulties initially, they recognized problems could arise later. Not knowing where they can get help with breastfeeding in the community could negatively impact their breastfeeding practices such as formula supplementation or early breastfeeding cessation. Participants wanted reassurance to know breastfeeding support was available even if it was not needed.

> And if you didn't have a problem in that first day, or two at the hospital, you know, it's important to know that if you did have a problem you would think to yourself like, ah, I could go to the medical community, I could follow-up with the doctor or nurse, and get help. (Participant 3)

The pandemic brought a lot of uncertainty for participants and those caring for them as there were ongoing changes in the delivery and availability of breastfeeding support services during the pandemic. This left participants unsure how to access breastfeeding support services in their communities. Further, participants felt as though their healthcare providers did not know what breastfeeding support services were available, which added to their confusion and a lack of much needed informational support.

> Everything was always changing, and everybody was trying to protect themselves and protect their clients and protect their work…it was really hard to access anything or to even know how to access anything…It seemed like no one knew anything about what anyone else was doing, which is fair. The midwives didn't know, how the breast pump rentals were working, they were like oh they used to do it, but I don't know what they do now. Oh, they do home visits, but I don't know what they do now. (Participant 5)

Several participants reported getting limited breastfeeding resources in their hospital discharge packages. For the resources they did receive, nurses often did not discuss information with participants when providing discharge packages. Some participants did not review their discharge packages themselves because they were recovering from labour and delivery and were busy caring for their newborn. For these reasons, participants thought it would have been beneficial if their nurses reviewed the information with them and discussed breastfeeding support services available. For example, Participant 8 said, "The discharge instructions, I was kind of

disappointed in because she just handed us papers and she said read it over if you have questions let us know."

Lack of Social Support. When speaking of their breastfeeding support experiences, participants described a lack of social support from social restrictions in place during the pandemic. Some were very concerned about their newborn becoming infected with COVID-19 and were especially cautious about limiting in-person interactions to reduce this risk. Others chose to limit the number of people they saw in-person and only saw immediate family. Almost all participants spoke about wishing they could have seen their friends and family members more often.

> I didn't see as many friends at the start, like I definitely didn't see as many people in the beginning. We did see family, immediate family pretty often and regularly, but yeah, like we definitely had more boundaries and visitation limits at the start just because we didn't want her to catch anything. (Participant 12)

Several participants talked about the absence of breastfeeding support groups and new parent groups operating during the pandemic further contributed to feelings of social isolation.

> Not being able to have access to, like I know around here when COVID was happening there's play groups and new mom groups and breastfeeding support groups and stuff like that, and all of that was taken away. And even now they're not open even though it seems like everything else is. And so that's something that I feel like the pandemic took away from us and our experience. (Participant 11)

While social restrictions were in place during the pandemic, many participants turned to social media to stay connected to other mothers virtually. Participant 11 said, "Social media has been so helpful because I've connected with women that I've never even met, that have been

able to give me tips on everything, breastfeeding, sleep, everything. I feel that's really helpful and really empowering to have. To hear people sharing their stories and know that you're not alone."

Lack of Emotional and Esteem-building Support. Participants described a lack of emotional support from their healthcare providers in which reassurance was not provided due to a lack of practical support with breastfeeding. Additionally, partners were not allowed to attend medical appointments at certain periods during the pandemic, which led to these women feeling alone and unsupported. Having their partners excluded from the decision-making process around their newborn's healthcare needs left participants missing much needed reassurance and support from their partners.

> It was just a lot on my shoulders and especially like not having my husband there, so it was just me, and I'm holding a crying baby, and like my husband's on Facetime in the car, so he's not really like, he's involved but not involved, and I feel like had he been able to be there for support and actually hear what was happening instead of having to try and hear over facetime, over a crying baby, across the room, um maybe more of those questions could have been answered and it would have been easier to advocate for ourselves as parents, for me as a person who was like not coping very well, so I think having, going into appointments on your own took a lot of your advocacy skills away. (Participant 5)

Figuring it Out

In response to the reduction in services and lack of adequate breastfeeding support described in the previous themes, participants had to figure out on their own what and how to feed their baby. Some fed their infants breast milk exclusively (at the breast or pumping/bottle

feeding), others used a combination of breast milk and formula, while others used formula. While most participants were disappointed with the lack of breastfeeding support available, they demonstrated understanding of the challenges due to the extraordinary circumstances. Participants seemed to lower their expectations of support from their healthcare providers and demonstrated motivational and resourcefulness by working through challenges they faced. Some participants took risks to get the support they needed, by allowing friends and family into their homes to help with breastfeeding, chores, and baby-care.

Understanding. Participants understood that the rules regarding social restrictions were changing frequently throughout the pandemic, and this made it difficult for health professionals to know which services were available. Reflecting on their postpartum hospital stay, participants expected breastfeeding support to be a priority on postpartum units, and especially given the reduction in breastfeeding support services in the community because of the COVID-19 pandemic. For example, Participant 7 said, "Knowing that it's also really hard to access support, I think the nurses need to make more of an effort in the hospital for that." However, participants recognized that the maternity nurses were busier than usual because of the pandemic's strain on the healthcare system. Even among women who reported an absence of breastfeeding support during their hospital stay, most expressed feelings of understanding and empathy towards the nurses. They did not blame individual nurses for the lack of breastfeeding support but staffing shortages resulting in an increased workload that was worsened by the pandemic's strain on the healthcare system.

> They said they were short staffed, so I think they were busy...So we really didn't have any one-on-one teaching the whole time we were there…And I think that because the hospital was short-staffed, with people being off sick and with COVID maybe they would

> have helped out a bit more at the hospital and just kind of reassured me that everything was fine. (Participant 8)

Motivation and Resourcefulness. Participants described their motivation to figure out their breastfeeding difficulties and continue breastfeeding. Overall, participants, were well-informed about the health benefits of breastfeeding. They spoke of having increased motivation to breastfeed during the pandemic to help build a strong immune system for their baby. However, despite the protection offered by breastmilk, breastfeeding was not encouraged by their healthcare providers or local public health unit to support a strong immune system for their baby, and this surprised participants.

> I was very determined to breastfeed and we were home all the time anyways and I think we really wanted to breastfeed because of COVID immunity, even when he was born, there were talking about vaccines and um, they were already talking about vaccines and how babies could get passive immunity from breastmilk… so sticking to breastfeeding even when it was difficult was super important because we were hopeful that eventually we would be vaccinated, or I would be vaccinated and then it would offer newborn some form of immunity and help him. We were and are still really cautious about him and COVID and so I think in our motivating to breastfeed that was the biggest one, motivating to keep breastfeeding. (Participant 5)

Participants described being motivated to do their own research and investigating how to get help with breastfeeding in their community. Most were able to get the help they needed after contacting numerous services and health professionals to find someone who could help them. Participant 3 said, “I was lucky enough to be able to you know, seek out the resources that I needed, um independently and you know sort of navigate that myself.” This speaks to the

participants' motivation to breastfeed despite having numerous challenges getting the support they needed. Similarly, for Participant 8, who did not receive any help with breastfeeding in the hospital, she said, "I read up on my own and figured it out on my own." This woman did online breastfeeding classes prenatally, since in-person prenatal classes were cancelled during the pandemic. She felt it helped prepare her to successfully breastfeed.

Taking Risks. Participants described taking risks to figure out how to breastfeed. Despite the public health restrictions to social gatherings during the pandemic, a few participants allowed their family and friends into their homes to get the support they needed. Participants spoke of taking a risk by doing this; their infant potentially contracting COVID-19. For example, Participant 1 described having a lot of support in the first few months postpartum and greatly benefited from it. She allowed her family and close friends into their house and having them help cooking, cleaning, and baby care allowed her to recover and focus on breastfeeding her newborn.

> I'm very lucky I have a mother-in-law, stepmom, and a mom so I had a lot of support in that sense and then I also have good friends, and that helped too. So yeah, I had a lot of people just come here, stay with us…I took risks though you know? Like to get all that support. (Participant 1)

Other participants received similar support postpartum from their friends and family that helped them focus on breastfeeding their newborn.

When participants did see their friends and family in-person, they recounted feeling worried about their newborn getting ill. Participants described feelings of conflict. If they refrained from have in-person visits, they did not get the support they needed, however, if they allowed visitors into their homes, they worried about their newborn being infected with COVID-19. This decisional uncertainty led to feelings of anguish. Participant 10 said, "Then it got

stressful because when I did have visitors I stressed about um, like newborn getting sick of course and then people would be wanting to hold him."

Emotional Hardships

Participants described the emotional hardships they experienced from lack of support from their friends and family and having to figure out how to breastfeed mostly on their own. Feelings of isolation were commonly described, and the seclusion they experienced postpartum was perceived as challenging. Two participants were diagnosed with perinatal mood disorders and attributed breastfeeding difficulties and the lack of support to their diagnosis. For a few participants, the isolation during the pandemic was viewed positively; allowing for more time at home to recover from their labour and delivery, bond with their newborn, and practice breastfeeding.

Isolation. Feeling isolated during the pandemic was a common theme throughout the transcripts. For most participants, the social isolation was viewed negatively. Being away from their family and friends taking care of a new baby with limited support contributed to feelings of being overwhelmed and anxious. Participants spoke of the fear of their baby becoming ill and were reluctant to take them anywhere. As a result, they chose to stay home as much as possible and limit visitors in their homes.

> I think as a new mom and breastfeeding I was already so nervous to go out in public and COVID made it really easy to be like oh well I'm just going to stay home, I'm not going to go anywhere and it made me feel really secluded and really alone for parts of it. (Participant 11)

Participant 5 only allowed parents over to her house occasionally and had them wear masks and keep their distance from their baby. She described feeling as though she and her

husband were on their own caring for their newborn and the absence of support made caring for their newborn demanding and overwhelming at times. Feelings of loneliness from this seclusion were described and this contributed to her symptoms of depression and anxiety.

> I think everything became so much harder for everybody and so it made it super hard to get support and I think that the isolation factor, being so isolated from everybody, and just like literally having like. We were just like two people, and it was just me and my husband, we were two people, and a new baby. We got like, we went into the hospital to get induced at 9 in the morning, we were back home at 5am the next morning. Like it went so quick and then it was just us with a baby and like facetime and no one else. So, it was really isolating, and it was really hard…It was just really hard to like, to have like the circle of support that you would hope to have. (Participant 5)

For a few participants, the isolation during the pandemic was viewed positively. Spending more time at home allowed for more time to rest, bond with their newborn, and practice breastfeeding without the distraction of visitors and other social obligations. However, these women did not experience many breastfeeding difficulties, therefore did not need much support with breastfeeding.

> No one came into my house ever, and no one ever asked to hold my baby and like we really had a lot of, like a fourth trimester at home with no interruptions type of thing and I just said no to all the events. There weren't any events, there were no weddings, no engagement parties, stuff like that, so like really was able to do skin-to-skin and breastfeed on demand and just be at home which I think is really important because during that first 3 months, the first month especially, it's so important to establish that

> breastfeeding relationship. So I feel like the COVID-19 pandemic helped in that sense. (Participant 4)

It was Difficult. Participants described the emotional consequences from the *lack of support* and *figuring it out.* Participants spoke of the emotional toll from spending a lot of time at home with their newborn and partner, without the support of their friends or family. They were on their own and most wished their loved ones could have spent more time with them and their baby, but the social restrictions enforced during the pandemic prevented it.

> [Partner's name] and I are both social people, so it was hard for us to not like see anybody. So with a newborn you know, we tried to go for walks but it was some nights too cold or some days it was just too cold, so there was like weeks where we would barely go outside so I found that a little bit hard emotionally but. Yeah, so that was a bit tough. (Participant 8)

Several participants described feeling overwhelmed and stressed about breastfeeding before being discharged from the hospital due to the lack of breastfeeding support they both need and expected to get. For example, Participant 7 said, "It was really, really, hard, and I was really stressed about it". Similarly, Participant 10 described feeling frustrated by the lack of support she received because it resulted in her feeling anxious about being able to breastfeed her baby. She said, "And I found that frustrating because yeah, I felt like I didn't get the support that I needed, and I was very stressed about it."

Participants spoke of the uncertainty of not knowing if they could get help with breastfeeding given the reduction of breastfeeding support services and changing circumstances over the course of the pandemic. Participants described this as stressful, which led to feelings of

anxiousness since they feared they would not be able to continue breastfeeding if they did not get help promptly when needed.

