Understanding Maternal Decision-Making Regarding Infant Sleep as Discussed on Social Media Platforms

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Preface

This study was conducted by a student researcher in the University of Ottawa Master of Science in Nursing program. Support and approval for study completion was provided by the student's thesis supervisor, Dr. Michelle Lalonde, as well as Thesis Advisory Committee members, Dr. Julie Chartrand and Dr. Brandi Vanderspank-Wright (see Appendix A). Approval from the University of Ottawa Research Ethics Board (REB) was obtained prior to participant recruitment (see Appendix B).

Abstract

Objective: To understand how mothers use social media when making decisions about infant sleep practices.

Methods: Using a quantitative descriptive design, the recruitment poster with a link to the questionnaire instrument was shared within three private Facebook groups for mothers in Northumberland County (Ontario).

Results: Mothers access social media frequently, primarily to read content rather than comment or post. Infant sleep practice is perceived as a controversial topic, with inconsistent guidelines which are challenging to implement. Trustworthiness and comfort discussing infant sleep on social media are low, but mothers continue to use these platforms as validation of infant sleep struggles and reinforcement of maternal instincts.

Discussion: Updating infant sleep guidelines to reflect the challenges and realities of infant sleep practices, developing decision support tools to reduce decisional conflict, and discussing information gathered from social media in an open, bi-directional dialogue, will better support mothers in decision-making about infant sleep practices.

Acknowledgements

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Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction

Although first defined in 1969, attention was drawn globally to the incidence of Sudden Infant Death Syndrome (SIDS) in 1988, with the Netherlands recommending against placing infants to sleep in prone positioning (National Institutes for Health, 2024). In 1991, consensus was achieved by an expert panel to define SIDS as “the sudden death of an infant under one year of age which remains unexplained after a thorough case investigation, including performance of a complete autopsy, examination of the death scene, and review of the clinical history” (Willinger et al., 1991, p.681). This definition continues to be widely accepted in both current literature (Duncan, 2018) and government reports (Public Health Agency of Canada et al., 2021). In the same year, available literature in Australia, New Zealand, and the United Kingdom (UK) influenced public health recommendations promoting side laying or supine sleep positioning in infants (National Institutes for Health, 2024). In 1992, the American Academy of Pediatrics (AAP) Task Force on Sleep Position and SIDS in the United States recommended that infants be placed on their backs or sides for sleep (National Institutes for Health, 2024). Shortly thereafter in 1993, experts in Canada recommended avoiding prone sleep positioning in infants (Public Health Agency of Canada et al., 2011; Rusen et al., 2004). In Canada, the first Joint Statement highlighting recommendations and identified risk factors for SIDS was released in 1993 (Health Canada et al., 1993). In 1994, Filiano and Kinney published the Triple-Risk Model of SIDS, which identified three contributing factors to the occurrence of SIDS: (1) a vulnerable infant, (2) a critical development period, and (3) exogenous stressors. The authors stated that an infant’s death due to SIDS will occur when the three factors overlap, as depicted in Figure 1 (Filiano & Kinney, 1994). Vulnerabilities include factors such as pre-term birth, low birth weight, genetic predisposition, or neurological or autonomic dysfunctions among others (Filiano & Kinney, 1994). The critical development period was identified as within the first six months of life, with a particular critical period between two and four months of life (Filiano &

Kinney, 1994). Exogenous stressors include factors such as prone sleeping, bed sharing, or the presence of a minor respiratory virus among others (Filiano & Kinney, 1994). The authors also hypothesized the importance of the exogenous stressor matching the vulnerability for the infant to succumb to SIDS (Filiano & Kinney, 1994), for example prone sleeping would be an exogenous stressor matching the vulnerability of an infant with an autonomous dysfunction. The Triple-Risk Model was one of the first to hypothesize and identify the intersection of various factors which might influence the risk of SIDS (Spinelli et al., 2017). This model also explained the differences across various SIDS factors, as well as indicating that not all infants with these risk factors will succumb to SIDS (Filiano & Kinney, 1994). The Triple-Risk Model remains the most explicable and referenced theory in SIDS research (Spinelli et al., 2017; Tóth et al., 2023).

Figure 1

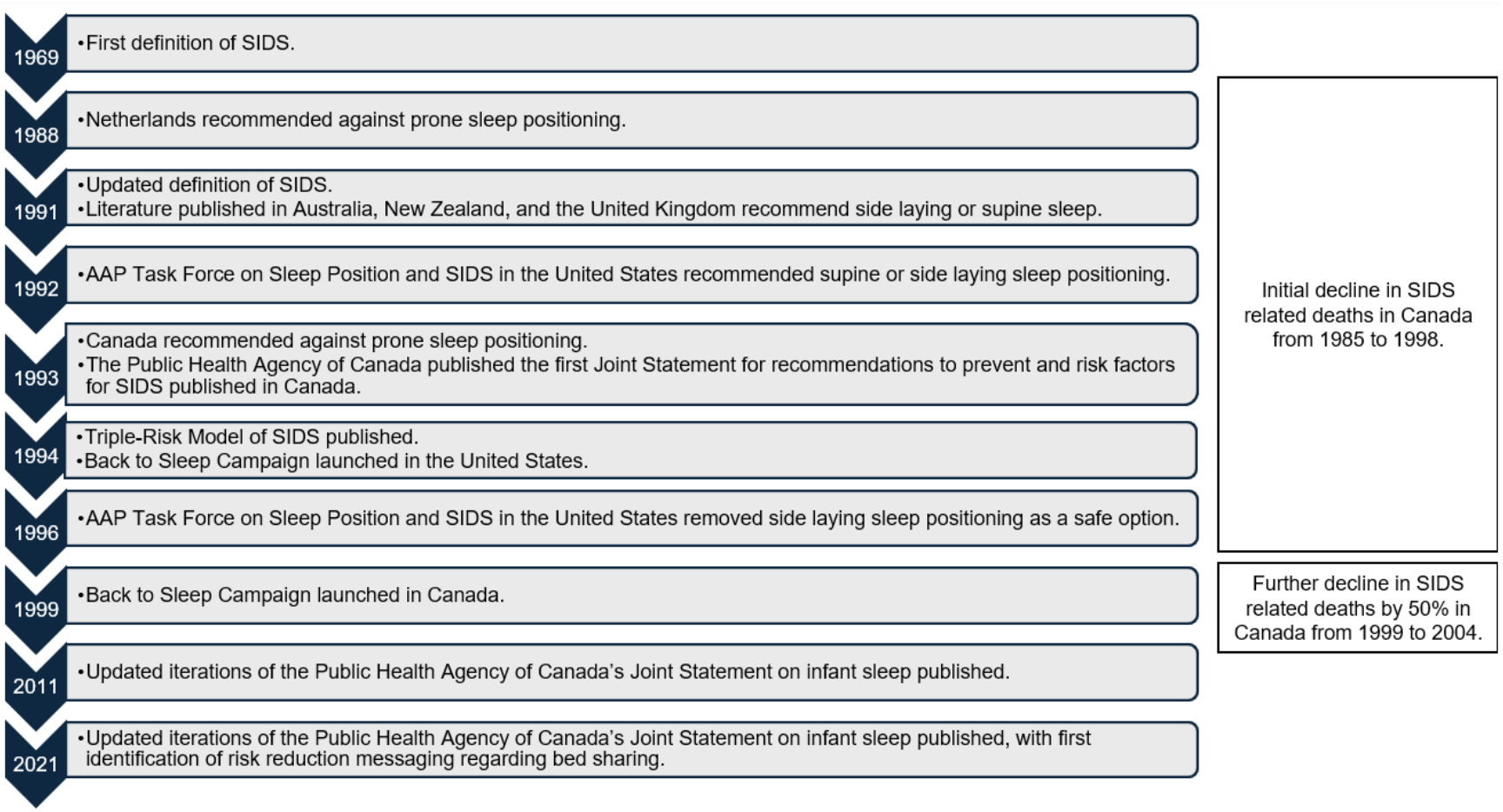
The Triple-Risk Model of SIDS (Filiano & Kinney, 1994).

In the same year that the Triple-Risk Model of SIDS was published, the *Back to Sleep* campaign was launched in the United States in 1994, with broad dissemination to professional organizations and hospitals with nurseries across the country (National Institutes for Health, 2024). In 1996 in the United States, the AAP Task Force on Sleep Position and SIDS specified that infants should only be placed in supine positioning for sleep, no longer accepting placing

infants on their sides to sleep as an accepted alternative (National Institutes for Health, 2024). In 1999, a similar public health campaign was launched in Canada, referred to as the *Back to Sleep Campaign,* in which parents and practitioners were advised to place infants on their backs to sleep (Public Health Agency of Canada et al., 2011). Data gathered in Canada indicated a decline in SIDS related deaths from 1985 to 1998 (Rusen et al., 2004), with a further decline by 50% (0.6 to 0.3 per 1,000 live births) from 1999 to 2004 after implementation of the *Back to Sleep Campaign* (Public Health Agency of Canada, 2008). Although the initial decline was prior to the initiation of the Canadian *Back to Sleep Campaign*, the United States' earlier adoption of a similar public health campaign, as well as developing Canadian recommendations on infant sleep such as the 1993 Joint Statement (Health Canada et al., 1993) may have impacted an earlier adoption of supine sleep and SIDS rates in Canada. Given the diagnosis by exclusion of SIDS, it is important to note that in certain cases, the cause of death may be attributed as 'undetermined' or 'unknown', influencing reported rates of SIDS (Duncan, 2018). Updated reiterations of the initial 1993 Joint Statement (Health Canada et al., 1993) were published in 2011 (Public Health Agency of Canada et al., 2011) and 2021 (Public Health Agency of Canada et al., 2021), in which SIDS continues to be identified as a priority health concern. The latest update by the Public Health Agency of Canada (PHAC) (2021) identifies key principles of infant safe sleep, including: supine sleep positioning, breastfeeding for at least two months, prevention of prenatal and postnatal tobacco exposure, elimination of toys and soft bedding on the sleep surface, sleep on an approved sleep surface, and room sharing but not bed sharing. Bed sharing is defined as an infant sharing a sleep surface with another adult or child (Public Health Agency of Canada et al., 2021).

Figure 2.

Chronology of SIDS and Infant Sleep Recommendations Globally



Since the advent of the *Back to Sleep* campaigns in the United States and Canada, bed sharing has frequently been identified as a potential risk for SIDS, with recommendations against this behaviour, particularly in Western countries (D'Souza et al., 2024). Other research indicates bed sharing may be present in mothers with increased duration of breastfeeding (Horsley et al., 2007). In turn, Thompson et al. (2017) demonstrated the protective impacts of breastfeeding against SIDS. Observational studies, such as case control studies, remain the breadth of SIDS related literature (Das et al., 2014), with causation between bed sharing and SIDS unable to be determined due to the ethical limitations of conducting randomized control studies for this research (Tóth et al., 2023). The literature has examined the confounding relationship between bed sharing, breastfeeding, and SIDS rates, with researchers challenged to identify consistent correlations between these factors (Das et al., 2014, 2021).

Despite safe infant sleep recommendations discouraging bed sharing practices, the practice continues to increase in Western countries (D'Souza et al., 2024). Gilmour et al. (2019) examined data obtained from the 2015 and 2016 Canadian Community Health Survey (CCHS) of a sample of 5,329 women aged 15-55 who had a reported live birth in the previous five years, denoting a population of 1.5 million Canadians. Data analysis conducted suggested that in this time period, 33% (n=497,000) of mothers across Canada would have reported frequent bed sharing (every day or almost every day) and 27% would have reported occasional bed sharing (less than once per month to one to two times per week) (Gilmour et al., 2019). Further, the two main reasons cited by mothers for bed sharing were breastfeeding (estimated 39%) and improved sleep for the mother or infant (estimated 29%) (Gilmour et al., 2019). As such, there appears to be a disconnect between recommendations on safe sleep and their implementation by mothers. Limited literature is available regarding bed sharing as a triad including the father, with most focusing on the mother-infant dyad (Mileva-Seitz et al., 2017). In their latest Joint Statement, the Public Health Agency of Canada et al. (2021) stated that they did not support the

practice of bed sharing yet identified “parents should be aware of the factors that put infants at greatest risk when bed sharing, so they can knowingly avoid them” (Public Health Agency of Canada et al., 2021, p.5). This risk reduction messaging is absent in earlier versions of the document (Health Canada et al., 1993; Public Health Agency of Canada et al., 2011), indicating a potential shift in public health strategy as it relates to reducing the incidence of SIDS.

With ease of access, mothers are becoming more reliant on social media for parenting decisions, generally deeming social media and the internet as trustworthy sources of information (Moon et al., 2019). In fact, social media posts within one mom group were found to contain contraindicatory information to safe sleep guidelines published by the American Association of Pediatrics (AAP) (Kallem et al., 2018). The authors identified that mothers sharing information regarding infant sleep practices and screen time utilization often presented information which did not align with the AAP (Kallem et al., 2018). In contrast, when responding to direct questions regarding infant health, participant responses often aligned with the AAP recommendations (Kallem et al., 2018). It is important to understand discussions regarding infant sleep practices occurring within social media platforms, how these impact maternal decisions as they pertain to infant sleep practices, and how their decisions compare to recommendations on infant sleep practices. This was explored further in this study among mothers of Northumberland County, Ontario, as outlined in Chapter 4: Methodology.