> We looked at [name of business] or whatever it's called, but they had like a two or three week wait to get in, and like I can't afford to have my baby not eat, or I didn't want to have that stress, there's enough going on we have a new baby, I didn't need that stress… So that was really kind of discouraging, and I was a little bit overwhelmed with things. (Participant 7)

Discussion

Thirteen first-time mothers from Ontario were interviewed about their experiences of breastfeeding support during the COVID-19 pandemic. An overarching theme, 'On their own', and three themes, 'Lack of support', 'Figuring it out', and 'Emotional hardships' were identified from the findings. Study participants described feeling as though they were *on their own* when it came to learning how to breastfeed their infants during the COVID-19 pandemic. The sub-themes, *lack of practical support*, *lack of informational support, lack of social support,* and *lack of emotional and esteem-building support* are reflective of the lack of breastfeeding support available to mothers during the pandemic. Despite these obstacles and lack of support, all participants figured out how to breastfeed their babies. While most participants did not get the help they wanted and needed, they demonstrated *understanding* of the extraordinary circumstances of the pandemic and were empathetic towards their healthcare providers. Reflecting on their experiences of support postpartum, participants described *taking risks* to get the help they needed. Their *motivation* to breastfeed was shown by their *resourcefulness* in finding solutions to their feeding difficulties. Amidst the *isolation* of having a baby during the

pandemic, participants found *it was difficult* for them to navigate breastfeeding and motherhood and most experienced emotional hardships as a result.

The public health restrictions and public health priorities in Ontario throughout the COVID-19 pandemic made it challenging for the mothers in this study to access any breastfeeding support, both informal support from lay-persons and peers, and formal support from healthcare professionals. Although there is an extensive body of literature concluding that breastfeeding support improves the duration of any and exclusive breastfeeding (McFadden et al., 2017), breastfeeding support services were extensively cut in Ontario during the pandemic (Jack et al., 2021). Furthermore, many breastfeeding support services in the community switched to virtual platforms, however, mothers generally found virtual support to be not as helpful as in-person appointments (Kolker et al., 2021; Rice et al., 2021). As a result, participants felt unsupported and socially isolated due to the cancellation of organized support groups for parents of infants and lack of breastfeeding support in the hospital and in the community. The impact on first time mothers' experiences from these cuts to services and changes in the delivery of care lead us to conclude that, the Ontario Government did not consider breastfeeding to be important enough to warrant ongoing services during the pandemic.

A socioecological model is used to frame our discussion and recommendations based on the findings from this study. According to Hector and colleagues (2005) there are three levels of factors that influence breastfeeding practices: individual, group, and society. Individual level factors comprise of attributes of the mother, the infant, and mother-infant dyad (Hector et al., 2005). Group level factors are the features of the mother and infant's environments that enable them to breastfeed, such as hospital and health facilities, the home, work, community, and public

policy (Hector et al., 2005). Societal level factors are the attributes of society, culture, and the economy that influence the acceptability and views about breastfeeding (Hector et al., 2005).

Individual

The individual characteristics of the participants in this study impacted their experiences of breastfeeding support during the COVID-19 pandemic. All the participants in this study were first-time mothers. This shared characteristic is relevant considering there is evidence in the literature that suggests first-time mothers may be at higher risk of early breastfeeding cessation due to the lack of breastfeeding support available during the pandemic (Ceulemans et al., 2021). Therefore, exploring first-time mothers' experiences of breastfeeding support is critical to encourage mothers to meet their breastfeeding goals.

Another individual characteristic pertinent to this study is whether a participant experienced problems with breastfeeding. For the few participants who did not experience breastfeeding difficulties, they typically did not need to seek out breastfeeding support beyond the minimal support they received in the hospital. However, among women who experienced challenges breastfeeding, most perceived the pandemic as having a negative impact on their breastfeeding support experiences, given the obstacles they encountered to get help with breastfeeding.

In the current study, several participants' responses showed that they were knowledgeable about the health benefits of breastfeeding for their baby's immune system and reported that the pandemic increased their beliefs regarding its importance. This finding supports the conclusions from two earlier studies that found the pandemic may have motivated mothers to continue to breastfeed because of concerns of infectious disease risks (Hull et al., 2020; Snyder et al., 2021). Additionally, participants in the current study demonstrated their motivation to

breastfeed by taking initiative to ask for help when it was not offered or tackling breastfeeding problems on their own. Participants demonstrated resourcefulness; doing their own research to find solutions and get the support they needed. This speaks to 'the work' of breastfeeding, while a natural act, it is a learned behavior that many women require support with (WHO, 2017).

Group

Several of the findings within the theme *lack of support*, are consistent with findings in the existing literature. In both the literature and the current study, women had concerns related to initiating or continuing their breastfeeding practices due to a lack of breastfeeding support and resources during the COVID-19 pandemic (Shuman et al., 2022). For example, the lack of breastfeeding support reported by participants during their postpartum hospital stay reflects findings from a study by Perrine and colleagues, in which 20% of hospitals in the United States reported a decrease in breastfeeding support during the pandemic (Perrine et al., 2020). Participants in the current study empathized with the nurses in the hospital and did not blame them for the lack of support they received but attributed it to staffing shortages because of the pandemic's strain on the healthcare system. However, the limited breastfeeding support described by participants in the current study is unsafe nursing practice since it could have led to negative repercussions such infant weight loss, non-medically indicated supplementation with formula, and early breastfeeding cessation (Brown et al., 2020).

Reflected in both the existing literature and the current study, there was a reduction in breastfeeding support services in the community during the pandemic and this contributed to mothers' stress about breastfeeding. Much of the reduction in service was attributed to the redeployment of public health nurses working in HBHC programs to pandemic response (Jack et al., 2021) and COVID-19 State of Emergency restrictions (Fry et al., 2021). This reflects a lack

of consideration of breastfeeding as a public health priority in the emergency preparedness planning by our government and public health units. A recent systematic review and meta-analysis found that home visits with postpartum women provide an opportunity for healthcare professionals to provide several types of breastfeeding support the mother and her social network (Oliveira et al., 2017). Similarities between findings from the current study and those of Fry et al. (2021) indicate that lack of home visits, access to breastfeeding and parent support groups contributed to feelings of isolation, stress, and anxiety.

Throughout the pandemic, many in-person breastfeeding support services were switched to virtual platforms (Kolker et al., 2021; Rice et al., 2021; Yip et al., 2022). However, participants in both the current study and in the literature perceived virtual breastfeeding support to be less helpful than in-person lactation services, due to communication challenges and not being able have a hands-on assessment (Kolker et al., 2021; Rice et al., 2021). These findings are consistent with studies conducted during and before the COVID-19 pandemic in which breastfeeding interventions that required face-to-face support were found to better support women with their breastfeeding practices (Kolker et al., 2021; Rice et al., 2021). Given the need for more practical in-person support for breastfeeding, future programs should prioritize in-person breastfeeding support services. Further research is needed on breastfeeding support services conducted virtually to explore how to provide breastfeeding support most effectively through virtual platforms.

There are implications of the findings in terms of public policy. For example, during the ‘stay at home’ order, non-household members were not allowed to gather indoors together (Government of Canada, 2023). This made it challenging for mothers to get support from their family members and peers. Some participants in the current study like those in other studies,

allowed friends and family into their homes to get the support they needed, despite the 'stay at home' order and feelings of worry and guilt due to the possibility of COVID-19 infection (Kolker et al., 2021; Rice et al., 2021). In the existing literature and the current study, participants benefited from having help with cooking, cleaning, and baby care as it allowed them to focus on breastfeeding their newborn (Kolker et al., 2021; Rice et al., 2021). These findings highlight the importance of family support during the pandemic for maternal mental wellbeing (Sakalidis et al., 2021).

The findings within the theme 'Emotional hardships', reflect findings from the existing literature. The COVID-19 pandemic had a negative impact on the mental health and wellbeing of mothers who gave birth during that time (Ceulemans et al., 2021; Deyoung et al., 2021; Dib et al., 2020; Harrison et al., 2021; Rice et al., 2021; Yip et al., 2022). In the current study, the isolation and absence of support from friends and family contributed emotional hardships for study participants and two participants were diagnosed with perinatal mood disorders. This is not surprising considering a lack of social support has been found to contribute to postpartum depression (Howell et al., 2006). Further, it is relevant to breastfeeding outcomes since perinatal mood disorders can contribute to breastfeeding difficulties and early breastfeeding cessation (Demirici, 2020).

While there were many negative impacts of the COVID-19 pandemic on breastfeeding support, several participants in the current study and in existing literature reported unexpected positive experiences. The absence of visitors, social obligations, and in-person appointments allowed mothers to have more time to rest and recover from labour and delivery, bond with their newborn, and practice breastfeeding (Sakalidis et al., 2021; Shuman et al., 2022; Yip et al., 2022). However, in the current study, participants who reported positive experiences did not

have significant breastfeeding difficulties, therefore, they likely required less support than those who had difficulties breastfeeding.

Society

During the COVID-19 pandemic disease, provincial officials and public health units prioritized disease prevention initiatives and health promotion initiatives were overlooked (Government of Canada, 2021; Jack et al., 2021). The lack of support for postpartum women and reduction in breastfeeding support services during the pandemic highlights the notion that breastfeeding is not a priority for policymakers and not important in our society. Several participants in the current study were surprised that despite the benefits of breastfeeding for infants' immune systems, it was not encouraged by their healthcare providers or local public health units. Not only is breastfeeding free and easily accessible, but formula shortages occurred throughout the pandemic (Tomori, 2023), which only added to parents' stress about feeding their baby (Hull et al., 2020; Snyder et al., 2021). Therefore, breastfeeding should be encouraged by policymakers and public health units to safeguard food security for infants, and help infants develop a strong immune system to protect them from illnesses (Tomori, 2023; Victora et al., 2016).

Strengths

There are many strengths unique to this study. At the time of data collection, this was the first qualitative study in Ontario that explored the breastfeeding support experiences among first-time mothers during the COVID-19 pandemic. Another strength to this study was the use of videoconferencing technology for interviews, as this-allowed women from across Ontario to participate. It also permitted recruitment that adhered to public health measures during the COVID-19 pandemic. Additionally, during videoconferencing interviews participants are in their

natural environment; therefore, they are more relaxed (Irani, 2018). Participants seemed comfortable sharing their experiences, as evident in the richness of the data. Typical barriers to participating such as transport to an interview location, parking, or childcare were eliminated using the online format. Several participants had their infants with them and breastfed during the interview.

Limitations

A limitation of this study is the lack of diversity in the study population, which included white, breastfeeding women, with middle to high socio-economic status. Therefore, the findings may not reflect the experiences of those in more difficult circumstances who may be more vulnerable to the impacts of the pandemic, such as Indigenous peoples, people experiencing homelessness, people living in overcrowded housing, collective refugees and migrants, people with disabilities, people living in closed facilities, people living in remote locations and people living in poverty and extreme poverty (WHO, 2020).

Conclusion

The COVID-19 pandemic and resulting public health restrictions and cuts to breastfeeding supports and services had a significant impact on the breastfeeding support experiences of the mothers who participated in this study. The lack of formal and informal breastfeeding support available during the pandemic contributed to breastfeeding difficulties and feelings of isolation. These issues have potential to negatively impact breastfeeding practices, such as early cessation, which has life-long impacts on the health of the mother and infant (Victora et al., 2016). Given the established importance of breastfeeding support for the mother-infant dyad (Victora et al., 2016), it is critical to understand mothers' experiences of breastfeeding support to help mothers breastfeed for as long as they want to (McFadden et al.,

2017). Thus, breastfeeding support should be prioritized in future pandemics and prolonged emergencies. Additionally, breastfeeding needs to be better supported in non-emergency situations to set up a culture and systems that can prioritize breastfeeding during exceptional circumstances. The lessons learned from the COVID-19 pandemic, the current study, and others, can inform policymakers and future public health programs to make changes to ensure that emergency preparedness planning better prioritizes breastfeeding as a critical public health initiative and protects services that support breastfeeding and new mothers.

Declaration of Interest Statement

No potential conflict of interest was reported by the authors.

References

Bengough, T., Von Elm, E., Heyvaert, M., & Hannes, K. (2018). Factors that influence women's engagement with breastfeeding support: a qualitative evidence synthesis. *Cochrane Database of Systematic Reviews*, *2018*(9). https://doi.org/10.1002/14651858.CD013115

Bowatte, G., Tham, R., Allen, K., Tan, D., Lau, M., Dai, X., & Lodge, C. (2015). Breastfeeding and childhood acute otitis media: A systematic review and meta-analysis. *Acta Paediatrica*, *104*(S467), 85–95. https://doi.org/10.1111/apa.13151

Brown, A., & Shenker, N. (2021). Experiences of breastfeeding during COVID-19: Lessons for future practical and emotional support. *Maternal and Child Nutrition*, *17*(1), e13088–n/a. https://doi.org/10.1111/mcn.13088

Caballero-Flores, G., Sakamoto, K., Zeng, M. Y., Wang, Y., Hakim, J., Matus-Acuña, V., Inohara, N., & Núñez, G. (2019). Maternal immunization confers protection to the offspring against an attaching and effacing pathogen through delivery of IgG in breast milk. *Cell Host & Microbe*, *25*(2), 313–323.e4. https://doi.org/10.1016/j.chom.2018.12.015

Ceulemans, M., Foulon, V., Ngo, E., Panchaud, A., Winterfeld, U., Pomar, L., Lambelet, V., Cleary, B., O'Shaughnessy, F., Passier, A., Richardson, J., Hompes, T., & Nordeng, H. (2021). Mental health status of pregnant and breastfeeding women during the COVID-19 pandemic-A multinational cross-sectional study. *Acta Obstetricia et Gynecologica Scandinavica*. https://doi.org/10.1111/aogs.14092

Chowdhury, R., Sinha, B., Sankar, M. J., Taneja, S., Bhandari, N., Rollins, N., Bahl, R., & Martines, J. (2015). Breastfeeding and maternal health outcomes: a systematic review and meta-analysis. *Acta Paediatrica*, *104*(S467), 96–113. https://doi.org/10.1111/apa.13102

Canadian Institute for Health Information. (2022). *Canadian COVID-19 Intervention Timeline.* https://www.cihi.ca/en/canadian-covid-19-intervention-timeline#resources

Costantini, C., Joyce, A., & Britez, Y. (2021). Breastfeeding experiences during the COVID-19 lockdown in the United Kingdom: An exploratory study into maternal opinions and emotional states. *Journal of Human Lactation*, *37*(4), 649–662. https://doi.org/10.1177/08903344211026565

Creswell, J.W., & Plano Clark, V.L. (2011). *Designing and conducting mixed method research.* (Second Edition). SAGE

Demirici, J. (2020). Breastfeeding support in the time of COVID-19. *The Journal of Perinatal & Neonatal Nursing*, *34*(4), 297–299. https://doi.org/10.1097/JPN.0000000000000521

DeYoung, S., & Mangum, M. (2021). Pregnancy, birthing, and postpartum experiences during COVID-19 in the United States. *Frontiers in Sociology*, *6*. https://doi.org/10.3389/fsoc.2021.611212

Dib, S., Rougeaux, E., Vázquez-Vázquez, A., Wells, J., & Fewtrell, M. (2020). Maternal mental health and coping during the COVID-19 lockdown in the UK: Data from the COVID-19 New Mum Study. *International Journal of Gynecology and Obstetrics*, *151*(3), 407–414. https://doi.org/10.1002/ijgo.13397

Dykes, F. (2006). The education of health practitioners supporting breastfeeding women: time for critical reflection. *Maternal and Child Nutrition, 2*(4), 204–216. https://doi.org/10.1111/j.1740-8709.2006.00071.x

Feldman-Winter, L. (2013). Evidenced-based interventions to support breastfeeding. *The Pediatric Clinics of North America*, *60*(1), 169-187. http://doi.org/10.1016/j.pcl.2012.09.007

Fry, H. L., Levin, O., Kholina, K., Bianco, J. L., Gallant, J., Chan, K., & Whitfield, K. C. (2021). Infant feeding experiences and concerns among caregivers early in the COVID-19 State of Emergency in Nova Scotia, Canada. *Maternal and Child Nutrition, 17*(3), e13154–n/a. https://doi.org/10.1111/mcn.13154

Government of Canada. (2023, April 14). *Coronavirus disease (COVID-19): Measures to reduce COVID-19 in your community.* https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/prevention-risks/measures-reduce-community.html

Harrison, V., Moulds, M., & Jones, K. (2021). Support from friends moderates the relationship between repetitive negative thinking and postnatal wellbeing during COVID-19. *Journal of Reproductive and Infant Psychology*, 1–16. https://doi.org/10.1080/02646838.2021.1886260

Hector, D., King, L., Webb, K., & Heywood, P. (2005). Factors affecting breastfeeding practices. Applying a conceptual framework. *N S W Public Health Bulletin, 16*(4), 52–55. https://doi.org/10.1071/NB05013

Howell, E. A., Mora, P., & Leventhal, H. (2006). Correlates of early postpartum depressive symptoms. *Maternal and Child Health Journal*, *10*(2), 149–157. https://doi.org/10.1007/s10995-005-0048-9

Hull, N., Kam, R. L., & Gribble, K. D. (2020). Providing breastfeeding support during the COVID-19 pandemic: Concerns of mothers who contacted the Australian Breastfeeding Association. Breastfeeding Review, 28(3), 25–35.

Irani, E. (2019). The use of videoconferencing for qualitative interviewing: Opportunities, challenges, and considerations. *Clinical Nursing Research*, *28*(1), 3–8. https://doi.org/10.1177/1054773818803170

Jack, S.M., Gonzalez, A., Orr, E., Campbell, K., Carsley, S., Croswell, L., Proulx, J., & Strohm, S. (2021). Impacts of the COVID-19 pandemic on Ontario's public health home visitation programs for families with young children: An environmental scan. School of Nursing, McMaster University. https://phnprep.ca/research/environmental-scan/

Kolker, S., Biringer, A., Bytautas, J., Blumenfeld, H., Kukan, S., & Carroll, J. C. (2021). Pregnant during the COVID-19 pandemic: an exploration of patients' lived experiences. *BMC Pregnancy and Childbirth, 21*(1), 851–851. https://doi.org/10.1186/s12884-021-04337-9

McFadden, A., Gavine, A., Renfrew, M., Wade, A., Buchanan, P., Taylor, J., Veitch, E., Rennie, A., Crowther, S., Neiman, S., MacGillivray, S., & McFadden, A. (2017). Support for healthy breastfeeding mothers with healthy term babies. *Cochrane Library*, *2017*(2), CD001141–CD001141. https://doi.org/10.1002/14651858.CD001141.pub5

Oliveira, L., Leal, L., Coriolano-Marinus, M., Santos, A., Horta, B., & Pontes, C. (2017). Meta-analysis of the effectiveness of educational interventions for breastfeeding promotion directed to the woman and her social network. *Journal of Advanced Nursing*, *73*(2), 323–335. https://doi.org/10.1111/jan.13104

Pacheco, F., Sobral, M., Guiomar, R., de la Torre-Luque, A., Caparros-Gonzalez, R., & Ganho-Ávila, A. (2021). Breastfeeding during COVID-19: A narrative review of the psychological impact on mothers. *Behavioral Sciences*, *11*(3), 34–. https://doi.org/10.3390/bs11030034

Perrine, C., Chiang, K., Anstey, E., Grossniklaus, D., Boundy, E., Sauber-Schatz, E., & Nelson, J. (2020). Implementation of hospital practices supportive of breastfeeding in the context of COVID-19 - United States, July 15-August 20, 2020. *MMWR. Morbidity and Mortality Weekly Report*, *69*(47), 1767–1770. https://doi.org/10.15585/mmwr.mm6947a3

Rice, K., & Williams, S. (2021). Women's postpartum experiences in Canada during the COVID-19 pandemic: a qualitative study. *CMAJ Open, 9*(2), E556–E562. https://doi.org/10.9778/cmajo.20210008

Ross, E., & Browne, J. (2013). Feeding outcomes in preterm infants after discharge from the neonatal intensive care unit (NICU): A systematic review. *Newborn and Infant Nursing Reviews*, *13*(2), 87–93. https://doi.org/10.1053/j.nainr.2013.04.003

Rudrum, S. (2021). Pregnancy during the global COVID-19 pandemic: Canadian experiences of care. *Frontiers in Sociology*, 6, 611324–611324. https://doi.org/10.3389/fsoc.2021.611324

Sakalidis, V. S., Rea, A., Perrella, S. L., McEachran, J., Collis, G., Miraudo, J., Prosser, S. A., Gibson, L. Y., Silva, D., & Geddes, D. T. (2021). Wellbeing of breastfeeding women in Australia and New Zealand during the COVID-19 pandemic: A cross-sectional study. *Nutrients, 13*(6), 1831–. https://doi.org/10.3390/nu13061831

Sankar, M. J., Sinha, B., Chowdhury, R., Bhandari, N., Taneja, S., Martines, J., & Bahl, R. (2015). Optimal breastfeeding practices and infant and child mortality: a systematic review and meta-analysis. *Acta Paediatrica, 104*(S467), 3–13. https://doi.org/10.1111/apa.13147

Shuman, C. J., Morgan, M. E., Chiangong, J., Pareddy, N., Veliz, P., Peahl, A. F., & Dalton, V. K. (2022). “Mourning the experience of what should have been”: Experiences of peripartum women during the COVID-19 pandemic. *Maternal and Child Health Journal, 26*(1), 102–109. https://doi.org/10.1007/s10995-021-03344-8

Silverman, M. E., Burgos, L., Rodriguez, Z. I., Afzal, O., Kalishman, A., Callipari, F., Pena, Y., Gabay, R., & Loudon, H. (2020). Postpartum mood among universally screened high and low socioeconomic status patients during COVID-19 social restrictions in New York City. *Scientific Reports, 10*(1), 22380–22380. https://doi.org/10.1038/s41598-020-79564-9

Siwik, E., Larose, S., Peres, D., Jackson, K. T., Burke, S. M., & Mantler, T. (2022). Experiences of at-risk women in accessing breastfeeding social support during the Covid-19 pandemic. *Journal of Human Lactation, 38*(3), 422–432. https://doi.org/10.1177/08903344221091808

Schmied, V., Beake, S., Sheehan, A., McCourt, C., & Dykes, F. (2011). Women’s perceptions and experiences of breastfeeding support: A metasynthesis. *Birth, 38*(1), 49–60. https://doi.org/10.1111/j.1523-536X.2010.00446.x

Snyder, K., & Worlton, G. Social support during COVID-19: Perspectives of breastfeeding mothers. *Breastfeed Med, 16*(1),39-45. http://doi.org/10.1089/bfm.2020.0200

Statistics Canada. (2021). *Table 13-10-0096-22. Exclusive breastfeeding, at least 6 months, by age group*. http://doi.org/10.25318/1310009601-eng

Thorne, S., Kirkham, SR. &, MacDonald-Emes, J. (1997). Interpretive description: A noncategorical qualitative alternative for developing nursing knowledge. *Research in Nursing & Health*, *20*(2), 169–177. https://doi-

org.proxy.bib.uottawa.ca/10.1002/(SICI)1098-240X(199704)20:2<169::AID-NUR9>3.0.CO;2-I

Thorne, S. (2016). Interpretive description: qualitative research for applied practice (Second edition). Routledge. https://doi.org/10.4324/9781315545196

Tomori, C. (2023). Global lessons for strengthening breastfeeding as a key pillar of food security. *Frontiers in Public Health, 11.* https://doi.org/10.3389/fpubh.2023.1256390

Vazquez-Vazquez, A., Dib, S., Rougeaux, E., Wells, J., & Fewtrell, M. (2021). The impact of the COVID-19 lockdown on the experiences and feeding practices of new mothers in the UK: Preliminary data from the COVID-19 New Mum Study. *Appetite*, *156*, 104985–104985. https://doi.org/10.1016/j.appet.2020.104985

Victora, C. G., Bahl, R., Barros, A. J. D., França, G. V. A., Horton, S., Krasevec, J., Murch, S., Sankar, M. J., Walker, N., & Rollins, N. C. (2016). Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect. *The Lancet (British Edition)*, *387*(10017), 475–490. https://doi.org/10.1016/S0140-6736(15)01024-7

Viswanath, S., & Mullins, L. B. (2021). Gender responsive budgeting and the COVID-19 pandemic response: a feminist standpoint. *Administrative Theory & Praxis, 43*(2), 230–244. https://doi.org/10.1080/10841806.2020.1814080

Walker, A. (2010). Breast Milk as the Gold Standard for Protective Nutrients. *The Journal of Pediatrics, 156*(2), S3–S7. https://doi.org/10.1016/j.jpeds.2009.11.021

World Health Organization (2003). *Global strategy for infant and young child feeding.* https://www.who.int/publications/i/item/9241562218

World Health Organization. (2017). *Guideline: Protecting, promoting and supporting breastfeeding in facilities providing maternity and newborn services.* https://www.who.int/publications/i/item/9789241550086

World Health Organization. Regional Office for the Western Pacific. (2020*). Actions for consideration in the care and protection of vulnerable population groups for COVID-19*. https://apps.who.int/iris/handle/10665/333043.