Problem Statement

Promoting safe infant sleep practices has been a public health focus over the last three decades. In addition, social media is increasing as a forum for the discussion of public health matters and for knowledge dissemination by experts. It is unclear how social media communications impact the decision-making of mothers regarding infant sleep practices.

The following thesis is presented in six chapters. First, a brief overview of the background of the public health focus of safe infant sleep practices as well as the advent of social media use in health care, is discussed in chapter one. Next, a literature review in chapter two identifies pre-existing and current safe infant sleep literature, with a focus on the links between bed sharing, breastfeeding, and SIDS. In addition, literature describing the current use of social media by the public to access health information and by mothers for infant and health queries is presented. Social media and its existing infrastructure as it pertains to this study is also discussed. In chapter three, two theoretical models are discussed, as is their implementation in various components of this study. Research methodologies are detailed in chapter four, followed by a description of results in chapter five. Lastly, chapter six elaborates on the study findings, and discusses implications and future research opportunities related to how mothers use social media platforms when making decisions about infant sleep practices.

Chapter 2: Literature Review

In the following chapter, the risks and benefits of bed sharing are explored as identified in the literature. The level of available studies will be described and reviewed as it relates to the impacts of their findings on the current state of infant sleep recommendations. As well, the literature on social media in the context of health care and public health is reviewed, allowing for a greater understanding of how mothers broadly consume social media. Lastly, an overview of common social media platforms and their current builds and algorithms are discussed.

The literature review was completed with the following databases: CINAHL, PubMed, Medline, and Embase. Inclusion criteria included literature written in the English language, peer reviewed, and publication dates in the last five years at the time the review was conducted. Limited literature was published in this short time frame, as such the scope of review was expanded to allow for the inclusion of literature with publication in the last 10 years at the time the review was conducted. Where appropriate, older resources and literature were included to present the progression and dissemination of safe infant sleep recommendations within Canada. There was no exclusion criteria based on the geographical location of research publications. Existing knowledge regarding safe infant sleep and bed sharing practices have highlighted variations in infant sleep practices globally (Das et al., 2014). As well, earlier implementation of infant sleep recommendations internationally, such as in the Netherlands, the UK, Australia, New Zealand, and in the United States (National Institutes for Health, 2024), may have impacted the development of Canadian literature and recommendations. For these reasons, while the focus of this study is on the decision-making of infant sleep practices in Canada, literature published internationally was included in the literature review. The following key concepts were used: ‘bed sharing’, ‘co-sleeping’, ‘safe sleep’, ‘benefits’, and ‘risks’ in conjunction with population defining concepts of ‘infants’, ‘neonates’, and ‘babies’. Additionally,

further literature was identified using the concepts ‘social media’, ‘maternal decision-making', ‘public health’, ‘safe infant sleep’, ‘Facebook’, ‘social media algorithms’.

A targeted grey literature search of safe infant sleep guidelines available in Ontario and Canada was completed, examining Public Health Units resources, federal guidelines, and professional association publications. At the time the review was conducted, grey literature published in the previous ten years was prioritized. Beyond the guidelines and recommendations, which were included to only review Canadian content, literature regarding infant safe sleep practices from beyond this geographic area was also included in the review. An additional guideline published in the UK was included due to its relevance to the content and its frequent citation in available literature. At the time of writing this thesis, limited literature was available regarding the use of social media by mothers specifically relating to infant sleep practices.

Bed Sharing, Breastfeeding, and SIDS

The causes of SIDS are unknown (Public Health Agency of Canada et al., 2021). Much research has focused on identifying modifiable factors which might reduce the incidence of SIDS and have formulated these strategies into what are known as infant safe sleep principles (Salm Ward, 2020). Within Canada, the first element of infant safe sleep was identified as part of the *Back to Sleep* Campaign in 1999, which highlighted the need for supine positioning of the infant during sleep (Public Health Agency of Canada et al., 2011; Rusen et al., 2004), closely followed by the importance of eliminating prenatal and postnatal tobacco exposure (Das et al., 2014). Since 2021, infant safe sleep principles include: supine sleep positioning, breastfeeding, prevention of tobacco exposure, approved sleep surfaces, and room sharing but not bed sharing (Public Health Agency of Canada et al., 2021). While these principles are based on over twenty years of epidemiological studies (Public Health Agency of Canada et al., 2021), a review of available literature identified the contentious nature of this body of research, especially

regarding the benefits and harms of bed sharing (Horsley et al., 2007; Marinelli et al., 2019). Bed sharing is associated with an increased duration and rate of breastfeeding, although it is unclear if this is a causal relationship or whether those who chose to breastfeed are also inclined towards bed sharing (Horsley et al., 2007; Marinelli et al., 2019). Breastfeeding has been shown to have a protective effect in the prevention of SIDS (Horsley et al., 2007). This protective effect is notable particularly when breastfeeding duration exceeds two months (Thompson et al., 2017).

Given the paucity of rigorous and generalizable data regarding the impact of bed sharing, the World Health Organization (WHO) has provided funding to conduct systematic reviews regarding factors influencing newborn health, including the topic of bed sharing (Das et al., 2014). This commitment by the WHO demonstrates the importance of better understanding the relationship between SIDS and bed sharing (Das et al., 2014, 2021). The funded projects highlighted a gap in research producing high quality recommendations on this topic, including in a systematic review of observational studies (n=21) which determined that there was low quality evidence associating the practice of bed sharing with prolonged breastfeeding rates and with increased rates of SIDS (Das et al., 2014). Das et al. (2014) emphasized that the determination of low quality evidence is secondary to the use of observational studies in this field of research given ethical concerns. This systematic review demonstrated an association between bed sharing and breastfeeding at four to six weeks of age, and again at six months (Das et al., 2014). The authors highlight that the AAP Task Force on SIDS recommends breastfeeding and against bed sharing, yet this may be confusing to parents given the increased breastfeeding rates when bed sharing is present (Das et al., 2014). The findings indicate that breastfeeding may not be protective enough to outweigh the significant risks of bed sharing and SIDS (Das et al., 2014). This echoes findings by Blair et al., (2014) which identify the protective factor of breastfeeding against SIDS for infants sleeping alone, but not for those who are bed sharing. An

additional challenge experienced by Das et al. (2014) in pursuing SIDS related research was the lack of evidence examining bed sharing and breastfeeding collectively as they impacted SIDS rates. In addition, a recent systematic review of interventional studies noted that there were no studies which met their inclusion criteria (Das et al., 2021), further identifying the challenges in research generating conclusive data regarding the risks and benefits of bed sharing. There are inconsistencies in both the research terminology and lay terms used to discuss the practice of bed sharing (Das et al., 2014), compounding the challenges of researchers, public health officials, and providers to discuss and provide sound, realistic, and evidence-based recommendations regarding this practice.

Bed sharing has often been associated with an increased prevalence of SIDS, yet more recent evidence emphasizes the presence of additional risk factors such as smoking or alcohol (Blair et al., 2014). Many previous studies correlating bed sharing with SIDS have not examined the incidence of drug or alcohol consumption (Marinelli et al., 2019). Blair et al. (2014) demonstrated that the risk of SIDS was three times higher in infants who co-slept with at least one adult compared to infants sleeping alone (Blair et al., 2014). However, once additional risk factors were accounted for, multivariate risk of bed-sharing was not a significant risk for the incidence of SIDS compared to infants who did not bed share (Blair et al., 2014). In this study, co-sleeping referred to sharing a sleep surface with at least one adult, whether it be a bed or other surface such as a couch, whereas bed sharing referred to the more specific action of sharing a bed with at least one adult (Blair et al., 2014). Where referenced, alcohol consumption was defined as greater than two units of alcohol (Blair et al., 2014). The risk of SIDS for infants co-sleeping on a sofa or chair, or with an adult who had consumed alcohol was determined to be 18 times higher than in infants who did not co-sleep (Blair et al., 2014). Additionally, the risk of SIDS for infants sleeping next to an adult who had smoked was four times higher than in infants who slept alone (Blair et al., 2014). Upon comparing the same risk factors for infants co-

sleeping compared to those sleeping in a separate room, the authors identified a statistically significant greater risk for those co-sleeping on a sofa or chair or with on any surface with an adult who had consumed alcohol or smoked (Blair et al., 2014). Although not statistically significant, the risk of SIDS in bed sharing with these hazards removed was higher when compared to infants who slept in their own room (Blair et al., 2014). In addition, the authors reported the protective effect of bed sharing against the risk for SIDS in infants greater than 98 days of age when additional risk factors were not present (Blair et al., 2014). To the authors' knowledge, this was the first study to identify this correlative protective effect (Blair et al., 2014). The protective effect of bed sharing was not present for infants under the age of 98 days, however, there was no statistically significant increased risk of SIDS in this population once additional risk factors were accounted for (Blair et al., 2014). These findings reinforced that risk factors previously identified, such as co-sleeping on a sofa or on any surface with an adult who had consumed drugs or alcohol are significant in the increased risk of SIDS (Blair et al., 2009). In their review of sudden unexpected deaths, Blair et al. (2009) identified that 13 of the 80 infants with deaths attributed to SIDS were co-sleeping on a couch, with more than 50% (n=7) of these caregivers having relocated to the couch for a feed yet had unintentionally fallen asleep. Furthermore, Blair et al., (2009) highlighted that co-sleeping on sofas was the only sleeping arrangement in which SIDS cases have increased in the last two decades in England and Wales. Blair et al. (2014) identified the risk of a zero-tolerance approach with a "blanket statement" (p.6) against bed sharing, as this is not aligned with available literature and may pose significant health risks. Particularly, there is a risk to infants whose parents choose to seek alternative surfaces for nocturnal wakings, such as a sofa or couch leading to inadvertent co-sleeping on a riskier sleep surface despite the parent's best intentions to engage in safe sleep practices.

Safe Infant Sleep Guidelines

The available recommendations and guidelines related to infant sleep practices from various professional associations and health units are discussed below. Additionally, guidelines published by National Institute for Health Care and Excellence (NICE) in the UK are discussed, as these guidelines were often referenced in available literature while conducting the literature review. A summary of the similarities and differences between the available resources are presented in Table 1. Comparison criteria were determined by reviewing the individual guidelines and identifying key components discussed. As well, risk factors identified in the literature review were captured as additional comparison criteria. Given the use of the Ottawa Decision Support Framework (ODSF) in this study, the availability of decision support tools was also identified as an important criterion in the discussed guidelines. For Northumberland County, the geographical setting for the study, the local health unit is the Haliburton, Kawartha, Pine Ridge (HKPR) District Health Unit. It is important to note that following the completion of data collection, the health unit announced its amalgamation with a second health unit, Peterborough Public Health, to form the Haliburton Kawartha Northumberland Peterborough Health Unit (Northumberland897, 2025). Resources available from the previously existing Peterborough Public Health were not reviewed as part of this literature review as the merger postdates the data collection.

The HKPR District Health Unit website provides a handout for parents regarding infant sleep behaviours and patterns, but this handout does not discuss safe infant sleep recommendations or risks (*Baby Sleep Habits*, n.d.). There are no further resources published by the HKPR District Health Unit referencing safe infant sleep practices.

The Canadian Pediatric Society (CPS) has an easy-to-read handout available electronically for providers supporting infants with their sleep. The content aligns with the recommendations for infant sleep practices as outlined in the Joint Statement on Safe Sleep

(2021) by the PHAC (Canadian Paediatric Society, 2021). Additionally, this handout highlights the importance of not engaging in bed sharing, but provides risk reduction strategies should parents or caregivers engage in this practice (Canadian Paediatric Society, 2021). These strategies do not address the specific risk factors of co-sleeping on a sofa, or with an adult who has smoked, or has consumed alcohol, medications causing drowsiness, or recreational drugs (Canadian Paediatric Society, 2021). Particularly, reference is made to general risk reduction strategies in a secondary section when discussing breastfeeding and its benefits (Canadian Paediatric Society, 2021). Parents and guardians are cautioned to review ways to reduce the risk of bed sharing should they engage in this practice while breastfeeding (Canadian Paediatric Society, 2021). Additional resources from the PHAC and the Winnipeg Regional Health Authority are linked within the handout (Canadian Paediatric Society, 2021).

The Registered Nurses' Association of Ontario (RNAO) has published a best practice guideline with a target audience of registered nurses supporting parents with infant sleep practices. The guideline's recommendations on achieving safe infant sleep practices align with those by the CPS and the PHAC (Registered Nurses' Association of Ontario, 2014). The best practice guideline also highlights the importance of the following when supporting parents regarding infant sleep practices and their decision-making: social determinants of health and informed decision-making (Registered Nurses' Association of Ontario, 2014). This resource was published greater than 10 years ago, with no available updates from the RNAO since initial publication. The ODSF is provided as a resource for nurses to assist parents who may experience decisional conflict regarding infant sleep practices (Registered Nurses' Association of Ontario, 2014). Interestingly, in the noted risk factors for SIDS, the best practice guideline includes "beliefs incongruent with safe sleep recommendations" (Registered Nurses' Association of Ontario, 2014, p.26). Although the best practice guideline identifies that parents may choose to bed share against available recommendations, there are no risk reduction strategies discussed related to bed sharing (Registered Nurses' Association of Ontario, 2014).

The guideline does identify that smoking or consumption of any substance which may alter an adult's mental state such as alcohol, recreational drugs, or medications causing drowsiness can contribute to an increased risk of SIDS, but these are not discussed in the context of bed sharing (Registered Nurses' Association of Ontario, 2014).

There were no resources regarding infant sleep practices located from the Association of Ontario Midwives. Current available resources for parents and health care providers share similar safe infant sleep recommendations.

In contrast, in the UK, the NICE published updated postnatal care guidelines with risk reduction messaging for infant sleep practices (National Institute for Health and Care Excellence, 2021a). Notably, these recommendations do not align with recommendations in the Joint Statement on Safe Sleep (Public Health Agency of Canada et al., 2021), despite publication in the same year. The NICE guidelines include: (1) supine sleep on a firm, flat mattress, (2) abstaining from co-sleeping on a sofa or chair, (3) ensuring pillows or duvets are not near the infant, and (4) not bed sharing with other children or pets. Additionally, further clarification is provided recommending against bed sharing if either parent smokes, has consumed alcohol, taken medications causing drowsiness, or used recreational drugs (National Institute for Health and Care Excellence, 2021a). The guidelines are available in a family friendly website, with available hyperlinks to the original report, as well as rationale to these recommendations written in lay terms (National Institute for Health and Care Excellence, 2021b). Decision support resources are not provided with the guidelines or public facing website.

The available recommendations and guidelines include certain similarities and differences, particularly with regards to risk reduction messaging in identifying hazards to bed sharing (Table 1). All of these resources can be found with minimal searching on the internet. It is possible that their ease of access and lack of alignment may provide further confusion to mothers making decisions regarding their infant sleep practices. As such, understanding the use

of social media in research and the use of social media by mothers is important in understanding how these decisions are made.

Table 1.

Comparison of Safe Infant Sleep Guidelines

Comparison criteria	Professional Associations				
	Haliburton, Kawartha, Pine Ridge (HKPR) District Health Unit	Canadian Pediatric Society	Registered Nurses' Association of Ontario	Association of Ontario Midwives	National Institute for Health Care and Excellence (UK)
Safe infant sleep resources available on organizational website	No	Yes	Yes	No	Yes
Recommendations aligned with the Joint Statement on Safe Sleep[a]	Not applicable	Yes	Yes	Not applicable	No[b]
Risk reduction strategies for bed sharing addressed	Not applicable	Yes	No	Not applicable	Yes
Decision support framework referenced	Not applicable	No	Yes	Not applicable	No
Additional risk factors to bed sharing discussed[c]	Not applicable	No	Yes, but not in the context of bed sharing	Not applicable	Yes
Linked Resources	Not applicable	Public Agency of Canada Winnipeg Regional Health Authority	No	Not applicable	Rationale, evidence review, and full guidelines available on public facing website

[a]The Joint Statement on Safe Sleep (Public Health Agency of Canada, 2021) identifies the following safe infant sleep recommendations: supine sleep positioning, breastfeeding for at least two months, prevention of prenatal and postnatal tobacco

exposure, elimination of toys and soft bedding on the sleep surface, sleep on an approved sleep surface, and room sharing but not bed sharing.

[b]The National Institute for Health Care and Excellence (NICE) in the UK identifies the following sleep recommendations: (1) supine sleep on a firm, flat mattress, (2) abstaining from co-sleeping on a sofa or chair, (3) ensuring pillows or duvets are not near the infant, and (4) not bed sharing with other children or pets. In addition, bed sharing is not recommended if either parent smokes, has consumed alcohol, taken medications causing drowsiness, or used recreational drugs (National Institute for Health and Care Excellence, 2021a).

[c]Additional risk factors align with those identified in the literature review, including co-sleeping with an adult on a sofa or couch, or with an adult on any sleep surface who has smoked, consumed alcohol, medications causing drowsiness, or recreational drugs.

Social Media and Research

In the early 2000s, health care experienced a paradigm shift related to medical knowledge accessibility (Casanas i Comabella & Wanat, 2015). Health care knowledge and research migrated, from the sole oversight of health care providers, to the current state in which consumers actively participate in the access and dissemination of medical knowledge through the internet and social media platforms (Casanas i Comabella & Wanat, 2015). In 2020, 69% of Canadians reported using the internet to research health related topics (Statistics Canada, 2021). This evolution of health care knowledge dissemination is both critiqued and supported by different members of the medical community (Casanas i Comabella & Wanat, 2015). Zhang et al. (2020) reviewed social media use for public health research from 2000 to 2018, identifying a steady increase, especially from 2011 to 2018. Social media use in research was originally intended for recruitment purposes and has since evolved to hold two active roles in public health research: engaging the general population in public health foci and initiatives, as well as providing research settings for public health studies (Zhang et al., 2020). Siegmund (2018) emphasized benefits of social media use in nursing research, including timely access to data and an opportunity for the researcher to better understand the impact of peer influences on participants' health care knowledge, in turn allowing clinicians to respond with relevant education. By engaging in social media research, clinicians may be able to better support discussions related to the decision-making process of mothers regarding infant sleep practices.

Social Media Algorithms

Social media platforms strive to individualize the experience for each user (Bak-Coleman et al., 2021). Over time, social media platforms have modified their algorithms for targeted content to meet the needs of the users, as well as to optimize business opportunities (Bak-Coleman et al., 2021). In the initial development of Facebook, the user's feed was populated based on likes, clicks, comments, and total engagement time on the social media platform

(Metzler & Garcia, 2024). In 2015, in response to clickbait from the original algorithm, Facebook altered its build to a more passive, professional use of the social network (Metzler & Garcia, 2024). In response to criticism about the lack of interaction on the platform, Facebook then updated the algorithm to focus on posts by family and friends, posts with larger comment volumes, and a move towards emotional-reaction buttons rather than likes (Metzler & Garcia, 2024). In turn, this contributed to an increase in controversial and lower quality posts, as highly commented posts tended to have an increase in anger emotional-reaction buttons (Metzler & Garcia, 2024). From 2018 to 2020, the weighting of the anger emotional-reaction button was progressively decreased (Metzler & Garcia, 2024).

Facebook has adopted the use of artificial intelligence (AI) to categorize relevant information to the user (Meta, 2025). A user's Facebook feed is generated using an AI system identifying a relevance score for each item based on three factors. First, the system identifies an inventory of available posts from all the user's friends, pages, and groups. Next, input signals are determined for each post identified. These input signals will consider factors such as the author of the post and the user's previous interactions with them, the media type (link, photo, video), and the number of likes by friends of this particular post. Approximately 500 posts are identified in this process. Lastly, AI predictions are made about content that the user will find most beneficial and useful. All together, these components contribute to a relevance score, which will determine the order by which the posts are displayed on the user's feed (Meta, 2025).

The impact of algorithms continues to be discussed and explored in academic settings. Bak-Coleman et al. (2021) identified a gap in knowledge regarding the impacts of algorithms in many aspects of society and how these might change collective behaviour. Additionally, algorithms have allowed the delegation of information seeking processes, yet algorithms are typically developed to improve profitability rather than overarching societal benefits (Bak-Coleman et al., 2021). Schäfer (2020) identified that high volumes of snack news, defined as short preview news stories or posts often found within news applications or social media,

contributed to increased perceived knowledge but did not increase factual knowledge. In contrast, users who read full news stories had an increase in factual knowledge, yet they did not report feeling more knowledgeable (Schäfer, 2020). The authors posit that by reading the full content of an article, they may identify the broader concepts related to a topic, rather than snack news headlines which are more concise and may increase the perception that there is not broader knowledge to be gained (Schäfer, 2020). Schäfer (2020) identified that only seven percent of news posts had participant interaction, without further review of content. The article simulates a similar environment to social media platforms, where users have access to repeated posts, often with similar content due to the algorithms previously identified (Schäfer, 2020). Of concern is the impact of this “snack news” phenomenon on the development of one's attitudes and beliefs regarding certain events and decisions (Schäfer, 2020) : “thus, the frequency of being exposed to snack news can indirectly affect the formation of strong convictions and the willingness to share them based on an illusory feeling of being informed” (Schäfer, 2020, p.2). By understanding the impact and conception of social media posts related to infant sleep practices, researchers may be able to better understand how values and beliefs surrounding infant sleep decision-making are undertaken.

Social Media for Health and Parenting Information

Chen and Wang (2021) identified the use of social media for health reasons by three distinct groups: health care institutions, health care practitioners, and the public. Health care institutions have leveraged social media for ‘infoveillance’ to inform public health and policy, to combat health care misinformation, as well as for health intervention (Chen & Wang, 2021). Infoveillance refers to the monitoring and review of “unstructured” (p.4) information available in certain settings, such as social media in this study, to help inform public health policy (Chen & Wang, 2021). Health care practitioners leverage social media for research purposes, professional development, and provider-to-patient communication and services (Chen & Wang,

2021). The public leverages social media platforms to research and share health information, engage in community support, and share health diagnoses or experiences (Chen & Wang, 2021). The most common use of social media by members of the public is to research and share health information, with social media acting as a primary source of information for many individuals (Chen & Wang, 2021). Those who sought health information via social media were unlikely to corroborate this information with a health care provider (Chen & Wang, 2021). Additionally, health care providers were found to disagree with 36.7% of available health information on social media (Chen & Wang, 2021). The authors highlighted the impact of health misinformation obtained through social media platforms as a priority concern, with further focus required on promoting reliable information via social media (Chen & Wang, 2021).

In Canada in 2020, Facebook was the highest sought social media platform, with 83% of respondents holding an account, and 77% reporting daily usage (Gruzd & Mai, 2020). Walker et al. (2017) identified that 96.4% of mothers reported accessing information regarding babies on electronic media sources, and 77.6% of mothers reported accessing the social media platform Facebook. According to mothers, the internet and social media have been identified as easy, accessible venues for health care information regarding infants (Moon et al., 2019). The ease of convenient access with perceived unlimited information, particularly as it is faster than accessing similar information from a health care provider, was noted as a beneficial element to internet and social media use for infant care queries (Moon et al., 2019). Mothers highlighted that search engines such as Google offered helpful information; however, the benefit of social media groups such as Facebook groups was that the information sought was provided by an individual who had recently lived through a similar experience (Holtz et al., 2015). A multimodal approach to sourcing information exists when using the internet and social media, allowing mothers to obtain consensus on a decision from multiple sources before proceeding (Moon et al., 2019). Additionally, most mothers perceived this information to be trustworthy and up to date, at times at a higher rate than information provided by health care providers (Moon et al.,

2019). Of note, the anonymity of social media platforms and internet resources provided reassurance and confidence to mothers who would otherwise have felt uncomfortable reaching out to providers or their social supports with the same questions (Moon et al., 2019). Mothers noted concerns with overwhelming volumes of information, as well as the presence of unverified sources (Moon et al., 2019). Social media platforms have been reported to allow new mothers to gather infant care information in a passive manner without the requirement for social interaction or engagement (Elliott et al., 2022). Maternal perceptions of health information available on social media were generally viewed as positive and sometimes preferred by the mother over the advice provided by a health care provider (Moon et al., 2019). In contrast, Kallem et al. (2018) identified inconsistencies and a lack of alignment with best practice guidelines in these social media discussions regarding health information.

Summary of Literature

In summary, SIDS related research has been a particular health focus globally since the 1990s. Limitations in the ethical feasibility of studies has led to the availability of epidemiological research, rather than more robust interventional studies. These challenges have contributed to confounding disagreements within the literature on the risks and benefits to bed sharing, as well as recommended public health strategies to promote safe infant sleep practices. The most recent data indicates that bed sharing in itself does not increase the risk for SIDS and may offer protective effects for certain infants. Rather, engaging in hazardous co-sleeping conditions by engaging in co-sleeping on the sofa or couch, or bed sharing with an adult who has consumed alcohol, drugs, or smoked, offers significantly increased risks of SIDS. Despite this evidence, variations exist in infant sleep guidelines within Canada, with certain associations promoting a risk reduction approach while others maintain verbiage that parents should never engage in bed sharing. In comparison, the UK has drastically modified their resources, allowing for bed sharing with clear recommendations on specific hazards which should be avoided. Given these

discrepancies, social media and internet sources may be of greater appeal to mothers seeking information regarding infant sleep practices. The use of social media in research continues to expand, both as a research setting and as a dissemination tool. Mothers are more frequently accessing social media for health care information and support, despite increasing concerns that all available information may not be accurate. Despite this, it is unclear what is being discussed on social media platforms by mothers regarding infant sleep practices, how they make decisions regarding infant sleep practices, and how these conversations compare to existing recommendations.