World Health Organization. (2021, January 29). *Timeline: WHO's COVID-19 response.* https://www.who.int/news/item/29-06-2020-covidtimeline

Yip, K.-H., Yip, Y.-C., & Tsui, W.-K. (2022). The lived experiences of women without COVID-19 in breastfeeding their infants during the pandemic: A descriptive phenomenological study. *International Journal of Environmental Research and Public Health, 19*(15), 9511–. https://doi.org/10.3390/ijerph19159511

Zanardo, V., Tortora, D., Guerrini, P., Garani, G., Severino, L., Soldera, G., & Straface, G. (2021). Infant feeding initiation practices in the context of COVID-19 lockdown. *Early Human Development*, *152*, 105286–105286. https://doi.org/10.1016/j.earlhumdev.2020.105286

Chapter 5: Discussion

Introduction

There is a large body of evidence concluding that breastfeeding has many short and long-term health benefits and can help protect infants and their mothers against certain illnesses and diseases (Bowatte et al., 2015; Chowdhury et al., 2015; Sankar et al., 2015; Victora et al., 2016). Breastfeeding support provided informally by lay-persons and peers and formal support from healthcare professionals has been found to significantly improve the duration of any and exclusive breastfeeding (McFadden et al., 2017). However, the public health restrictions in Ontario during the COVID-19 pandemic made it difficult for the mothers in this study to access any form of breastfeeding support. Informal support from family members and peers was restricted because of the 'stay-at-home' orders and social restrictions imposed by government bodies during the pandemic (Government of Canada, 2023). Additionally, formal breastfeeding support services were extensively cut or switched to virtual platforms instead of in-person appointments (Kolker et al., 2021; Rice et al., 2021). As a result, participants felt unsupported and socially isolated due to the lack of breastfeeding support in the hospital, cancellation of organized support groups for parents of infants, and the cancellation of breastfeeding appointments in the community with public health nurses and lactation consultants. These cuts to services and the resulting impact on first time mothers' experiences lead us to conclude that, despite the evidence regarding the benefits of breastfeeding and how to improve breastfeeding rates, the Ontario government and public health units did not consider breastfeeding to be sufficiently important to warrant ongoing services during the pandemic. The findings from this study provide initial insight into the consequences of the government's policy decisions to re-deploy human and financial resources (ex. public health nurses) from health promotion

interventions (breastfeeding support services) to pandemic needs (ex. case and contact management and mass immunization programs).

The purpose of this research was to explore the breastfeeding support experiences of first-time mothers in Ontario during the COVID-19 pandemic. The goal was to answer the research question, "What are the breastfeeding support experiences of first-time mothers in Ontario who gave birth during the COVID-19 pandemic?". In this chapter I will begin by briefly summarizing my research findings then, using Hector and colleague's socioecological model I will situate the findings in the existing literature (Hector et al., 2005). Next, I will discuss implications for nursing practice, policy, and research. Lastly, I describe the strengths and limitations of this study before making concluding remarks.

Summary of Findings

I interviewed thirteen first-time mothers about their experiences of breastfeeding support during the COVID-19 pandemic. An overarching theme, 'On their own', and three core themes, 'Lack of support', 'Figuring it out', and 'Emotional hardships' were identified. The core themes lead to nine sub-themes, which I will summarize in this paragraph. The sub-themes, *lack of practical support*, *lack of informational support, lack of social support,* and *lack of emotional and esteem-building support* clearly demonstrate the lack of breastfeeding support available to mothers during the COVID-19 pandemic. *Figuring out* how to breastfeed their babies amidst these obstacles and lack of support was challenging for most participants. While most participants did not get the help they wanted and needed, they demonstrated *understanding* of the extraordinary circumstances of the pandemic and were empathetic towards those providing care for them. Reflecting on their experiences of breastfeeding support, some participants described *taking risks* to get the help they needed by allowing their friends and family into their homes to

assist with baby care and household chores. Their *motivation* to breastfeed was shown by their *resourcefulness* in finding solutions to their feeding difficulties without much direction from their health care providers. Amidst the *isolation* of having their first child during the pandemic, participants found *it was difficult* for them to navigate breastfeeding and motherhood during this unprecedented time in history and many experienced *emotional hardships* as a result.

Discussion

In the subsequent paragraphs Hector et al.'s model (see Appendix F) is used to frame a discussion of how this study's findings contribute to the existing literature. According to Hector et al. (2005) there are three levels of factors that influence breastfeeding practices: individual, group, and societal. Individual level factors involve attributes of the mother, attributes of the infant, and mother-infant dyad. These include the mother's knowledge, skills, and parenting experience, her intention to breastfeed, health status, and childbirth experience (Hector et al., 2005). Group level factors are the features of the mother and infant's environments that enable them to breastfeed. These environments can include hospital and health facilities, including professional support with breastfeeding and follow-up care, the home and peer environment, including, partner and peer support, the work environment, including policies that influence the mother's ability to combine work and breastfeeding, the community environment, such as breastfeeding friendly spaces in the community, and public policy, including maternity leave and childcare (Hector et al., 2005). Societal level factors are the attributes of society, culture, and the economy that influence the acceptability and beliefs about breastfeeding. These include economic structures and incentives that support breastfeeding, cultural norms about breastfeeding, child feeding, and parenting, the role of men and women in society, and the food system (Hector et al., 2005). These three levels of factors interact with each other to influence

breastfeeding practices positively or negatively. For example, a mother may have intended to breastfeed, but a non-supportive environment in the hospital may lead her to stop breastfeeding early (Hector et al., 2005). This framework can be used to plan and organize research and to design and evaluate interventions to encourage the WHO's recommended breastfeeding practices (Hector et al., 2005; WHO, 2015).

Individual

The individual characteristics of this study's participants impacted their experiences of breastfeeding support during the COVID-19 pandemic. A characteristic shared among all study participants, by virtue of the inclusion criteria, is they are first-time mothers. Existing literature suggests that first-time mothers may be at higher risk of early breastfeeding cessation due to the lack of breastfeeding support available during the pandemic (Ceulemans et al., 2021). Therefore, exploring first-time mothers' experiences of breastfeeding support is critical to understand their unique needs and to inform future interventions. Importantly, this is currently the only study conducted in Ontario that explores the experiences of first-time mothers.

Another individual characteristic of participants in this study that influenced their experience is whether they had problems or not with breastfeeding. Among participants who had difficulties breastfeeding, most of them perceived the pandemic as having a negative impact of their breastfeeding support experiences. This was because of numerous obstacles they faced to get the breastfeeding support they needed. For the few participants who did not experience breastfeeding difficulties, they typically did not need to seek out breastfeeding support beyond their postpartum hospital stay. These participants generally did not perceive the pandemic as having a negative impact on their breastfeeding experiences and perceived breastfeeding support.

In keeping with the evidence on providing effective breastfeeding support and in line with the findings from this study, healthcare providers working with this population should include the four types of breastfeeding support (practical, informational, social, and emotional and esteem-building), and face-to-face interventions when possible (Dykes, 2006; Mcfadden et al., 2017; Schmied et al., 2011). Even with the reduction of services during the pandemic, hospital and community nurses should use the most effective means of delivering breastfeeding support when given the opportunity to work with their clients. This will help women who chose to breastfeed to establish and maintain their breastfeeding practices.

Reflected in both this study and the literature, the demographics among study participants could impact their breastfeeding experiences and experiences of breastfeeding support (Brown et al., 2021; Ceulemans et al., 2020). Participants in this study had similar demographic backgrounds: all were White women, and all but one had post-secondary education and a household income above C$100,000. A cross-sectional study conducted in Belgium found 90% of respondents did not believe the pandemic affected their breastfeeding practices or led to early cessation (Ceulemans et al., 2020). These mothers were slightly older, highly educated, and professionally active compared to the general population. However, the study by Ceulemans and colleagues does not specifically state whether these women experienced breastfeeding difficulties. A mixed-methods study conducted in the UK found that women who had more difficult breastfeeding experiences lived in more challenging circumstances, had lower education, and were from black and minority ethnic backgrounds (Brown et al., 2021). While mothers who were more privileged in their living circumstances reported more positive breastfeeding experiences (Brown et al., 2021). It is likely that mothers without these advantages may have different experiences breastfeeding and breastfeeding support experiences.

Several participants in this study demonstrated good understanding of the health benefits of breastfeeding and described the pandemic as having increased the importance of breastfeeding to promote the health of their babies' immune systems. This finding supports conclusions from two other studies that found the pandemic may have motivated mothers to continue to breastfeed because of concerns of infectious disease risks (Hull et al., 2020; Snyder et al., 2021). Additionally, participants in this study demonstrated their motivation to breastfeed by taking initiative to ask for help when it was not offered or tackling breastfeeding problems on their own. Many exemplified resourcefulness by doing their own research to find solutions and get the support they needed due to a lack of access to informal and formal breastfeeding support services. This speaks to 'the work' of breastfeeding, while considered a natural act, it is also a learned behavior that many mothers require support with (WH0, 2017).

Group

Several of the findings within the theme *lack of support*, are consistent with findings in the literature (Brown et al., 2021; Perrine et al., 2020; Shuman et al., 2022). Women had concerns related to initiating or continuing their breastfeeding practices, and these concerns were attributed to a lack of breastfeeding support and resources during the COVID-19 pandemic (Shuman et al., 2022).

Hospital. The features of the hospital environment did not encourage breastfeeding, specifically, the hospitals in which participants delivered their babies did not provide enough support with breastfeeding to the mother-infant dyad. Several participants reported their nurse observed them breastfeed their newborn once or twice, and for one participant, not at all. The lack of breastfeeding support reported by this study's participants during their postpartum hospital stay reflects findings from a report by Perrine and colleagues (2020). The report

discusses findings from a survey the CDC conducted in July and August of 2020 in which 1,344 hospitals across the United States participated in. The report found that nearly one in five hospitals in this study reported that in-person lactation support had decreased during the pandemic (Perrine et al., 2020). Interestingly, a novel finding that my study contributes is the empathy participants expressed for their postpartum nurses. They did not blame them for the lack of support they received in the hospital but attributed it to the increased workload due to staffing shortages and infection prevention and control policies implemented during the pandemic. However, the limited in-hospital breastfeeding support due to a shortage of nursing staff is clear evidence of unsafe nursing practice. The inadequate staffing described by our study participants may have led to negative outcomes such infant weight loss, non-medically indicated supplementation with formula, and early breastfeeding cessation (Brown et al., 2021). It also contributed to participants' anxiety about breastfeeding and negatively impacted their breastfeeding experiences in the hospital. Thus, obstetrical units should prioritize breastfeeding support given the reduction of breastfeeding support services in the community during the pandemic and consider having lactation consultants available to fill this gap in care.

Community. Reflected in both the literature and this study, breastfeeding support services in the community were disrupted during the pandemic (Fry et al., 2021; Jack et al., 2021). In Ontario, much of this disruption was attributed to the redeployment of public health nurses to pandemic related work such as contact tracing, phone line management and case management work (Jack et al., 2021). Usually, public health nurses working in the Healthy Babies Healthy Children (HBHC) program follow up with families postpartum within a few days after birth, in addition to providing breastfeeding support at breastfeeding clinics and baby-drop ins (Jack et al., 2021). However, a report by Jack and colleagues (2021) identified that more than

50% of public health nurses in Ontario were redeployed to pandemic related work. With those few left to provide perinatal supports this reduction in service created a gap in care for breastfeeding mothers which contributed to feelings of stress about breastfeeding among women in this study. This reflects findings from a study conducted in Nova Scotia, where it was found that 66% of study participants described challenges accessing lactation support from lactation consultants or public health nurses due to COVID-19 State of Emergency restrictions (Fry et al., 2021). Not having access to lactation consultants could be detrimental to breastfeeding outcomes, as breastfeeding support from lactation consultants has been found to improve breastfeeding outcomes (Haasse et al., 2019). In a systematic review and meta-analysis Oliveira and colleagues found that home visits are an important opportunity where several types of breastfeeding support can be provided to the mother and the members of her social network (Oliveira et al., 2017). Furthermore, the similarities between the findings of Fry and colleague's study (2021) and the current study may demonstrate that not having access to public health drop-ins and breastfeeding support groups contribute to feelings of isolation, stress, and anxiety.