Chapter 3: Theoretical Models

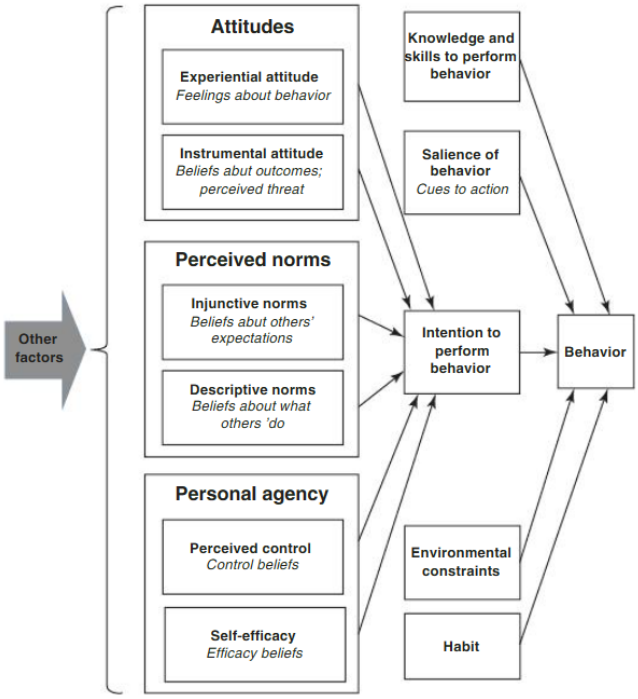
In this chapter, the two theoretical models used in the development of this research: The Integrated Behavioral Model (IBM) and The ODSF are discussed. Both models were referenced in the planning, data collection, and analysis components of this study.

Integrated Behavioral Model

In a guide for health care practitioners outlining safe sleep practices for infants, common challenges to implementation, and proposed evidence-based solutions, Salm Ward and Moon (2020) discuss current recommendations and various opportunities for practitioners to influence adherence to these practices. The Integrated Behavioral Model (IBM) is proposed as one of the models informing parental decision-making regarding infant sleep practices and is suggested as a tool for practitioners to understand why certain parents may implement differing infant sleep practices and how these can be addressed (Salm Ward & Moon, 2020). In the early 1990s, the National Institutes for Mental Health (NIMH) supported a workshop for the theorists involved in the development of various health behaviour models to create a model integrating their key constructs (Montaño & Kasprzyk, 2008). Simultaneously, researchers and theorists developed a model intended to guide their study regarding HIV-prevention, which aligned with the recommendations determined in the NIHM workshop (Kasprzyk et al., 1998; Montaño & Kasprzyk, 2008). The resulting IBM has been utilized extensively in understanding health behaviours and incorporates accepted health behaviour models, such as the theory of reasoned action, theory of planned behaviour, social cognitive theory, and the health belief model (Montaño & Kasprzyk, 2008; Salm Ward & Moon, 2020).

Figure 3.

The Integrated Behavioral Model (Salm Ward & Moon, 2020).



Determining Factors of Behaviour

The primary determining factor of an individual's behaviour is intention (Montaño & Kasprzyk, 2008). Intention is defined as the individual's inclination to follow through with a behaviour (Salm Ward & Moon, 2020). It can be expressed from one extreme to the opposite, either in support or opposition of a behaviour (Salm Ward & Moon, 2020). For example, parents may strongly intend to bed share with their infant or may strongly intend not to bed share with their infant. Behavioural intention in itself is impacted by attitudes, perceived norms, and personal agency, with each of these comprised of two separate constructs (Montaño & Kasprzyk, 2008).

Four additional elements will impact one's ability to adhere to a behavior, including: having the knowledge and skills to execute the behavior, the absence of environmental constraints interfering with the behavior, salience of the behavior, and habituality of the behavior

(Montaño & Kasprzyk, 2008). The former three elements influence whether an individual's behavioral intention can translate to behavioral performance (Montaño & Kasprzyk, 2008).

Attitudes. Encompasses both experiential and instrumental attitudes as constructs towards a behaviour (Salm Ward & Moon, 2020). Experiential attitude refers to how an individual feels about a behaviour and is often colloquially referred to as their 'gut feeling' (Salm Ward & Moon, 2020). For example, a mother may feel as though it is the best choice for her infant to sleep with her. Instrumental attitude refers to how an individual perceives the costs versus benefits of implementing a behaviour (Salm Ward & Moon, 2020). If a mother believes strongly that the risk of SIDS is far more important than a perceived ease in breastfeeding overnight, she will likely choose to place her infant on a separate sleep surface.

Perceived Norms. Identifies the social pressure experienced by an individual having to make a decision and includes injunctive and descriptive norms (Salm Ward & Moon, 2020). The former highlights societal expectations as perceived by the individual engaging in the behaviour, while the latter refers to the individual's perception on the interventions others are engaging in (Salm Ward & Moon, 2020). A mother may choose to engage in safe sleep principles as she feels others expect this of her (injunctive norms), while another mother may choose to bed share as she has seen many social media posts on the benefits of sleeping in the same bed as your child (descriptive norms).

Personal Agency. Refers to the extent to which an individual can influence their behaviour, and includes both perceived behavioural control and self-efficacy (Salm Ward & Moon, 2020). Perceived behavioural control denotes how likely it is the individual will have agency with implementing a behaviour, while self-efficacy refers to how much an individual believes their behaviour will impact the outcome of the situation (Salm Ward & Moon, 2020). A mother may not feel comfortable asking for a travel cot when staying with relatives and will bed share because she does not have a sleep surface for her infant (perceived behavioural control). As well, a mother may think that regardless of her behaviour, the risk of SIDS will not change as

she has read of instances of SIDS occurring despite parents following all recommended safe sleep principles (self-efficacy).

Knowledge and Skills. In order to implement a behaviour, an individual needs to have the knowledge and skills to do so (Salm Ward & Moon, 2020). If a mother is unaware that falling asleep on a sofa while holding an infant consists of co-sleeping, then she does not have the knowledge to implement safe sleep principles.

Environmental Constraints. These are external factors which discourage a behaviour, rather than facilitate its implementation (Salm Ward & Moon, 2020). Parents with a bedroom too small to fit a bassinet may choose to bed share despite their desire to engage in safe sleep principles.

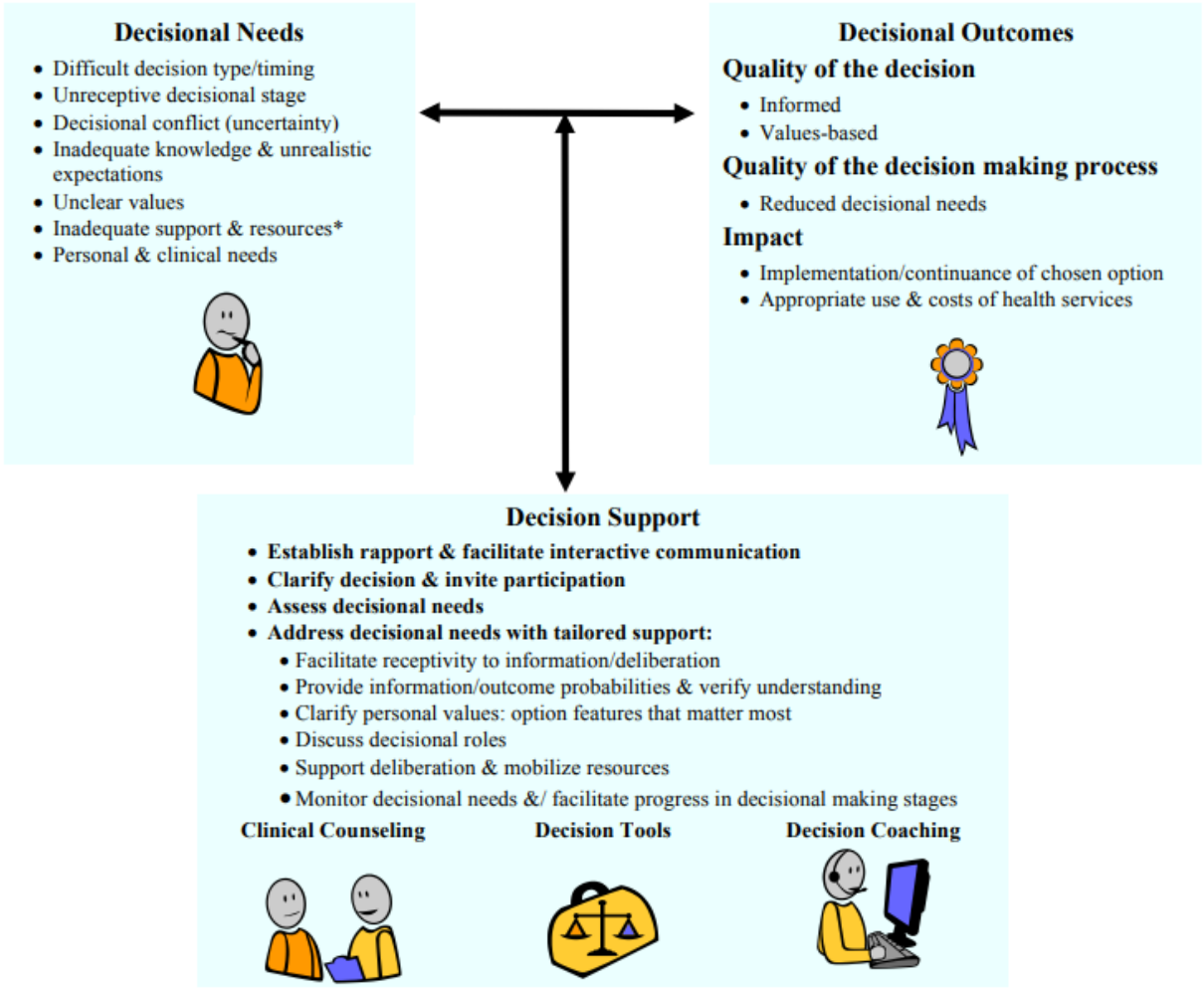
Salience. Refers to how important this behaviour is to an individual and whether they are constantly thinking about its implementation (Salm Ward & Moon, 2020). This component is often influenced by the presence of cues to action or external reminders to engage in the preferred behaviour, such as safe sleep principle reminders on infant sleep surfaces (Salm Ward & Moon, 2020).

Habit. The constant implementation of a behaviour will allow it to occur without additional forethinking by the individual in the future (Salm Ward & Moon, 2020). By habitually placing their infant to sleep in their own crib on their back, with time, this will become routine, and it would feel out of place to have the infant sleep in any other manner. Alternatively, by continuously bed sharing with their infant, this too will become routine for the parents.

The Ottawa Decision Support Framework

Figure 4.

The Ottawa Decision Support Framework (revised 2020) (Stacey et al., 2020).



The ODSF has been available to facilitate the decision-making process of patients regarding challenging health decisions for over 20 years (Stacey et al., 2020). The ODSF has been shown to allow for higher quality decision-making by assessing a patient's decisional needs, providing appropriate decision support interventions, and evaluating decisional outcomes (O'Connor et al., 2002). The framework postulates that decision support interventions targeting decisional needs will lead to a higher quality decision (Hoefel et al., 2020). A recent

20th anniversary review of the of the ODSF has led to evaluation of the synthesized evidence of decisional needs (Hoefel et al., 2020) and to an associated update reflecting this updated evidence (Stacey et al., 2020). The ODSF has not been used in research studies examining maternal decision-making regarding infant sleep practices.

Decisional Needs

The ODSF identifies seven decisional needs, including (1) difficult decision type/timing, (2) unreceptive decisional stage, (3) decisional conflict (uncertainty), (4) inadequate knowledge & unrealistic expectations, (5) unclear values, (6) inadequate support & resources, and (7) personal and clinical needs (Stacey et al., 2020). The ODSF postulates that when these decisional needs are present, these may negatively impact the decision-making process and lead to a lower quality decision (Hoefel et al., 2020). Mothers may experience these decisional needs, among others, regarding infant sleep practices such as a lack of understanding of safe sleep principles (inadequate knowledge and unrealistic expectations) or an inability to sleep unless bed sharing with their infant (personal needs).

Decision Support

The use of decision support interventions targeting the outlined decisional needs can improve the quality of the final decision (Stacey et al., 2020). The primary decision support intervention is clinical counselling, supported by the use of decision tools such as Patient Decision Aids (PtDAs) and the use of decision coaching (Stacey et al., 2020). There are no existing PtDAs relevant to infant sleep practices, and it is unclear if health care providers actively engage in other decision support interventions with new mothers.