Given the physical distancing measures imposed throughout the pandemic, some breastfeeding support programs in the community switched to virtual platforms (Kolker et al., 2021; Rice et al., 2021; Yip et al., 2022). However, participants in this study, like other studies during the COVID-19 pandemic (Kolker et al., 2021; Rice et al., 2021), found virtual breastfeeding support was not as helpful as in-person lactation services due to difficulties understanding health teaching over the phone and the inability to have a hands-on assessment. These findings are consistent with studies conducted before the COVID-19 pandemic in which breastfeeding interventions that require face-to-face support, rather than by telephone, were found to better support women with their breastfeeding practices (McFadden et al., 2017). Given

the need for more practical in-person support for breastfeeding, future programs should prioritize in-person breastfeeding support services. While in-person contact was limited to reduce the spread of the virus during the COVID-19 pandemic, it is critical that the risks versus benefits be considered in future public health emergencies given the established health benefits of breastfeeding for both mother and baby. Further research on virtual breastfeeding support interventions should explore how to most effectively support women to breastfeed through virtual platforms.

Several participants in this study did not have consistent appointments for breastfeeding with health professionals in the community. This lack of follow-up runs counter to best practice recommendations from a current systematic review that found that a key characteristic of breastfeeding support is having regularly scheduled appointments so that the mother is aware of when support will be offered (McFadden et al., 2017). Thus, participants in this study were missing an important component of effective breastfeeding support, namely consistently and predictability, and were unsure when they would be able to get help with breastfeeding. Additionally, participants in this study were often not given direction from their healthcare providers on where they can access breastfeeding support in their community. This lack of informational support caused feelings of frustration and participants felt as though their healthcare providers did not know where and how to direct them since services were constantly changing during the pandemic.

Several of the findings within the theme '*Emotional hardships'*, are consistent with findings in the literature, which found that the COVID-19 pandemic had a significant negative impact on the mental health and wellbeing of mothers who gave birth during that time (Ceulemans et al., 2021; Deyoung et al., 2021; Dib et al., 2020; Harrison et al., 2021; Rice et al.,

2021; Yip et al., 2022). In this study, most participants experienced emotional hardships due to the isolation and absence of support from their friends and family. This is relevant to breastfeeding outcomes, since a lack of support from family and peers has been found to negatively impact breastfeeding practices (Dennis et al., 2009). Additional literature on breastfeeding support from lay-persons and peers highlights the importance of their role in providing emotional support mothers who are breastfeeding (Dennis, 2003). Most participants in this study reported feeling stressed about feeding their baby and described their postpartum and breastfeeding experiences as 'difficult'. Two of the thirteen participants were diagnosed with perinatal mood disorders. This is not surprising considering inconsistent and a lack of social support are recognized contributors to postpartum depression (Howell et al., 2006). Maternal mental health is relevant to breastfeeding outcomes since perinatal mood disorders can contribute to breastfeeding difficulties and early breastfeeding cessation (Demirici, 2020).

This study also reflects the findings of Rice et al. (2021) and Kolker et al. (2021), in which participants allowed friends and family into their homes to get the support they needed, despite the 'stay at home' order. Rice et al. (2021) and Kolker et al. (2021) share similar findings to this study in which few participants reported feelings of stress and guilt and worried about their baby becoming infected with COVID-19. However, a few participants in this study spoke of the benefits of allowing their family and peers into their houses, despite going against the government's advice to limit in-person socialization as well as violating the 'stay at home' order. For participants in this study and those from studies by Rice et al. (2021) and Kolker et al. (2021), there was a sense of relief knowing they could rely on others for help with cooking, cleaning, and diaper changes, which allowed them to focus on breastfeeding their newborn. This

highlights the importance of family support during the pandemic for maternal mental wellbeing (Sakalidis et al., 2021).

While there were many reported negative impacts of the COVID-19 pandemic on breastfeeding support, several participants reported unanticipated positive experiences. The absence of visitors, social obligations, and in-person appointments, allowed them to spend more time at home with their newborn. This gave participants more time to rest and recover from labour and delivery, bond with their newborn, and practice breastfeeding. This finding is not unique; other studies have found that the pandemic gave women more time for bonding with their infant, practice breastfeeding, and lower levels of stress due to fewer visitors (Sakalidis et al., 2021; Shuman et al., 2022; Yip et al., 2022). However, it is important to consider that the participants in the current study who reported positive experiences did not experience significant breastfeeding difficulties. Therefore, they may have not needed as much support from professionals, lay persons, and peers as those who did experience challenges breastfeeding.

Public Policy. Public policies during the pandemic had implications for mothers who sought support with breastfeeding. For example, during the 'stay at home' order and certain points of the pandemic where community transmission of COVID-19 was high, non-household members were not allowed to gather indoors together (Government of Canada, 2023). This made it challenging for mothers to benefit from informal support from family member and peers. Furthermore, policies restricting the attendance of support persons at perinatal appointments impacted participants' experience of breastfeeding support. In this study, one participant spoke of not being able to advocate for herself and her baby because her partner was not allowed to attend medical appointments for their newborn. This reflects findings from a Canadian study by

Rice and colleagues that found policies that restrict the presence of support persons in hospitals and at home during the postpartum period appear to be causing harm (Rice et al., 2021)

Society

Throughout the COVID-19 pandemic, disease prevention has been the priority for provincial officials and public health units and health promotion initiatives were neglected (Government of Canada, 2023; Jack et al., 2021). The reduction in breastfeeding support programs and general lack of support for mothers during the postpartum period reinforces the notion that breastfeeding is not important in our society. Several participants in this study were surprised that breastfeeding was not encouraged by their healthcare providers or local public health units to support a strong immune system for their baby. Not only is breastfeeding free and easily accessible, but supply chain issues during the pandemic made it difficult for parents to access formula (Tomori, 2023). This directly impacts infant food security and health for non-breastfed babies. Participants in two studies found the formula shortages to be stressful and potentially detrimental to their infant's health (Hull et al., 2020; Snyder et al., 2021). Thus, breastfeeding should be encouraged to ensure food security is protected for infants, as well as to help infants develop a strong immune system to protect them from illnesses (Tomori, 2023; Victora et al., 2016).

Nursing Implications

The findings within this thesis have implications for nursing practice, policy, and research, of which are described in the following paragraphs.

Nursing Practice

There are two implications for nursing practice from the findings: lack of breastfeeding support provided by nurses in the hospital and public health nurses should provide ongoing

breastfeeding support in the community. However, the lack of support by nurses was largely because of resources being distributed away from breastfeeding support services during the pandemic and was not due to individual nurses themselves. Nonetheless, the first-time mothers in this study strongly identified the need for more help with breastfeeding from nurses in the hospital and in the community.

Nurses have the potential to play a pivotal role in optimizing breastfeeding outcomes and protecting breastfeeding especially during times of public health crises such as the pandemic. The Registered Nurse Association of Ontario (RNAO) Best Practice Guideline: *Breastfeeding-promoting and supporting the initiation, exclusivity, and continuation of breastfeeding for newborns, infants, and young children,* recommends that "nurses, the interprofessional team, and peers play an integral role in supporting the initiation, exclusivity, and continuation of breastfeeding" (RNAO, 2018, p.10). In agreement with the WHO's recommendations for initiation breastfeeding, this best practice guideline recommends that breastfeeding be initiated within the first hour of life (RNAO, 2018; WHO, 2015). This is done immediately following childbirth. Here, healthcare providers can support the breastfeeding dyad to achieve effective positioning, latch, and milk transfer (RNAO, 2018). One-on-one counseling should occur throughout the postpartum period in hospital and non-hospital births (RNAO, 2018). Furthermore, nurses working with mothers and infants should include the four types of support when possible (practical, informational, social, and emotional and esteem-building) (Dykes, 2006; McFadden et al., 2017; Schmied et al., 2011), to most effectively help women with their breastfeeding practices. Implementing policies that promote the early establishment of breastfeeding, one-on-one counseling that includes the four types of support described above, may improve the breastfeeding support nurses provide to postpartum women. However, it is

important to note that there was not enough support in hospitals due to staffing shortages, of which can only be fixed by hospital policies. Such policies could include developing a return to Nursing Now program to encourage RNs to come back to Ontario's nursing workforce, expanding the Nursing Graduate Guarantee, bringing back retired nurses to mentor new graduates, and forming a nursing taskforce to make recommendations on issues pertaining to the retention and recruitments of RNs (RNAO, 2022). Something nurses can do individually is staying up to date on the available breastfeeding support services in their communities so they can provide mothers with accurate information on resources available. Additionally, nurses can advocate for their management to prioritize breastfeeding support in the hospitals by scheduling an adequate number of nurses to work, staffing lactation consultants, and having nurses experienced in providing breastfeeding support.

In the community, additional recommendations from the RNAO best practice guideline (2018) include follow-up post-discharge, ongoing breastfeeding support services to address the individualized needs of the breastfeeding dyad and include family members in breastfeeding education and support (RNAO, 2018). In this study, it is evident that there is a need for formal breastfeeding supports beyond the postpartum hospital stay and into the community. These supports and services are important because as the mother and infant's needs change, issues may arise over time (McFadden et al., 2017). Having accessible and timely supports in the community delivered by public health nurses is an example of this continuation of services from the hospital to the community. The recommendation of including family members in breastfeeding education and support could be achieved by nurses advocating for their clients' support persons to be present during breastfeeding support interventions.

Nursing Policy

There are several implications for nursing policy that are relevant from the findings from this study, including: emergency preparedness policy for redeployment of public health nurses, framing breastfeeding as an upstream public health initiative worth protecting, the role of lactation consultants to provide breastfeeding support in hospitals, institutional policies such as the Baby Friendly Initiative, and implementing policies for communicating breastfeeding support services between hospitals and community partners.

In this study, participants described a lack of in-person follow up and support in the community from public health nurses due a large number being redeployed to pandemic-response. While in-person contact was limited to reduce the spread of the virus, it is critical that the risks versus benefits be considered given the established health benefits of breastfeeding for both mother and baby. According to a report from Jack and colleagues, 50% of public health nurses working in the Healthy Babies Healthy Children program in Ontario were redeployed to the pandemic response (Jack et al., 2021). Nurses working in the Healthy Babies Healthy Children program have an important role in providing breastfeeding support to mothers through home visits and breastfeeding clinics in the community. Given the long-term health benefits of breastfeeding for the mother-infant dyad (Bowatte et al., 2015; Chowdhury et al., 2015; Sankar et al., 2015; Victora et al., 2016), breastfeeding should have been encouraged during the pandemic to help ensure babies are nourished and develop a strong immune system to protect them from illnesses such as COVID-19 (Victora et al., 2016). Additionally, a recent systematic review pertaining to the effects of COVID-19 vaccination on lactating women found there is some evidence to suggest that maternal vaccination against COVID-19 may provide the infant with some protection against the virus (Muyldermans et al., 2022). It is also cost effective to continue providing breastfeeding support services to help mothers breastfeed for as long as they

want to. Thus, future pandemic preparedness plans should refrain from deploying public health nurses from the Healthy Babies Healthy Children program and prioritize in-person breastfeeding support services to optimize breastfeeding outcomes.

This study identified the need for lactation consultants in hospitals given the lack of breastfeeding support in this setting of care. A systematic review supports the use of lactation consultants to increase the number of women initiating breastfeeding and improve any and exclusive breastfeeding rates (Patel et al., 2016). Additionally, the RNAO best practice guideline *Breastfeeding-promoting and supporting the initiation, exclusivity, and continuation of breastfeeding for newborns, infants, and young children* recommends lactations consultants be integrated into the provision of care to the breastfeeding dyad throughout the perinatal period (RNAO, 2018). Having lactation consultants available to support and collaborate with obstetrical nurses would be an invaluable asset to help nurses if they are unable to provide effective breastfeeding support to their patients. This could help postpartum mothers establish breastfeeding in the hospital and allow them gain confidence with breastfeeding before being discharged.

Hospitals, healthcare facilities, and community organization related to breastfeeding had an impact on the first-time mothers breastfeeding support experiences in this study. Hospitals and public health units should implement the Baby Friendly Initiative (BFI) to provide a common framework and philosophy regarding breastfeeding support (Breastfeeding Committee for Canada [BCC], 2021; WHO, 2009; WHO, 2018). The BFI is a global strategy that was launched by WHO and UNICFEF to promote, protect, and support breastfeeding (WHO, 2018). The *Ten Steps to Successful Breastfeeding* in Canada provide a framework for institutions to achieve BFI designation (see Appendix G) (BCC, 2021). Adopting the principles and

recommendations of the BFI into clinical practice would promote collaboration and consistency between the hospitals and breastfeeding support services in the community to better support mothers with breastfeeding (BCC, 2021; WHO, 2009; WHO, 2018).

It is recommended that breastfeeding support services in the community be regularly communicated with hospital, general practitioners, and nurse practitioners. This was reflected as a need from the findings since participants felt their healthcare providers were oftentimes unaware of breastfeeding support services available in the community due to the changing circumstances during the pandemic. A liaison between hospital and community could help facilitate this community, improve communication and continuation of care, and reinforce the importance of breastfeeding as a health priority.

Nursing Research

The findings from this study raise questions related to the use of virtual care for breastfeeding support interventions. In this study several participants described their experiences of virtual breastfeeding support. Compared to interventions conducted in-person, participants did not find virtual support to be as effective and had unresolved issues after these appointments. Difficulties with communication and not being able to have hands-on practical support were reasons given. Further nursing research should be undertaken to explore the effectiveness of breastfeeding support delivered through virtual platforms. This is an important area of research should nurses need to provide virtual care in future pandemics or prolonged emergencies. In addition, virtual care could serve to provide breastfeeding support to people living in rural areas without access to local services or those without transportation. Furthermore, it may be important to examine different types of technology to see which may be most effective if in-person appointments are not possible.

The study has identified several knowledge gaps related to breastfeeding support during the COVID-19 pandemic. This study lacks the voice of vulnerable populations. This includes Indigenous peoples, people experiencing homelessness, people living in overcrowded housing, collective refugees and migrants, people with disabilities, people living in closed facilities, people living in remote locations and people living in poverty and extreme poverty (WHO, 2020). It would be valuable to study the breastfeeding support experiences of vulnerable groups as it has been found that vulnerable populations in Canada were disproportionately negatively affected by the COVID-19 pandemic (Public Health Ontario, 2020).

Lastly, further research is needed on breastfeeding initiation and duration rates among women who gave birth in Ontario during the COVID-19 pandemic, as this data is currently not available. Turner and colleagues (2022) conducted a narrative review on breastfeeding initiation, duration, and mother's experiences of breastfeeding support during the pandemic in five western countries. In this review, several studies from the United States and one study from the United Kingdom showed that the pandemic was related to changes in breastfeeding initiation and duration. There were no Canadian data on breastfeeding initiation or duration during the pandemic at the time, therefore more research needs to be undertaken (Turner et al., 2022).

Strengths and Limitations

There were several strengths to this study. At the time of data collection, this was the first qualitative study in Ontario about the breastfeeding support experiences among first-time mothers during the pandemic. Another strength to this study was the use of videoconferencing for interviews, as is allowed women from across Ontario to participate. It also permitted recruitment that adhered to public health measures during the COVID-19 pandemic. Additionally, during videoconferencing interviews participants are in their natural environment;

therefore, they are more relaxed (Irani, 2018). They also did not have to drive to an interview location, pay for parking, or arrange childcare; and these small things could create barriers for people wanting to participate in interviews. Several participants had their infants with them and breastfed during the interview. The participants in this study seemed comfortable sharing their experiences, as this was evident in the richness of the data.

A limitation of this study is the lack of diversity in the study population, which included White, breastfeeding women, with middle to high socio-economic status. Therefore, these results may not reflect the experiences of those in more difficult circumstances who may be more vulnerable to the impacts of the pandemic, such as Indigenous peoples, people experiencing homelessness, people living in overcrowded housing, collective refugees and migrants, people with disabilities, people living in closed facilities, people living in remote locations and people living in poverty and extreme poverty (WHO, 2020).

Conclusion

The COVID-19 pandemic significantly impacted the breastfeeding support experiences among the mothers who participated in this study. The feelings of isolation and lack of support because of social restrictions, a lack of breastfeeding support in both hospitals and communities, contributed to breastfeeding difficulties and poor maternal mental health. These issues have potential to negatively impact breastfeeding practices, which has life-long impacts on the health of the infant (Victora et al., 2016). Given the established importance of breastfeeding support (Victora et al., 2016), it is critical to understand mothers' experiences of breastfeeding support it is to provide appropriate and effective support. This will help to enable mothers to breastfeed to meet their breastfeeding goals (McFadden et al., 2017). Thus, during future pandemics and prolonged emergencies, breastfeeding support should be given more priority than was not given

during the COVID-19 pandemic. For this to happen, every effort should be made on the individual, group, and societal level to support mothers in feeding their infants. As such, implementing interventions to improve access to breastfeeding support services in the postpartum period should be undertaken. This could include public health units evaluating their emergency preparedness plans to refrain from redeploying public health nurses who provide direct perinatal services and breastfeeding services to the pandemic response. Protecting breastfeeding should be a public health priority to protect the health and food security among infants. Also, hospitals should prioritize breastfeeding support and consider having lactation consultants provide breastfeeding support to fill this gap in care. The role of the support person and family support cannot be undervalued. Policies that restrict support persons at home during the postpartum period appear should be reconsidered since they appear to negatively affect breastfeeding practices and maternal mental health. The lessons learned from the COVID-19 pandemic may inform policymakers and future public health programs to make changes to better support women to breastfeed.

References

Bowatte, G., Tham, R., Allen, K., Tan, D., Lau, M., Dai, X., & Lodge, C. (2015). Breastfeeding and childhood acute otitis media: A systematic review and meta-analysis. *Acta Paediatrica*, *104*(S467), 85–95. https://doi.org/10.1111/apa.13151

Breastfeeding Committee for Canada. 2021. *Baby-friendly implementation guideline.* https://breastfeedingcanada.ca/wp-content/uploads/2021/05/BFI-Implementation-Guideline-May-19.pdf

Brown, A., & Shenker, N. (2021). Experiences of breastfeeding during COVID-19: Lessons for future practical and emotional support. *Maternal and Child Nutrition*, *17*(1), e13088–n/a. https://doi.org/10.1111/mcn.13088

Ceulemans, M., Verbakel, J., Van Calsteren, K., Eerdekens, A., Allegaert, K., & Foulon, V. (2020). SARS-CoV-2 infections and impact of the COVID-19 pandemic in pregnancy and breastfeeding: Results from an observational study in primary care in Belgium. *International Journal of Environmental Research and Public Health*, *17*(18), 1–10. https://doi.org/10.3390/ijerph17186766

Ceulemans, M., Foulon, V., Ngo, E., Panchaud, A., Winterfeld, U., Pomar, L., Lambelet, V., Cleary, B., O'Shaughnessy, F., Passier, A., Richardson, J., Hompes, T., & Nordeng, H. (2021). Mental health status of pregnant and breastfeeding women during the COVID-19 pandemic-A multinational cross-sectional study. *Acta Obstetricia et Gynecologica Scandinavica*. https://doi.org/10.1111/aogs.14092

Chowdhury, R., Sinha, B., Sankar, M. J., Taneja, S., Bhandari, N., Rollins, N., Bahl, R., & Martines, J. (2015). Breastfeeding and maternal health outcomes: a systematic review and meta-analysis. *Acta Paediatrica*, *104*(S467), 96–113. https://doi.org/10.1111/apa.13102

Demirici, J. (2020). Breastfeeding support in the time of COVID-19. *The Journal of Perinatal & Neonatal Nursing*, *34*(4), 297–299. https://doi.org/10.1097/JPN.0000000000000521

Dennis, C. (2003). Peer support within a health care context: a concept analysis. *International Journal of Nursing Studies*, *40*(3), 321–332. https://doi.org/10.1016/S0020-7489(02)00092-5

Dennis, C.-L., & McQueen, K. (2009). The relationship between infant-feeding outcomes and postpartum depression: A qualitative systematic review. *Pediatrics (Evanston)*, *123*(4), e736–e751. https://doi.org/10.1542/peds.2008-1629

DeYoung, S., & Mangum, M. (2021). Pregnancy, birthing, and postpartum experiences during COVID-19 in the United States. *Frontiers in Sociology*, *6*. https://doi.org/10.3389/fsoc.2021.611212

Dib, S., Rougeaux, E., Vázquez-Vázquez, A., Wells, J., & Fewtrell, M. (2020). Maternal mental health and coping during the COVID-19 lockdown in the UK: Data from the COVID-19 New Mum Study. *International Journal of Gynecology and Obstetrics*, *151*(3), 407–414. https://doi.org/10.1002/ijgo.13397

Dykes, F. (2006). The education of health practitioners supporting breastfeeding women: time for critical reflection. *Maternal and Child Nutrition, 2*(4), 204–216. https://doi.org/10.1111/j.1740-8709.2006.00071.x

Fry, H. L., Levin, O., Kholina, K., Bianco, J. L., Gallant, J., Chan, K., & Whitfield, K. C. (2021). Infant feeding experiences and concerns among caregivers early in the COVID-19 state of emergency in Nova Scotia, Canada. *Maternal and Child Nutrition, 17*(3), e13154–n/a. https://doi.org/10.1111/mcn.13154

Government of Canada. (2023, April 14). *Coronavirus disease (COVID-19): Measures to reduce COVID-19 in your community.* https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/prevention-risks/measures-reduce-community.html

Haase, B., Brennan, E., & Wagner, C. L. (2019). Effectiveness of the IBCLC: Have we made an impact on the care of breastfeeding families over the past decade? *Journal of Human Lactation, 35*(3), 441–452. https://doi.org/10.1177/0890334419851805

Harrison, V., Moulds, M., & Jones, K. (2021). Support from friends moderates the relationship between repetitive negative thinking and postnatal wellbeing during COVID-19. *Journal of Reproductive and Infant Psychology*, 1–16. https://doi.org/10.1080/02646838.2021.1886260

Hector, D., King, L., Webb, K., & Heywood, P. (2005). Factors affecting breastfeeding practices. Applying a conceptual framework. *N S W Public Health Bulletin, 16*(4), 52–55. https://doi.org/10.1071/NB05013

Howell, E. A., Mora, P., & Leventhal, H. (2006). Correlates of early postpartum depressive symptoms. *Maternal and Child Health Journal*, *10*(2), 149–157. https://doi.org/10.1007/s10995-005-0048-9

Hull, N., Kam, R. L., & Gribble, K. D. (2020). Providing breastfeeding support during the COVID-19 pandemic: Concerns of mothers who contacted the Australian Breastfeeding Association. *Breastfeeding Review, 28*(3), 25–35.

Irani, E. (2019). The use of videoconferencing for qualitative interviewing: Opportunities, challenges, and considerations. *Clinical Nursing Research*, *28*(1), 3–8. https://doi.org/10.1177/1054773818803170

Jack, S.M., Gonzalez, A., Orr, E., Campbell, K., Carsley, S., Croswell, L., Proulx, J., & Strohm, S. (2021). Impacts of the COVID-19 pandemic on Ontario's public health home visitation programs for families with young children: An environmental scan. School of Nursing, McMaster University. https://phnprep.ca/research/environmental-scan/

Kolker, S., Biringer, A., Bytautas, J., Blumenfeld, H., Kukan, S., & Carroll, J. C. (2021). Pregnant during the COVID-19 pandemic: an exploration of patients' lived experiences. *BMC Pregnancy and Childbirth, 21*(1), 851–851. https://doi.org/10.1186/s12884-021-04337-9

McFadden, A., Gavine, A., Renfrew, M., Wade, A., Buchanan, P., Taylor, J., Veitch, E., Rennie, A., Crowther, S., Neiman, S., MacGillivray, S., & McFadden, A. (2017). Support for healthy breastfeeding mothers with healthy term babies. *Cochrane Library*, *2017*(2), CD001141–CD001141. https://doi.org/10.1002/14651858.CD001141.pub5

Muyldermans, J., De Weerdt, L., De Brabandere, L., Maertens, K., & Tommelein, E. (2022). The effects of COVID-19 vaccination on lactating women: A systematic review of the literature. *Frontiers in Immunology, 13*, 852928–852928. https://doi.org/10.3389/fimmu.2022.852928

Oliveira, L., Leal, L., Coriolano-Marinus, M., Santos, A., Horta, B., & Pontes, C. (2017). Meta-analysis of the effectiveness of educational interventions for breastfeeding promotion directed to the woman and her social network. *Journal of Advanced Nursing*, *73*(2), 323–335. https://doi.org/10.1111/jan.13104