Decisional Outcomes

The quality of the decision can be evaluated based on whether it is informed and values-based, meaning it aligns with what matters most to the patient (Stacey et al., 2020). The quality

of the decision-making process can be determined by a decline in decisional needs experienced by the patient (Stacey et al., 2020). Longer term decisional outcomes can be evaluated by determining continued adherence to the chosen option by the patient and the use of health care services in a manner which aligns with the patient's values and informed preferences (Stacey et al., 2020). As such, engaging in decision support interventions with new mothers may allow them to feel more confident in their infant sleep practices and allow for longer-term implementation of their chosen decision. This decision could be one to place their infant to sleep in a crib, or to bedshare with careful attention to additional risk factors such as smoking, alcohol, or drug consumption.

Implementation of the IBM and ODSF

The IBM and ODSF were utilized in the planning, data collection, and analysis portions of this study. Throughout the study, the IBM was consulted by the student researcher to better understand the theoretical underpinnings of a mother's decision-making related to infant sleep practices, and how these may act as barriers or facilitators to discussions with others, including peers on social media platforms. The IBM informed the development of the research instrument. In the analysis of the data, the ODSF helped delineate the various components of the decision-making process, including decisional needs, outcomes, and supports used to facilitate this process. Finally, the ODSF also helped interpret the extent to which social media groups may act as decision support tools, but may also contribute to decisional conflict for mothers engaged in decision-making regarding infant sleep practices.

Chapter 4: Methodology

In the following chapter, the methodology of this study is presented. First, the objective and research question are presented. Next, the study design is discussed, followed by the research setting and sample, and participant recruitment approaches. Lastly, data collection processes and ethical considerations are reviewed.

Objective

The purpose of this study was to understand how mothers use social media when making decisions about infant sleep practices.

Research Question

How do mothers use social media platforms when making decisions about infant sleep practices?

Study Design

The study was conducted using a quantitative descriptive design (Miksza et al., 2023) with a questionnaire instrument. Engaging in quantitative descriptive research allows researchers to determine the current state of a situation (Miksza et al., 2023). Gathering numeric data using questionnaire instruments or observation, facilitates researcher understanding specific to how a phenomenon has impacted an individual or population (Allen, 2017). In this study, the use of an online questionnaire instrument allowed the student researcher to explore the use of social media by mothers at a time that was convenient for them.

Setting and Sampling

The geographical study setting was informed by the following inclusion criteria. First, a smaller community within Canada was sought, with a single hospital providing maternal child services and a single health unit to limit confounding variables. Different Canadian hospitals

may have varying policies and approaches regarding health teaching of infant sleep practices, and public health units may offer differing services or follow up to new mothers regarding infant sleep support or resources. While valuable information, introducing these variables to data collection fell beyond the scope of this study. For this reason, larger metropolises such as the Greater Toronto Area (GTA) or the City of Ottawa were deemed too large for setting inclusion. Second, to capture potential variations in the practices of providers by specialty, a community offering birthing services provided by obstetricians, family physicians, and midwives was sought. Lastly, the community identified for the research setting needed to demonstrate prioritizing resources for new mothers, as well as having multiple active social media groups supporting mothers with outlined geographic boundaries, whether in their title or admission criteria. Northumberland County, in Ontario, Canada, was determined to meet the outlined setting criteria and was identified as the research setting for this study.

Northumberland County is located along the shores of Lake Ontario and is approximately 1.5 hours to the east of the GTA (Destination Ontario, 2025). At the time of the last federal census, Northumberland County had a population of 89,365 residents (Government of Canada, 2022). Northumberland County is serviced by one hospital offering a maternal child program, Northumberland Hills Hospital (NHH) (Northumberland Hills Hospital, 2025a). Birthing supports at NHH are facilitated within the region by one midwifery clinic, family physicians assisting deliveries, and obstetricians (Northumberland Hills Hospital, 2025a). At the time the study was developed and during data collection, Northumberland County was serviced by one public health agency, the HKPR District Health Unit (Haliburton Kawartha Pine Ridge District Health Unit, 2025). Using this population provided a context with geographical boundaries and facilitated analysis of data in the context of available guidelines and health care resources pertaining to this specific area, as these guidelines and resources may differ from region to region. As well, Northumberland County engages in community initiatives to support mothers and their infants, such as the Mothers of Newborn Program (YMCA Northumberland, 2025a).

This program was piloted in 2017 with strong community support, including by local family physicians (YMCA Northumberland, 2025b). The program offers a free one-year membership to the YMCA facilities within Northumberland County, as well as programming to support mothers in returning to an active lifestyle in their first year of motherhood (YMCA Northumberland, 2025b). While it is possible other communities may have also met the outlined inclusion criteria for the research setting, Northumberland County was determined to be an appropriate setting for this study.

Private groups were accessed for this research as the posts within these groups are only visible to the group's membership (Facebook, 2023b), which might create a sense of security and community when sensitive discussion questions are posted, such as infant sleep practices. Membership to these groups is maintained and regulated by group administrators who act as gatekeepers by determining whether individuals seeking to join groups meet identified admission criteria, such as being a mother or living locally (Facebook, 2023a). Private Facebook groups are required to have administrators to support the functioning of the group and to ensure members adhere to stated rules and guidelines. The number of intended participants was determined by considering the number of births in the sample region, as well as the current membership in Northumberland County social media groups. In the last fiscal year, Northumberland Hills Hospital (NHH) welcomed 532 births (Northumberland Hills Hospital, 2025b). In Facebook's search field, groups were located using terms such as 'mother', 'mama', and 'mom'. Social media groups created for mothers were used for this study, as the available literature highlights the role the mother holds regarding bed sharing decision-making, rather than that of the father or both parents combined (Mileva-Seitz et al., 2017). Additionally, a regional term of 'Northumberland' was included in the search. Four private Facebook groups were identified. Upon identification of these groups, a review of the group name, description, and criteria for admission to the group was conducted (Appendix E). This ensured that selected groups identified their main purpose as overall support for mothers, as well as ensuring that

groups with a particular viewpoint regarding parenting, public health concerns, or infant sleep practices, such as promoting bed sharing or anti vaccine discussions, were not considered. Additionally, careful review of the description ensured that the intended Northumberland County in Ontario, Canada, was referenced in these groups, as other regions globally share this name, such as a region in England. Ultimately, at the time the questionnaire was opened for completion, there were four local social media groups meeting the search terms and research criteria, ranging from 1600 to 2500 members in each group. Therefore, the minimum intended participant number was 18 participants, with no maximum participant number.

Administrators of groups meeting the identified criteria were contacted by the student researcher on October 24th, 2024, who stated the intended research objectives and requested permission to join the group (see Appendix D). Three groups responded with approval to join, with no response from the fourth group. The three groups used for this research study were: ‘Northumberland Ontario Mamas’, ‘Mom’s Supporting Mom’s - Northumberland Canada’, and ‘Northumberland Moms, Mamas & Mothers’. The group names, descriptions, and criteria for admission for each group can be reviewed in Appendix E. Beyond the permission to join the group for research purposes, the student researcher met the admission criteria for these groups by being a mother living in Northumberland County.

Inclusion criteria for participants were that the individuals: (1) identified as mothers, (2) have engaged in social media groups available to mothers within Northumberland County, (3) have had an infant in the last five years, (4) can read and write in English, and (5) were residents of Northumberland County (Ontario) at the time they had an infant.

Participant Recruitment

A recruitment poster was published within the three private Facebook groups within Northumberland County who had granted approval to join the group (see Appendix C). Informed by the Dillman Total Design Survey Method (Dillman, 1978), the recruitment poster was shared

three times during the collection period within these three groups every three weeks. A link and QR code for questionnaire (Appendix C) completion were available directly on the recruitment poster. The link was available to be shared by group members, although this was not explicitly stated in the recruitment poster.

Participants were screened for eligibility at the start of the questionnaire (Appendix C). Should the participant have selected 'no' to any inclusion criteria questions at the start of the questionnaire, they would have been redirected to a page indicating they were not eligible to participate in the study. Participants were accepted until the end of the data collection period.

Data Collection

A questionnaire was developed by the research team and was informed by the theoretical model which underpinned this study, the IBM (Salm Ward & Moon, 2020) (see Appendix F). The questionnaire contained 22 questions, of which three allowed participants to determine that they met the study's inclusion criteria, one documenting consent, and four obtaining demographic data. Three questions included Likert scale questions, and four allowed for identification of use of social media platforms and related frequencies. Lastly, there were seven open-ended qualitative questions. The open-ended questions were constructed to reflect the three contributing elements (attitudes, perceived norms, and personal agency) to an individual's intention, which in turn is the primary contributing factor to an individual's behaviour. Likert scale questions allowed the questionnaire to gather information related to the four additional contributing elements to an individual's behaviour, being knowledge and skills, salience of behaviour, environmental constraints, and habit. The questionnaire was developed digitally through Survey Monkey using a University of Ottawa account and accessible by link or QR code. The questionnaire was available for two months, namely October 24th to December 27th, 2024. Data obtained from the questionnaire was exported to Microsoft Excel and Statistical

Package for the Social Sciences (SPSS) programs following the completion of data collection. The questionnaire was intended to take between 10 and 15 minutes to complete.

Data Analysis

Closed-ended questions were analyzed using descriptive statistics, including but not limited to frequencies, means, and ranges. Open ended questions were analyzed using content analysis with an inductive approach. Content analysis is the primary approach to data analysis in qualitative descriptive studies (Sandelowski, 2000) and can be either inductive or deductive (Elo & Kyngäs, 2008). The use of content analysis is entrenched in nursing research and highly represented in public health studies (Elo & Kyngäs, 2008). Inductive content analysis is preferred to deductive content analysis when researching phenomenon for which there is limited knowledge (Elo & Kyngäs, 2008). Inductive content analysis is comprised of open coding, categorization, and abstraction (Elo & Kyngäs, 2008). Open coding is facilitated by identifying headings or notes in the margins of the data, with the researcher reading through as many times as required to ensure sufficient coding has been achieved (Elo & Kyngäs, 2008). These headings and notes are then captured on coding sheets, allowing for the identification of categories (Elo & Kyngäs, 2008). These categories are then grouped into broader categories, to reduce the number of total categories (Elo & Kyngäs, 2008). Lastly, abstraction is facilitated by the grouping of categories to describe the research (Elo & Kyngäs, 2008). Categories in inductive content analysis are intended to be identified using content-characteristic words (Elo & Kyngäs, 2008) and were also aligned with the components of the IBM (Salm Ward & Moon, 2020). The use of inductive content analysis allowed for the generalization of categories highlighting the various elements impacting maternal decision-making as it pertains to infant sleep practices, until the collected data was adequately represented. Correlations were calculated using Pearson’s r coefficient, as this statistical analysis is recommended when determining correlation of two variables on an interval or ratio scale (Polit, 2010). The non-

parametric test Wilcoxon Signed-Ranks was used to evaluate the difference in means, as this statistical analysis can be used when testing group differences for ordinal data between two paired groups (Polit, 2010). This non-parametric test was used as the data was ordinal and between two paired groups, such as evaluating comfort level between private and public social media groups when discussing infant sleep practices.

Ethical Considerations

Approval was received from the University of Ottawa's REB (see Appendix B). The student researcher's contact information was available should any group members have had questions or concerns regarding the study. There was no further interaction or communication between the student researcher and group members.

Upon initiation of the questionnaire, participants were asked to provide consent to participation. If consent was not obtained, the participant could not complete the questionnaire. Participation in the questionnaire was completed anonymously. Participants were informed that personal information would not be collected. Completed questionnaires were anonymized and transcribed to a secure file. The device on which data is stored is only accessible by password. Access to the data through SurveyMonkey is only accessible through the student researcher's University of Ottawa login with multiple factor authentication. Computer files are stored securely on the student researcher's University of Ottawa network, only accessible by password and with multiple factor authentication. Data will be retained for five years, at which point it will be purged from the University of Ottawa's network. The data files were shared with the student researcher's supervisor using the secure University of Ottawa's network. There are no paper copies of the data.

Chapter 5: Results

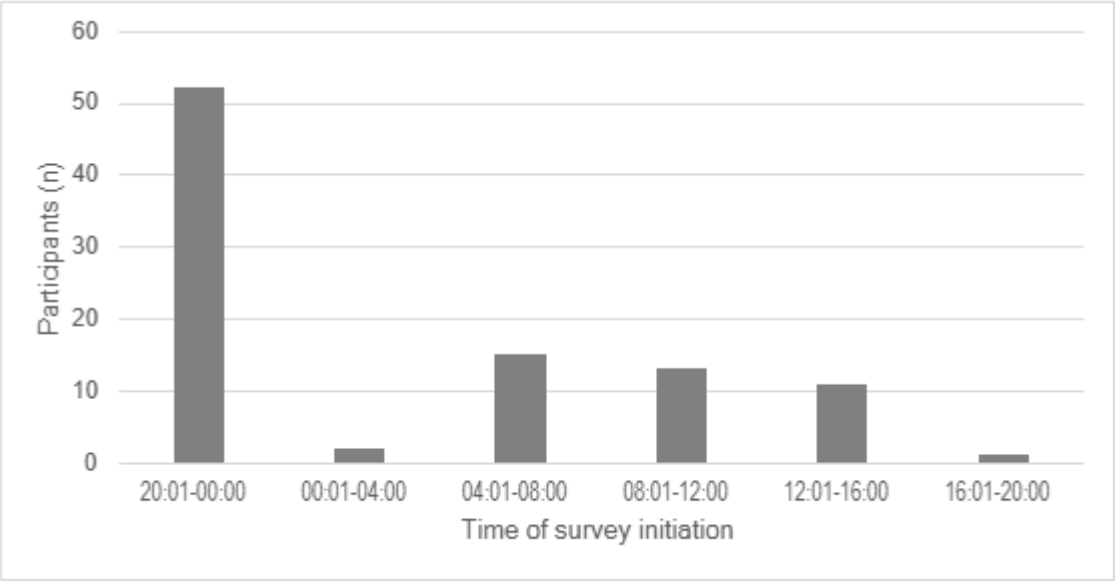
In the following chapter, the result analysis for both quantitative and qualitative data gathered through the questionnaire is reviewed. First, the study sample is described, followed by the results of the descriptive analysis, including means, standard deviations, medians, and ranges. Next, a review of correlation data obtained from various quantitative questions is presented. Population means are available, as determined using the Wilcoxon signed-rank test. Lastly, summarized qualitative data gathered from open-ended questions follows, presented in the categories identified by content analysis. Unless otherwise noted, statistical significance is assumed for *p* values below 0.05.