Public Health Ontario. (2020, May 24). COVID-19 – What we know so far about... social determinants of health. https://www.publichealthontario.ca/-

/media/documents/ncov/covid-wwksf/2020/05/what-we-know-social-determinants-health.pdf?la=en

Patel, S., & Patel, S. (2016). The effectiveness of lactation consultants and lactation counselors on breastfeeding outcomes. *Journal of Human Lactation*, *32*(3), 530–541. https://doi.org/10.1177/0890334415618668

Perrine, C., Chiang, K., Anstey, E., Grossniklaus, D., Boundy, E., Sauber-Schatz, E., & Nelson, J. (2020). Implementation of hospital practices supportive of breastfeeding in the context of COVID-19 - United States, July 15-August 20, 2020. *MMWR. Morbidity and Mortality Weekly Report*, *69*(47), 1767–1770. https://doi.org/10.15585/mmwr.mm6947a3

Registered Nurses' Association of Ontario. (2018, July). *Breastfeeding- promoting and supporting the initiation, exclusivity, and continuation of breastfeeding for newborns, infants, and young children.* https://rnao.ca/bpg/guidelines/breastfeeding-promoting-and-supporting-initiation-exclusivity-and-continuation

Registered Nurses' Association of Ontario. (2022, May). *Nursing through crisis: A comparative perspective.* https://rnao.ca/sites/default/files/2022-05/Nursing%20Through%20Crisis%20-%20A%20Comparative%20Analysis%202022.pdf

Rice, K., & Williams, S. (2021). Women's postpartum experiences in Canada during the COVID-19 pandemic: a qualitative study. *CMAJ Open, 9*(2), E556–E562. https://doi.org/10.9778/cmajo.20210008

Sankar, M. J., Sinha, B., Chowdhury, R., Bhandari, N., Taneja, S., Martines, J., & Bahl, R. (2015). Optimal breastfeeding practices and infant and child mortality: a systematic

review and meta-analysis. *Acta Paediatrica, 104*(S467), 3–13. https://doi.org/10.1111/apa.13147

Sakalidis, V. S., Rea, A., Perrella, S. L., McEachran, J., Collis, G., Miraudo, J., Prosser, S. A., Gibson, L. Y., Silva, D., & Geddes, D. T. (2021). Wellbeing of breastfeeding women in Australia and New Zealand during the COVID-19 pandemic: A cross-sectional study. *Nutrients, 13*(6), 1831–. https://doi.org/10.3390/nu13061831

Schmied, V., Beake, S., Sheehan, A., McCourt, C., & Dykes, F. (2011). Women's perceptions and experiences of breastfeeding support: A metasynthesis. *Birth, 38*(1), 49–60. https://doi.org/10.1111/j.1523-536X.2010.00446.x

Shuman, C. J., Morgan, M. E., Chiangong, J., Pareddy, N., Veliz, P., Peahl, A. F., & Dalton, V. K. (2022). "Mourning the experience of what should have been": Experiences of peripartum women during the COVID-19 pandemic. *Maternal and Child Health Journal, 26*(1), 102–109. https://doi.org/10.1007/s10995-021-03344-8

Snyder, K., & Worlton, G. Social support during COVID-19: Perspectives of breastfeeding mothers. *Breastfeed Med, 16*(1),39-45. http://doi.org/10.1089/bfm.2020.0200

Turner, S., McGann, B., & Brockway, M. "Merilee." (2022). A review of the disruption of breastfeeding supports in response to the COVID-19 pandemic in five western countries and applications for clinical practice. *International Breastfeeding Journal, 17*(1), 38–38. https://doi.org/10.1186/s13006-022-00478-5

Victora, C. G., Bahl, R., Barros, A. J. D., França, G. V. A., Horton, S., Krasevec, J., Murch, S., Sankar, M. J., Walker, N., & Rollins, N. C. (2016). Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect. *The Lancet (British Edition)*, *387*(10017), 475–490. https://doi.org/10.1016/S0140-6736(15)01024-7

World Health Organization. (2009). *Acceptable medical reasons for use of breast-milk substitutes.* https://www.who.int/publications/i/item/WHO_FCH_CAH_09.01

World Health Organization. (2015). *Global strategy for women's, children's, and adolescents' health (2016–2030). Survive, thrive transform.* https://www.who.int/publications/i/item/A71-19

World Health Organization. (2017). *Guideline: Protecting, promoting and supporting breastfeeding in facilities providing maternity and newborn services.* https://www.who.int/publications/i/item/9789241550086

World Health Organization. (2018). *Implementation guidance: protecting, promoting, and support breastfeeding in facilities providing maternity and newborn services- the revised Baby-Friendly Hospital Initiative.* https://www.who.int/publications/i/item/9789241513807

World Health Organization. Regional Office for the Western Pacific. (2020*). Actions for consideration in the care and protection of vulnerable population groups for COVID-19*. https://apps.who.int/iris/handle/10665/333043.

Yip, K.-H., Yip, Y.-C., & Tsui, W.-K. (2022). The lived experiences of women without COVID-19 in breastfeeding their infants during the pandemic: A descriptive phenomenological study. *International Journal of Environmental Research and Public Health, 19*(15), 9511–. https://doi.org/10.3390/ijerph1915951

Appendix A: Research Ethics Board Approval from the University of Ottawa

26/11/2021

Université d'Ottawa
Bureau d'éthique et d'intégrité de la recherche

University of Ottawa
Office of Research Ethics and Integrity

CERTIFICAT D'APPROBATION ÉTHIQUE I CERTIFICATE OF ETHICS APPROVAL

Numéro du dossier / Ethics File Number	H-08-21-7185
Titre du projet / Project Title	The Breastfeeding Support Experiences Among Women Who Gave Birth During The COVID-19 Pandemic
Type de projet / Project Type	Thèse de maîtrise / Master's thesis
Statut du projet / Project Status	Approuvé / Approved
Date d'approbation (jj/mm/aaaa) / Approval Date (dd/mm/yyyy)	26/11/2021
Date d'expiration (jj/mm/aaaa) / Expiry Date (dd/mm/yyyy)	25/11/2022

Équipe de recherche / Research Team

Chercheur / Researcher	Affiliation	Role
Hannah MARCOTTE	École des sciences infirmières / School of Nursing	Chercheur Principal / Principal Investigator
Wendy PETERSON	École des sciences infirmières / School of Nursing	Superviseur / Supervisor
Rosann EDWARDS	University of New Brunswick	Autre / Other
Christine MCPHERSON	École des sciences infirmières / School of Nursing	Autre / Other

Conditions spéciales ou commentaires / Special conditions or comments

26/11/2021

Université d'Ottawa

Bureau d'éthique et d'intégrité de la recherche

University of Ottawa

Office of Research Ethics and Integrity

Le Comité d'éthique de la recherche (CÉR) de l'Université d'Ottawa, opérant conformément à l'*Énoncé de politique des Trois conseils* (2014) et toutes autres lois et tous règlements applicables, a examiné et approuvé la demande d'éthique du projet de recherche ci-nommé.

L'approbation est valide pour la durée indiquée plus haut et est sujette aux conditions énumérées dans la section intitulée "Conditions Spéciales ou Commentaires". Le formulaire « Renouvellement ou Fermeture de Projet » doit être complété quatre semaines avant la date d'échéance indiquée ci-haut afin de demander un renouvellement de cette approbation éthique ou afin de fermer le dossier.

Toutes modifications apportées au projet doivent être approuvées par le CÉR avant leur mise en place, sauf si le participant doit être retiré en raison d'un danger immédiat ou s'il s'agit d'un changement ayant trait à des éléments administratifs ou logistiques du projet. Les chercheurs doivent aviser le CÉR dans les plus brefs délais de tout changement pouvant augmenter le niveau de risque aux participants ou pouvant affecter considérablement le déroulement du projet, rapporter tout évènement imprévu ou indésirable et soumettre toute nouvelle information pouvant nuire à la conduite du projet ou à la sécurité des participants.

The University of Ottawa Research Ethics Board, which operates in accordance with the *Tri-Council Policy Statement* (2014) and other applicable laws and regulations, has examined and approved the ethics application for the above-named research project.

Ethics approval is valid for the period indicated above and is subject to the conditions listed in the section entitled "Special Conditions or Comments". The "Renewal/Project Closure" form must be completedfour weeks before the above-referenced expiry date to request a renewal of this ethics approval or closure of the file.

Any changes made to the project must be approved by the REB before being implemented, except when necessary to remove participants from immediate endangerment or when the modification(s) only pertain to administrative or logistical components of the project. Investigators must also promptly alert the REB of any changes that increase the risk to participant(s), any changes that considerably affect the conduct of the project, all unanticipated and harmful events that occur, and new information that may negatively affect the conduct of the project or the safety of the participant(s).

Kim THOMPSON
Responsable d'éthique en recherche / Protocol Officer
Pour/For **Daniel LAGAREC** Président(e) du/ Chair of the **Comité d'éthique de la recherche en sciences de la santé et sciences / Health Sciences and Sciences Research Ethics Board**

Appendix B: Recruitment Post

Participate in a Breastfeeding Research Study

Are you a first-time mother who had a baby during the COVID-19 pandemic (on/after March 11th, 2020)? Was your baby born on or after 37 weeks gestation and/or was not admitted to the NICU? Did you breastfeed your baby or try to breastfeed for any amount of time?

For my master's thesis I am looking at women's experiences of breastfeeding support during the COVID-19 pandemic. Participation in this study will help contribute to the advancement of knowledge on women's experiences of breastfeeding and breastfeeding support during the COVID-19 pandemic. Participants must reside in Ontario and will be selected on a first-come first-serve basis. Participation involves an online interview conducted in English and lasting up to one hour. Participation is voluntary and will be confidential.

Looking forward to hearing from you!

Researcher: Hannah Marcotte RN, BScN, University of Ottawa

Please share this post as appropriate.

Appendix C: Participant Consent Form

Consent Form

Title of the study: The Breastfeeding Support Experiences Among Women Who Gave Birth During the COVID-19 Pandemic

Researcher: Hannah Marcotte RN, BScN and supervisor Wendy Peterson, RN, Ph.D.

Institution: School of Nursing, Faculty of Health Science, University of Ottawa.

Invitation to participate: I am invited to participate in the above-mentioned research study conducted by master's student Hannah Marcotte RN, BScN and supervisor Wendy Peterson, RN, Ph.D. because I had a baby during the COVID-19 pandemic and breastfed or tried to breastfeed my baby for some amount of time.

Purpose of the study: The purpose of this study is to better understand the impact of the COVID-19 pandemic upon the ability to breastfeed, specifically, women's perceptions of breastfeeding support during this time.

Participation: My participation will consist of an interview with Hannah Marcotte lasting approximately one hour in length. The interview will be online and audio-recorded using a video conferencing software, either Microsoft Teams or Zoom, according to my preference. I can choose to have my camera off if I wish. Internet connection is required, having the video conferencing application downloaded is not required. Hannah Marcotte will e-mail me the meeting invitation link to the interview to the e-mail I provide, which I can connect to using a web browser (Google Chrome, Apple Safari, Microsoft Internet Explorer etc.). Hannah Marcotte and I will be the only people who have the link to access this interview on Microsoft Teams/Zoom to maintain confidentiality.

Risks: My participation in this study will entail that I volunteer personal information, and this may cause me to feel emotional. I have received assurance from Hannah Marcotte that every effort will be made to minimize this risk, including not having to answer any questions I do not wish to answer or share information I am not comfortable disclosing.

Benefits: My participation in this study will contribute to the advancement of knowledge on women's experiences of breastfeeding and breastfeeding support during the COVID-19 pandemic.

Confidentiality and Anonymity: I have no personal relationship with Hannah Marcotte beyond social media. I have received assurance from Hannah Marcotte that the information I will share will remain strictly confidential. I understand that the content will be used only for the purpose of this study and that my confidentiality will be protected. My name will not be used in any reports, publications or presentations of the study. Hannah Marcotte will create a master list that links participants' names to a pseudonym. Only Wendy Peterson and Hannah Marcotte will have access to the master list. In order to minimize the risk of security breaches and to help ensure my confidentiality I understand that it is recommended that I use standard safety measures such as signing out of my account, closing my browser and locking my screen or device when I

am no longer using them/when I have completed the interview. My name or identifying information will be known to Hannah Marcotte, who interviews me. My anonymity will be protected by removing personal characteristics that could identify me, from the answers I provide in the interview. Instead, I will be given a pseudonym that will be used in publications and presentations of the research findings.