Sample

A total of 115 participants opened and initiated the questionnaire, of which 94 participants completed the questionnaire in its entirety. A total of 94 participants made up the final sample, as data used by those who did not finish and submit the questionnaire was not included in the analysis. It is possible that certain respondents may have initiated the questionnaire without ample time for completion, and when returning to answer the questions, may have initiated a second questionnaire. As such, the additional 19 incomplete questionnaires were not included in the analysis to maintain data integrity. There were no respondents who answered ‘no’ to any inclusion criteria questions, as such there was no exclusion of potential respondents. The average completion time for the questionnaire was six minutes, 15 seconds. The majority of participants completed the questionnaire outside of conventional business hours, with 55% of participants (n=52) initiating the questionnaire between 20:01 and 00:00, followed by the second largest sample cohort with 16% of participants initiating (n=15) the questionnaire between 04:01 and 08:00.

Figure 5.

Participant Questionnaire Initiation Time



Descriptive Data

Demographics

The mean and median age of participants was 33 years old, with a range from 23 to 44 years of age. A minority of participants, 7.45% (n=7), completed a high school diploma or Ontario High School Equivalency Certificate as their highest level of education, with 45.74% (n=43) having completed college, 35.11% (n=33) having completed a university degree, and 11.70% (n=11) having completed a graduate or post-graduate degree.

Table 2.

Highest Level of Education

Highest level of education	Participants	
	%	n=94
High school diploma/Ontario High School Equivalency Certificate	7.45	7
College degree	45.74	43
University degree	35.11	33
Graduate or post-graduate degree	11.70	11

74.19% (n=69) of participants reported being married and 25.81% (n=24) reported having a common-law living arrangement. The question was skipped by one respondent. Of note, there were no respondents who identified as being single or separated.

Table 3.

Marital Status of Participants

Marital status	Participants	
	%	n=93
Married	74.19	69
Common-law	25.81	24

37.23% (n=35) of mothers reported having one child, 44.68% (n=42) reported having two children, 10.64% (n=10) reported having three children, 4.26% (n=4) reported having four children, and 3.19% (n=3) reported having five or more children. The average number of children per participant was just under two (mean = 1.91).

Table 4.

Number of Children per Participant

Number of children	Participants	
	%	n=94
1	37.23	35
2	44.68	42
3	10.64	10
4	4.26	4
5 or more	3.19	3

Frequency of Access of Mom Content on Social Media

77.66% (n=73) of participants accessed publicly available mom content on social media frequently, with 47.87% of participants (n=45) stating that they accessed content more than once per day, and 29.79% (n=28) having accessed it once per day. Only 10.64% (n=10) of participants accessed publicly available mom content infrequently, with 3.19% (n=3) of participants accessing the groups once per week, and 7.45% (n=7) of participants accessing the groups less than once per week.

Table 5.

Frequency of Access of Publicly Available Mom Content on Social Media

Frequency of Access	Participants	
	%	n=94
More than once per day	47.87	45
Once per day	29.79	28
2 –3 times per week	11.70	11
Once per week	3.19	3
Less than once per week	7.45	7

Similarly to public mom groups, 75.27% of participants (n=70) accessed private mom groups on social media frequently, with 46.24% (n=43) accessing more than once per day, and 29.03% of participants (n=27) accessing once per day. 9.68% (n=9) of participants accessed private mom groups on social media infrequently, with 4.30% of participants (n=4) accessing the

groups once per week and 5.38% (n=5) of participants accessing the groups less than once per week.

Table 6.

Frequency of Access of Private Mom Groups on Social Media

Frequency of Access	Participants	
	%	n=93
More than once per day	46.24	43
Once per day	29.03	27
2 –3 times per week	15.05	14
Once per week	4.30	4
Less than once per week	5.38	5

Engagement of Infant Sleep Content by Mothers on Social Media

Participants were more likely to review content rather than actively engage in comments or post in private social media groups regarding infant sleep practices. The mean score for reading posts in private groups was 4.16 on 5 (SD=0.77). 91.49% (n=86) of participants reported reading posts in private groups somewhat often or often, as opposed to 23.40% (n=22) of participants reported commenting on posts in private groups somewhat often or often, and only 13.83% (n=13) of participants reporting posting in private groups somewhat often or often. The mean score for commenting on posts in private groups was 2.65 on 5 (SD=1.06). 72.34 % (n=68) of participants reported having never or not often posted questions in private groups, alongside 46.80% (n=44) of participants having never or not often commented on questions in private groups. In contrast, only 5.32% (n=5) of participants reported having never or not often read posts in private groups. The mean score for posting questions to private groups was 2.15 (SD=1), the lowest mean for interaction within private social media settings.

Table 7.

Engagement with Private Social Media Groups Regarding Infant Sleep Practices (n=94)

Engagement with private social media groups	Frequency									
	Never		Not often		Neutral		Somewhat often		Very often	
	%	n	%	n	%	n	%	n	%	n
Posting questions	27.66	26	44.68	42	13.83	13	12.77	12	1.06	1
Commenting on posts	14.89	14	31.91	30	29.79	28	20.21	19	3.19	3
Reading posts	1.06	1	4.26	4	3.19	3	60.64	57	30.85	29

Table 8.

Mean Level of Engagement with Private Social Media Groups Regarding Infant Sleep Practices (n=94)

Engagement with private social media groups	Mean	Standard Deviation
Posting questions	2.15	1.00
Commenting on posts	2.65	1.06
Reading posts	4.16	0.77

In public social media settings, participants were also more likely to review content rather than initiate discussion. The mean score for reviewing content from influencers was 3.22 on 5 (SD=1.13). 48.94% (n=46) of participants stated that they reviewed content from influencers somewhat often or very often, whereas only 12.77% (n=12) commented and 14.90% (n=14) of participants posted questions in public groups somewhat often or very often. The mean score for commenting on posts in public groups was 2.24 on 5 (SD=1.01). In addition, 76.59% (n=72) of participants reported having never or not often posted questions in public groups, and 65.96% (n=62) of participants reported having never or not often commented on posts in public groups. Lastly, the mean score for posting questions in public groups was 1.98 on 5 (SD=1.11); the lowest mean was for interaction within public social media settings.

Table 9.

Engagement with Public Social Media Groups Regarding Infant Sleep Practices (n=94)

Engagement in public social media settings	Frequency									
	Never		Not often		Neutral		Somewhat often		Very often	
	%	n	%	n	%	n	%	n	%	n
Posting questions	42.55	40	34.04	32	8.51	8	12.77	12	2.13	2
Commenting on posts	24.47	23	41.49	39	21.28	20	10.64	10	2.13	2
Reviewing content from influencers	6.38	6	24.47	23	20.21	19	38.30	36	10.64	10

Table 10.

Mean Level of Engagement with Public Social Media Regarding Infant Sleep Practices (n=94)

Engagement with social media	Mean	Standard Deviation
Posting questions	1.98	1.11
Commenting on posts	2.24	1.01
Reviewing content from influencers	3.22	1.13

Level of Comfort Discussing Infant Sleep Practices in Various Settings

In rating their level of comfort in various settings, participants were given an option for ‘I did not discuss infant sleep practices in this setting’ in addition to the Likert scale ratings. This additional option did not allow participants to differentiate between those who did not discuss infant sleep practices in this setting as they did not access this level of care, as opposed to those who attended these settings but did not engage in discussion regarding infant sleep practices. For this reason, the data was analyzed in the context of removing this response option.

Participants reported a lower level of comfort in discussing infant sleep practices on social media platforms compared to their comfort in discussing the same topic with family, friends, and the majority of health care settings. On a Likert scale with 1 indicating ‘very uncomfortable’ and 5 indicating ‘very comfortable’, the mean score for public social media was

2.91 (SD=1.36), and 3.63 (SD=1.11) for private social media groups. As such, social media settings provided the lowest reported level of comfort when discussing infant sleep practices. In contrast, the mean score for level of comfort in discussing infant sleep with family was 4.22 on 5 (SD=1.15), and 4.41 on 5 (SD=0.93) with friends. Discussing infant sleep practices with family and friends provided the highest reported level of comfort among participants. By contrast, participants' reported level of comfort in discussing infant sleep practices with obstetricians was rated the lowest among the various health care providers, with a mean of 3.49 on 5 (SD=1.31). Conversely, the highest mean reported level of comfort among health care providers was with nurse practitioners with a mean of 4.2 on 5 (SD=1.09) and midwives with a mean of 4.18 on 5 (SD=1.37).

Table 11.

Mean Level of Comfort Discussing Infant Sleep Practices by Setting

Setting	Participants (n)	Mean	Standard deviation
Family doctor	80	4.03	1.19
Midwife	39	4.18	1.37
Obstetrician	27	3.49	1.31
Nurse practitioner	46	4.20	1.09
Public health nurse	46	4.00	1.21
Private social media groups	81	3.63	1.11
Public social media groups	67	2.91	1.36
Family	94	4.22	1.15
Friends	94	4.41	0.93

Level of Trustworthiness Discussing Infant Sleep Practices in Various Settings

Participants reported higher levels of perceived trustworthiness with discussing infant sleep practices with various health care providers compared to social media platforms, family, or friends. The health care providers deemed the most trustworthy by participants were midwives with a mean of 4.37 (SD=0.90) and nurse practitioners with a mean of 4.37 (SD=0.78). The health care provider with the lower perceived trustworthiness when discussing infant sleep practices was the obstetrician with a mean of 4.00 (SD=0.89). Participants identified friends as

having a higher mean perceived trustworthiness with a mean of 4.00 (SD=0.89) compared to family members with a mean of 3.70 (SD=1.01). The lowest perceived trustworthiness when discussing infant sleep practices was within social media platforms, with a mean of 3.18 (SD=1.00) within private social media groups and 2.97 (SD=1.06) within public social media groups.

Table 12.

Mean Perceived Trustworthiness Discussing Infant Sleep Practices in Various Settings

Setting	Participants (n)	Mean	Standard deviation
Family doctor	85	4.11	1.01
Midwife	43	4.37	0.90
Obstetrician	34	4.00	0.89
Nurse practitioner	54	4.37	0.78
Public health nurse	51	4.21	0.78
Private social media groups	84	3.18	1.00
Public social media groups	78	2.97	1.06
Family	91	3.70	1.01
Friends	92	4.00	0.89

Correlations

Demographics and Social Media Access

The correlations discussed below are all in the context of accessing and discussing infant sleep practice topics in a variety of settings. Age, number of children, and marital status were not found to be correlated with the frequency of a participant's access of mom content on private or public social media forums. In addition, the frequency of access of mom content on public forums strongly correlates positively with the frequency of access of mom content on private forums, r(91)=0.82, *p*=<0.001.

A participant's highest level of education was negatively correlated with posting questions in public groups, r(92)=-.26, *p*=.013, commenting on posts in public groups, r(92)=-.22, *p*=.031, and commenting on posts in private groups, r(92)=-.34, *p*=.001. Interestingly, there was no correlation between a participant's level of education and reading

posts in private or public groups, nor was any correlation found with posting in private groups. In turn, a participant's number of children were positively correlated with commenting in private groups, r(92)=.36, *p*=<0.001, commenting in public groups, r(92)=.31, *p*=.003, as well as posting questions in public groups, r(92)=.21, *p*=.043.

Trustworthiness and Comfort Related to Frequency of Social Media Access

The frequency of use of private social media platforms was negatively correlated with a participant's perceived trustworthiness of private social media, r(82)=-.28, *p*=.01. Similarly, the frequency of use of public social media platforms was negatively correlated with a participant's perceived trustworthiness of public social media, r(76)=-.25, *p*=0.03. Similar negative correlations were identified between the frequency of use of private social media platforms with a participant's perceived trustworthiness of public social media, r(76)=-.24, *p*=0.037, as well as the frequency of use of public social media platforms with a participant's perceived trustworthiness of private social media, r(82)=-.25, p=0.025. Similar correlations between the frequency of both private and public social media platforms were not noted with a participant's level of comfort in the respective setting.