Conservation of data: The data collected both, hard copy and electronic will be kept in a secure manner. Interviews will be recorded using a digital recording device and recordings will be deleted by Hannah Marcotte and Wendy Peterson 5 years after the completion of data collection for this study. Written notes will be taken during interviews by Hannah Marcotte and will be shredded 5 years following the completion of data collection. Recorded interviews will be transcribed and saved on uOttawa one drive and deleted 5 years following the completion of data collection. Hannah Marcotte, Wendy Peterson, and two thesis committee members will have access to the transcripts for the purpose of data analysis.

Compensation: For participating in this study, I will receive token gift of $10 to Walmart in the form of a e-gift-card. If I choose to withdraw from the study, I will still receive this compensation.

Voluntary Participation: I am under no obligation to participate and if I choose to participate, I can withdraw from the study at any time and/or refuse to answer any questions, without providing a reason, and without suffering any negative consequences. If I choose to withdraw, all data gathered until the time of withdrawal may contribute to the study findings however quotations from my interview will not be used.

Duty to Report: As a professional obligation, Hannah Marcotte has a duty to report if she suspects that a child is or may be in need of protection to a Family and Children's Services. This includes neglect, physical, sexual and emotional abuse, and risk of harm.

Acceptance: I, *(Name of participant),* agree to participate in the above research study conducted by Hannah Marcotte RN, BScN of the School of Nursing, Faculty of Health Sciences, University of Ottawa, which research is under the supervision of Wendy Peterson, RN, Ph.D.

If I have any questions about the study, I can contact Hannah Marcotte or Wendy Peterson

If I have any questions regarding the ethical conduct of this study, I can contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 154, Ottawa, ON K1N 6N5
Tel.: (613) 562-5387

There are two copies of the consent form, one of which is mine to keep.

Participant's signature:	(Signature)	Date: *(Date)*
Researcher's signature:	(Signature)	Date: *(Date)*

Appendix D: Interview Guide

There are two sets of questions in this interview.

The first set consists of 10 demographic questions, and we ask them so that we can provide a broad description of the group of people who participated in the study.

The second set of 8 questions are more open-ended or interview type questions, where I will ask about your experiences.

If you do not wish to answer any of these questions please say, "prefer not to answer".

First set: Demographic questions

1. How old are you?
    a. <25
    b. 26-30
    c. 31-35
    d. 36-40
    e. 40+

2. Do you live in a rural or urban area?

3. Do you self-identify as a member of a minority group? (example: Indigenous, Person of colour)

4. What is the highest level of education that you have completed?
    a. Elementary school
    b. Some high school
    c. High school
    d. Some college or university
    e. College or university
    f. University graduate degree/certificate

5. Which of the following best describes your approximate annual household income?
    a. Less than $50,000
    b. $50,000-$100,000
    c. $100,000-$150,000
    d. More than $150,000

6. When you were pregnant, were you planning to breastfeed?

7. What kind of healthcare professional cared for you during childbirth?
    a. Obstetrician
    b. Family doctor

c. Midwife
d. Not sure

8. Did you have a vaginal or caesarean delivery?

9. How old is your baby now?

10. Did you have a partner or support person(s) during the postpartum period?

Second set: Open-ended interview questions

1. Tell me about your experience of feeding your baby.

2. Did you experience any breastfeeding challenges? If so, please describe them.

3. What does support mean to you in the context of breastfeeding?

4. Describe the breastfeeding support you received: a. from professionals b. from family c. from friends/peers d. any other sources of breastfeeding support

5. How was this support helpful or not helpful to you?

6. Did you experience any barriers or challenges accessing breastfeeding support? If so,
please describe them.

7. How did the COVID-19 pandemic impact your breastfeeding experience?

8. How do you think breastfeeding support could be improved upon in the context of the COVID-19 Pandemic?

Appendix E: University of Ottawa Research Ethics Board Evaluation Checklist

uOttawa

REB - EVALUATION CHECKLIST

The REB is mandated to assess the ethical acceptability of a research project through consideration of the foreseeable risks, potential benefits and ethical implications of the project. The three core principles of the TCPS 2 (respect for persons, justice, and concern for welfare) should also be kept in mind when reviewing a project. The document below is meant to assist REB members in their in evaluation. When possible, references to the TCPS 2 have been included in parentheses so that you can verify the guidelines as needed. The TCPS 2 interpretations could also be of interest.

Project Description

- ☐ Are the purpose/objectives clearly and adequately explained?
- ☐ Are there ethical implications relating to the methods and design of the project? (Article 2.7)
- ☐ If applicable, are conflicts of interest managed properly? (Chap 7, Section D)

Recruitment Process

- ☐ Is sufficient information on the sample provided, including inclusion/exclusion criteria (Chap 4, A & B)?
- ☐ Is the recruitment process clearly and adequately explained?
- ☐ If there is a risk of coercion, is it dealt with appropriately?
- ☐ Are recruitment texts (e.g., email script, poster, letter of info) complete?

Participation

- ☐ Is participation adequately explained (e.g., activities, duration, location)?
- ☐ If research activities are recorded (e.g., audio, video, photographs), are the process and information provided to participants adequate?
- ☐ If applicable, are the details of compensation explained and appropriate? (Article 3.1)
- ☐ Are copies of research instruments appended (e.g., survey, interview guide), where relevant?

Risks and Benefits (Chapter 2, Section B)

- ☐ Are the potential risks clearly and adequately explained?
- ☐ If there are risks, are the measures to mitigate such risks appropriate?
- ☐ If necessary, is a list of resources for participants appended?
- ☐ Are the benefits clearly and adequately explained?

Privacy, Confidentiality and Data Conservation (Chapter 5 and Article 10.4)

- ☐ If the protection of the identity of participants is guaranteed, are safeguarding measures clearly and adequately explained?
- ☐ If protection of the identity of participants is not guaranteed, are limits of privacy and/or potential risks to participants clearly and adequately explained?
- ☐ Are the proposed measures for data conservation (during and after the project) clearly and adequately explained?

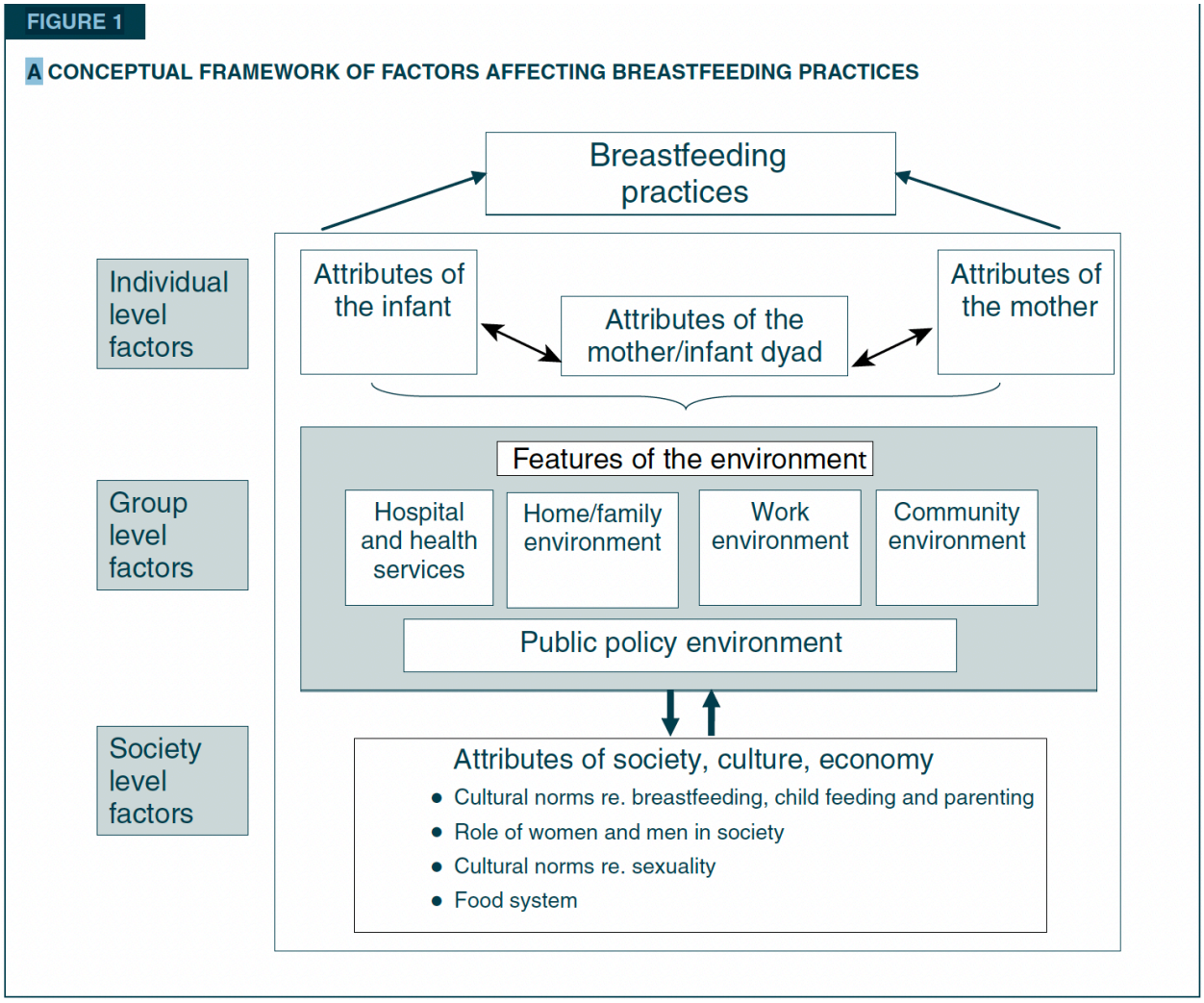
Consent Process (Chapter 3)

- ☐ Is the consent process clearly and adequately explained? (Articles 3.1 and 3.12)
- ☐ If there is a risk of coercion when obtaining consent, is it dealt with appropriately?
- ☐ If there is partial disclosure or deception, is the debriefing process clearly explained? (Article 3.7)

Consent Documents: Is the following information included? (Article 3.2)

- ☐ Name, contact info and affiliation of researchers
- ☐ Funding information (if applicable)
- ☐ Purpose and objectives of the research project
- ☐ Participation details (e.g., duration, location, audio-recording, transcript review)
- ☐ Nature of benefits, potential risks and mitigating measures
- ☐ Info regarding anonymity and confidentiality
- ☐ Info regarding data conservation
- ☐ Details on compensation and/or reimbursement
- ☐ Statement on voluntary participation (e.g., can refuse to participate; withdrawal of data)
- ☐ Ethics Office contact information
- ☐ Language level is appropriate for sample

Appendix F: Socio Ecological Framework



Hector, D., King, L., Webb, K., & Heywood, P. (2005). Factors affecting breastfeeding practices. Applying a conceptual framework. *N S W Public Health Bulletin, 16*(4), 52–55. https://doi.org/10.1071/NB05013

Appendix G: The 10 Steps to Successful Breastfeeding in Canada

Critical Management Procedures
1.a. Comply with the International Code of Marketing of Breast-milk Substitutes and relevant World Health Assembly Resolutions. 1.b. Have a written Infant Feeding Policy that is routinely communicated to all staff, pregnant women/persons and parents. 1.c. Establish ongoing BFI monitoring and data-management systems. 2. Ensure that staff have the competencies (knowledge, attitudes and skills) necessary to support mothers/birthing parents to meet their infant feeding goals.
Key Clinical Practices
3. Discuss the importance and process of breastfeeding with pregnant women/persons and their families. 4. Facilitate immediate and uninterrupted skin-to-skin contact at birth. Support mothers/birthing parents to respond to the infant's cues to initiate breastfeeding as soon as possible after birth. 5. Support mothers/parents to initiate and maintain breastfeeding and manage common difficulties. 6. Support mothers/parents to exclusively breastfeed for the first six months, unless supplements are medically indicated. 7. Promote and support mother-infant togetherness. 8. Encourage responsive, cue-based feeding for infants. Encourage sustained breastfeeding beyond six months with appropriate introduction of complementary foods.

9. Discuss the use and effects of feeding bottles, artificial nipples and pacifiers with parents. 10. Provide a seamless transition between the services provided by the hospital, community health services and peer-support programs.

Breastfeeding Committee for Canada. (2021). *Baby-friendly implementation guideline.* https://breastfeedingcanada.ca/wp-content/uploads/2021/05/BFI-Implementation-Guideline-May-19.pdf