Trustworthiness and Comfort of Settings

Comfort with private and public social media settings when discussing infant sleep practices were positively correlated, r(65)=.55, *p*=<0.001. Similarly, a participant's perceived trustworthiness of private and public social media settings was strongly positively correlated, r(75)=.73, *p*=<0.001. Comfort and perceived trustworthiness in the same setting were often positively correlated, including in private social media settings, r(75)=.43, *p*=<0.001, public social media settings, r(60)=.52, *p*=<0.001, among family r(89)=.55, *p*=<0.001, and among friends r(90)=.67, *p*=<0.001. Additionally, comfort with family was positively correlated with trust in friends, r(90)=.26, *p*=.013, as well as comfort with friends being positively correlated with trust in family, r(89)=.40, *p*=<0.001. A participant's perceived trustworthiness of infant sleep

information from their family when discussing infant sleep practices was strongly positively correlated with their perceived trustworthiness of infant sleep practice information gathered from their friends, r(89)=.55, *p*=<0.001.

Trustworthiness and Comfort Related to Interaction Type with Social Media Access

There was predominant negative correlation between comfort or perceived trustworthiness of certain provider types and various levels of social media access and use. The only exception to this was a positive correlation between a participant's perceived trustworthiness of a family doctor regarding infant sleep practice discussions and commenting on posts in private social media groups, r(83)=.23, *p*=0.035. However, a participant's level of comfort in discussing infant sleep with their family doctor was negative correlated with the participant's frequency of accessing public social media settings, r(78)=-.24, *p*=0.032. Posting questions to public groups was negatively correlated with a participant's level of comfort in discussing infant sleep with their midwife, r(37)=-.44, *p*=0.005. Reviewing content from influencers regarding infant sleep practices was negatively correlated with a participant's perceived trustworthiness of their obstetrician, r(32)=-.41, *p*=0.017, a participant's comfort with their obstetrician, r(25)=-.43, *p*=0.025, and a participant's level of comfort with their nurse practitioner, r(44)=-.31, *p*=0.036. Lastly, commenting on posts in public groups was also found to be negatively correlated with a participant's level of comfort discussing infant sleep practices with their midwife, r(37)=-.34, *p*=0.032. Interestingly, there were no correlations found between passive consumption of social media content in private settings such as reading posts, and level of trust or comfort in discussing infant sleep with various health care providers or family and friends. In private groups, all correlations noted indicated a level of action on behalf of the participant, such as commenting or posting.

Posting infant sleep related questions in private social media settings was positively correlated with a participant's perceived trustworthiness of private social media settings,

r(82)=.37, *p*=0.001. A participant's perceived trustworthiness of public social media platforms was positively correlated with reviewing content from influencers, r(76)=.39, *p*=<0.001.

Comfort in discussing infant sleep practices on public social media platforms was positively correlated with both commenting on posts in public groups, r(65)=.35, *p*=0.004, and reviewing content from influencers, r(65)=.26, *p*=0.067. A participant's comfort in discussing infant sleep practices with their friends was negatively correlated with posting questions to private groups, r(92)=-.22, *p*=0.037, posting questions to public groups, r(92)=-.35, *p*=0.001, and commenting on posts in public groups, r(92)=-.27, *p*=0.009. Similarly, trustworthiness of friends was negatively correlated with posting questions to public groups, r(90)=-.21, *p*=0.046, however trustworthiness of friends was positively correlated with trustworthiness of family, r(89)=.59, *p*=<0.001, as well as with reviewing content from influencers, r(90)=.23, *p*=0.027. Trustworthiness of family was also positively correlated with reviewing content from influencers, r(89)=.21, *p*=0.047.

Wilcoxon Signed-Ranks Test

Level of Comfort Discussing Infant Sleep Practices Across Populations

Wilcoxon signed-rank test demonstrated a statistically significant increase in comfort when discussing infant sleep practices with friends as opposed to family (*Z* = -1.872, *p*=.035). Statistical significance was determined with a higher level of comfort when discussing infant sleep practices in private social media groups as opposed to public social media groups (*Z*=-4.226, *p*=<0.001), with family compared to within private social media groups *(Z* =-3.151, *p*=0.002)*,* and with friends compared to private social media groups (*Z*=-4.887*, p*=<0.001). Similarly, a higher level of comfort was determined to be statistically significant when discussing infant sleep practices with family as opposed to public social media groups (*Z=-5.320, p=<0.001)*, as well as with friends compared to public social media groups (*Z*=-5.609, *p*=<0.001).

Table 13.

Wilcoxon Signed-Ranks Test Level of Comfort Discussing Infant Sleep Practices Across Populations

		N	Mean Rank	Sum of Ranks
Comfort Friends - Comfort Family	Negative Ranks	11[a]	15.23	167.50
	Positive Ranks	22[b]	17.89	393.50
	Ties	61[c]		
	Total	94		
Comfort Public social media groups or threads (i.e. reddit) - Comfort Private social media groups (i.e. mom groups)	Negative Ranks	28[d]	16.43	460.00
	Positive Ranks	3[e]	12.00	36.00
	Ties	36[f]		
	Total	67		
Comfort Private social media groups (i.e. mom groups) - Comfort Family	Negative Ranks	39[g]	29.12	1135.50
	Positive Ranks	16[h]	25.28	404.50
	Ties	26[i]		
	Total	81		
Comfort Private social media groups (i.e. mom groups) - Comfort Friends	Negative Ranks	46[j]	28.11	1293.00
	Positive Ranks	8[k]	24.00	192.00
	Ties	27[l]		
	Total	81		
Comfort Public social media groups or threads (i.e. reddit) - Comfort Family	Negative Ranks	48[m]	27.22	1306.50
	Positive Ranks	5[n]	24.90	124.50
	Ties	14[o]		
	Total	67		
Comfort Public social media groups or threads (i.e. reddit) - Comfort Friends	Negative Ranks	49[p]	27.39	1342.00
	Positive Ranks	4[q]	22.25	89.00
	Ties	14[r]		
	Total	67		

[a]Comfort Friends < Comfort Family

[b]Comfort Friends > Comfort Family

[c]Comfort Friends = Comfort Family

[d]Comfort Public social media groups or threads (i.e. reddit) < Comfort Private social media groups (i.e. mom groups)

[e]Comfort Public social media groups or threads (i.e. reddit) > Comfort Private social media groups (i.e. mom groups)

[f]Comfort Public social media groups or threads (i.e. reddit) = Comfort Private social media groups (i.e. mom groups)

[g]Comfort Private social media groups (i.e. mom groups) < Comfort Family

[h]Comfort Private social media groups (i.e. mom groups) > Comfort Family

[i]Comfort Private social media groups (i.e. mom groups) = Comfort Family

[j]Comfort Private social media groups (i.e. mom groups) < Comfort Friends

[k]Comfort Private social media groups (i.e. mom groups) > Comfort Friends

[l]Comfort Private social media groups (i.e. mom groups) = Comfort Friends

[m]Comfort Public social media groups or threads (i.e. reddit) < Comfort Family

[n]Comfort Public social media groups or threads (i.e. reddit) > Comfort Family

[o]Comfort Public social media groups or threads (i.e. reddit) = Comfort Family

[p]Comfort Public social media groups or threads (i.e. reddit) < Comfort Friends

[q]Comfort Public social media groups or threads (i.e. reddit) > Comfort Friends

[r]Comfort Public social media groups or threads (i.e. reddit) = Comfort Friends

Perceived Level of Trustworthiness Discussing Infant Practices Sleep Across Populations

The Wilcoxon Signed-Ranks test demonstrated an increase in perceived trustworthiness when discussing infant sleep practices in private social media groups compared to public social media groups (Z=-1.988, p=0.47). Perceived trustworthiness of friends was higher compared to that of family (Z=-3.407, p<.001). Statistical significance was also determined to indicate a higher perceived trustworthiness when discussing infant sleep practices with friends compared to private social media groups (Z=-5.327, p<.001), as well as with friends compared to public social media groups (Z=-5.955, p<.001), Lastly, participants reported a higher level of trustworthiness when discussing infant sleep practices with family compared to private social

media groups (Z=-3.549, p<.001), as well as with family compared to public social media groups (Z=-4.162, p<.001).

Table 14.

Wilcoxon Signed-Ranks Test Perceived Level of Trustworthiness Discussing Infant Sleep Practices Across Populations

		N	Mean Rank	Sum of Ranks
Trust Public social media posts (i.e. reddit) - Trust Private social media groups (i.e. mom groups)	Negative Ranks	14[a]	10.11	141.50
	Positive Ranks	5[b]	9.70	48.50
	Ties	58[c]		
	Total	77		
Friends - Trust Family	Negative Ranks	5[d]	14.80	74.00
	Positive Ranks	25[e]	15.64	391.00
	Ties	61[f]		
	Total	91		
Trust Private social media groups (i.e. mom groups) - Friends	Negative Ranks	50[g]	30.30	1515.00
	Positive Ranks	8[h]	24.50	196.00
	Ties	26[i]		
	Total	84		
Trust Public social media posts (i.e. reddit) - Friends	Negative Ranks	54[j]	30.46	1645.00
	Positive Ranks	5[k]	25.00	125.00
	Ties	19[l]		
	Total	78		
Trust Private social media groups (i.e. mom groups) - Trust Family	Negative Ranks	42[m]	27.19	1142.00
	Positive Ranks	12[n]	28.58	343.00
	Ties	29[o]		
	Total	83		
Trust Public social media posts (i.e. reddit) - Trust Family	Negative Ranks	41[p]	24.90	1021.00
	Positive Ranks	8[q]	25.50	204.00
	Ties	28[r]		
	Total	77		

[a]Trust Public social media posts (i.e. reddit) < Trust Private social media groups (i.e. mom groups)

[b]Trust Public social media posts (i.e. reddit) > Trust Private social media groups (i.e. mom groups)

[c]Trust Public social media posts (i.e. reddit) = Trust Private social media groups (i.e. mom groups)

[d]Friends < Trust Family

[e]Friends > Trust Family

[f]Friends = Trust Family

[g]Trust Private social media groups (i.e. mom groups) < Friends

[h]Trust Private social media groups (i.e. mom groups) > Friends

[i]Trust Private social media groups (i.e. mom groups) = Friends

[j]Trust Public social media posts (i.e. reddit) < Friends

[k]Trust Public social media posts (i.e. reddit) > Friends

[l]Trust Public social media posts (i.e. reddit) = Friends

[m]Trust Private social media groups (i.e. mom groups) < Trust Family

[n]Trust Private social media groups (i.e. mom groups) > Trust Family

[o]Trust Private social media groups (i.e. mom groups) = Trust Family

[p]Trust Public social media posts (i.e. reddit) < Trust Family

[q]Trust Public social media posts (i.e. reddit) > Trust Family

[r]Trust Public social media posts (i.e. reddit) = Trust Family

Qualitative Responses

Participants reported discovering various mom content on social media as they displayed across their social media feeds on applications such as Facebook, Instagram, and TikTok. Scrolling through their social media feeds was a commonly used method to view content, often as specific topics were not sought by participants. Two main reasons for using private or public mom groups were highlighted by participants. The first reason was that many participants reported reviewing posts within social media groups for interest or to discover what other moms were discussing at the time. Similarly, posts regarding infant sleep practices or other mom focused topics were often viewed “for curiosity’s sake” (Participant 57) or content reviewed if “a topic catches my eye” (Participant 45). A second common use of the private or public mom groups was to search for answers to questions that a participant may find timely to their current parenting needs. Frequently searched topics included specific information

regarding development, feeding, illness, and sleep. Others reported accessing content to identify social opportunities or events within the community, particularly as they relate to mothers or children. Participants preferred accessing information by reading or searching, rather than posting their own questions. Identifying common struggles of motherhood by reading or searching the content was identified as positive for most participants, whereas there was a burden of potential embarrassment or negative feelings to post their own questions.

When seeking specific information regarding infant sleep practices, there was a wide breadth of content sought. Some mothers only reviewed infant sleep practice content when they were struggling in the moment with their infant's sleep. Others stated they reviewed content in safe sleep groups, which are social media groups specific to promoting safe infant sleep practices and often align with the safe infant sleep recommendations. Sleep training, routines, and wake windows were other topics reviewed by mothers. Commonly, mothers accessed the group to review resources or feedback regarding strategies to improve safety when bed sharing. One mom shared "I was unhealthy obsessed with my first baby's sleep schedule because of social media and what I 'thought' was right." (Participant 62). In contrast, another mom highlighted that other moms sharing sleep schedules and wake windows was helpful.

The following section will discuss categories determined through inductive content analysis of the open-ended questions. Nine main categories were obtained through abstraction of participant responses, including: (a) anonymity for discussions, (b) controversy surrounding infant sleep practices, (c) the practice of bed sharing, (d) multimodal approaches to gathering infant sleep practice information, (e) maternal instinct and individualized approaches to infant sleep practices dependent on each baby, (f) inconsistent or outdated advice from others, (g) the lack of feasibility in adopting safe sleep recommendations, (h) the identification of trustworthy information, and (i) the normalization of infant sleep struggles.

Anonymity for Discussions

Participants identified that anonymity and privacy were important considerations when discussing infant sleep practices, stating that “comfort is increased by anonymity or privacy” (Participant 29). Some participants preferred the anonymity of social media and discussing controversial topics with individuals they did not know formally or through in person social interactions. One participant identified this was particularly true if others may “disagree with my decisions” (Participant 33). In contrast, others highlighted that a one-on-one conversation with a health care provider increased their comfort for discussing this topic compared to discussions in a larger social media group: “Comfort is increased by anonymity or privacy (ie: conversation with a family doctor is one-on-one” (Participant 29).

Controversy Surrounding Infant Sleep Practices

Participants were keen to underscore the contentious nature of infant sleep discussions, with one participant sharing: “I find sleep to be a conflict subject, with many people having strong opinions” (Participant 16). Another participant identified that “I find infant sleep is often a topic of controversy. (…) It can be uncomfortable to discuss the topic especially before knowing other’s [sic] views” (Participant 2). Others defined it as a divisive or judged topic and one that they do not typically engage in discussing with others given the "mixed responses” (Participant 90) and “strong opinions” (Participants 16 & 38) associated with infant sleep decisions. One participant highlighted that they did not feel comfortable discussing their bed sharing decision with health care providers as medical professionals “do not condone cosleeping [*sic*]” (Participant 34). It was also highlighted that a mother’s level of comfort in discussing this contentious topic may be dependent on “where the other party is at in their parenting journey” (Participant 7). Lastly, mothers who did not have support from their family and friends in their choice to bed share sought further advice and reinforcement online

The Practice of Bed Sharing

There were mixed responses and feelings shared regarding the practice of bed sharing. Some mothers identified that social media groups reinforced the risks of bed sharing: “Made me more aware of the risks in co-sleeping when I would see TikToks of mother’s [*sic*] who accidentally smothered their babies while co-sleeping” (Participant 89). In contrast, other mothers did not share these concerns regarding bed sharing, identifying this practice is vilified due to its “perceived risk” (Participant 75). Another participant highlighted a discrepancy in the practice of bed sharing and health care providers’ approach to discussing infant sleep practices, stating “bed sharing is shamed by doctors, but online you can connect with many women who have bedshared safely whether by choice or culture” (Participant 11). Other mothers identified the benefits of social media groups in assisting them with gaining confidence in bed sharing or identifying safer bed sharing strategies.

Multimodal Approaches to Gathering Infant Sleep Practice Information

Mothers consistently identified the importance of a multimodal approach to information gathering regarding infant sleep practices, with one participant stating, “I think gathering information from various sources and people is helpful in decision making as it provided me with alternative information and perceptions that I did not consider” (Participant 74). Some participants highlighted that social media groups often initiated deeper investigation into a specific topic such as infant sleep practices. One participant identified these platforms as a cue to pursue further investigation: “it would prompt me to go [*sic*] more research and I would base decisions on that” (Participant 26). After reading about different approaches to infant sleep practices on social media platforms, certain participants stated that they then proceeded to discuss these suggestions or thoughts with their family and friends. Others used this information as a starting topic when conducting their own research through other means, such as books, friends, or online courses. Health care providers were not commonly identified in this context as

a source of further information. When health care providers were used as an alternative or additional source, participants referenced accessing these resources through social media or other web-based platforms, such as private paid webinars created by nurses. One participant stated that they “signed up for online courses offered by moms (professional nurses)” (Participant 46). Participants did not discuss or elaborate on whether professional credential validation of the resource creators could be completed when accessing these resources.

Maternal Instinct and Individualized Approaches to Infant Sleep Practices

Mothers shared that often they would gather information but ultimately would rely on maternal instinct, intuition, or their “gut” (Participant 77). Participants shared that social media groups allowed mothers to gain confidence in assessing their infants’ unique needs and developing a plan in alignment with this assessment. One participant emphasized the importance of “understanding that each baby is their own person with unique needs. There are general sleep requirements but that there is no set routine that works for everyone” (Participant 83). A frequent reference by mothers in their responses was the importance of understanding that every baby is different, and that varied approaches to achieving infant sleep should be respected. This was particularly vocalized by mothers with multiple children, often sharing that despite similar approaches, their children all required vastly different sleep approaches and had differing sleep patterns. While many mothers discussed this one size does not fit all approach to parenting and infant sleep practices in the context of bed sharing or sleeping on separate surfaces, other topics relevant to this discussion included: sleep training, sleep aides or technology such as sleep sacks or white noise machines, or assisting an infant with falling asleep by rocking, feeding, or other means. These responses highlighted the broad variety of approaches to sleep, even for mothers who rigorously followed safe sleep guidelines.

Inconsistent or Outdated Advice

Those who sought infant sleep practice support from social media groups commonly identified that advice was inconsistent or outdated, sharing “family members can be more biased by their poor memories of what it was like” (Participant 44). Some participants shared concern that there was a lack of consistency in the advice regarding infant sleep practices depending on the particular health care practitioner engaged in the discussion with mothers. One participant stated “[In my opinion] my advice from my doctor was heavily focused on safe sleep guidelines which didn’t help promote quality sleep, and my advice from my midwives were focusing on promoting quality sleep but less so on safe sleep” (Participant 29). Mothers identified a perceived level of bias depending on the health care provider’s specialty or their own personal values and beliefs. Participants shared examples of outdated medical advice regarding infant sleep practices, such as the expectation that infants should sleep through the night by the age of six months, recommendations to switch from breast feeding to formula simply to improve quality of sleep, and the use of dimenhydrinate as a sleep aid. Other participants shared a perception that health care providers are not very knowledgeable about infant sleep practices “other than the basics” (Participant 91). In contrast, some participants highlighted the importance of trusting highly trained and educated health care providers when discussing infant sleep practices.

Participants shared that older family members and some friends may not be an accurate source of support or information given they may “be more biased by their poor memories of what it was like” (Participant 44). In turn, this redirected these participants to access information online as they felt that mothers who have recently experienced infant sleep were a more “trustworthy source vs outdated advice from older family members” (Participant 2).

Lack of Feasibility in Adopting Safe Sleep Recommendations

Some participants discussed their concern with trusting information provided by health care professionals, as there has been fluctuation in the infant sleep recommendations “every 5 years it seems” (Participant 27). Participants highlighted the significant stress placed upon new mothers by the stringent guidelines, particularly in the context of adapting to caring for a newborn. The guidelines negatively impacted some participants' determination of self-worth as a mother, with one participant stating that with time they understood “I'm not a bad mom because those extreme guidelines aren't working for us” (Participant 27). Trust in the available recommendations was difficult to achieve “especially when those guidelines just change all the time” (Participant 27).

The Identification of Trustworthy Information

One participant highlighted that any sources that referenced evidence-based practices should be considered more trustworthy. In contrast, another participant identified challenges in identifying who is most trustworthy, whether online, health care practitioners, or family and friends, stating “It’s hard to know exactly who is most trustworthy.” (Participant 71) Certain participants shared that information gathered on social media assisted them in making informed decisions regarding infant sleep practices, stating “[the information] helped to make informed decisions on how to co sleep as safely as possible” (Participant 46) and “helped make informed decisions and see other perspectives” (Participant 61).

The Normalization of Infant Sleep Struggles

Many participants identified the positive impact of utilizing social media groups to discuss infant sleep practices, as it would help them “feel better about decisions I made or experiences I was having” (Participant 61). Normalization of the struggles of infant sleep resonated strongly with many participants, with one participant sharing “I found it reassuring to read about others going through similar situations, it made me normalize how difficult it can be”

(Participant 16). After joining social media mom groups and reviewing posts, many felt validated that their negative experiences with infant sleep were related to their infant simply not adhering to sleep, as opposed to a reflection of their maternal abilities. Without this validation, many mothers shared feelings of self-doubt and self-criticism, going as far as describing feelings of ineptitude with motherhood. This was particularly heightened in the context of making infant sleep practice decisions that differed from guidelines and their recommendations, particularly when the participants had intended to assume these guidelines prior to their infant being born. Many participants highlighted that the information gathered on social media increased confidence and reinforced the choices they had already made regarding infant sleep practices. It also allowed for validation when certain infant sleep practices, such as sleep training, were not successful for an individual infant or mother.

Chapter 6: Discussion

In the following chapter, a short summary of thesis findings will be discussed, followed by a discussion of the sample demographics in the context of the broader Northumberland County population. Next, key findings in the context of available literature will be reviewed to address the research question as to how mothers use social media platforms when making decisions about infant sleep practices. These key findings include the use of social media by mothers, validation of infant sleep struggles, reinforcement of maternal instinct, social media as a paradox, and the effectiveness of current safe infant sleep guidelines. Lastly, the strengths and limitations of the research study will be outlined, followed by implications for future research based on research findings.

Summary of Findings

The results indicate that participants interact with online platforms outside of conventional business hours, as demonstrated by the questionnaire completion times. The majority of participants accessed publicly available mom content on social media and private social media groups frequently. Within both private and public social media settings, participants were significantly more inclined to consume the content rather than contribute to further content creation by commenting or posting. Participants reported the lowest level of comfort when discussing infant sleep practices in social media settings, a higher level of comfort with health care providers, and the highest level of comfort with family and friends. With health care providers, the highest reported level of comfort discussing infant sleep practices was with nurse practitioners and midwives, and the lowest was with obstetricians. In turn, health care providers had the highest perceived trustworthiness when discussing infant sleep practices, followed by friends, family, private social media groups, and public social media groups. Within the health care provider setting, the perceived trustworthiness was highest for nurse practitioners and

midwives, and lowest for obstetricians. Both private and public social media settings received the lowest perceived ranking of trustworthiness.

High positive correlations were noted between a participant's frequency of access between private and public social media groups. This means that participants using private social media groups are also likely to be using public social media groups. Moderate negative correlations were noted between a participant's level of education and active contributions to certain social media settings, such as posting or commenting; however, this correlation was not noted for passive consumption of content in the same settings. This indicates that participants with a lower level of education were more likely to contribute to social media groups by posting or commenting. Low to moderate positive correlations were noted with a participant's number of children and their active contributions to certain social media settings, indicating a higher frequency of posting or commenting in social media groups by mothers with a higher number of children. Correlative data indicated that the frequency of use of social media platforms was lowly negatively correlated with a participant's perceived trustworthiness of their content, meaning the more participants used social media platforms, the less they trusted their content. However, active interactions within social media groups such as posting or commenting were moderately positively correlated with a participant's perceived trustworthiness. This indicates that increases in posting or commenting was linked to increased trust in the content. Both comfort and perceived trustworthiness were noted to be moderately positively correlated in the same setting, such as private and public social media settings, as well as family and friends. This means that when participants were comfortable in a specific setting, they were also more likely to trust content discussed in this setting. Similar moderate positive correlations were also noted across certain settings, such as between family and friends. Comfort and perceived trustworthiness of social networks beyond online social media platforms, such as family and friends, were lowly negatively correlated to most types of active interaction within social media settings. This indicates that participants comfortable and receiving trustworthy information from

sources external to social media, were less inclined to engage in active interactions within social media settings, such as posting or commenting.

When comparing participants' level of comfort discussing infant sleep practices across populations, discussions with friends were noted to have the highest level of comfort, followed by family, private social media groups, and lastly public social media groups. Similar findings were noted when comparing perceived trustworthiness when discussing infant sleep practices across the same four populations, with friends noting the highest level of comfort, and public social media groups noting the lowest.

In qualitative responses, nine categories were identified when addressing the use of social media by mothers regarding infant sleep practices. Participants highlighted the importance of anonymity when discussing infant sleep practices. They also identified the topic of infant sleep practices as controversial and discussed the practice of bed sharing. Many highlighted the importance of obtaining infant sleep practice information from a variety of sources, as well as reflecting on the use of maternal instinct or individualized approaches to infant sleep practices depending on the unique needs of each infant. Participants noted inconsistencies in advice obtained from others regarding infant sleep practices, including health care providers as well as family and friends. They noted that identifying trustworthy information could be challenging at times. Of concern to the participants was the lack of feasibility in implementing safe sleep recommendations. Lastly, participants highlighted the importance of normalizing discussions regarding infant sleep struggles.

Demographics

Demographics of the sample used for this research study will be discussed in the context of the 2021 census data for Northumberland County (Government of Canada, 2022). The census data available does not identify demographic criteria in the context of those identifying as mothers, as such for the purpose of this discussion, these demographics will be

reviewed in the context of census data for women in Northumberland County. Interpretation should be undertaken cautiously given the wider age range used in census data. Of note, census data was collected in 2021, three years prior to the data collection for this study. The mean and median age of study participants was 33, whereas the mean age of women in Northumberland County was 49.1 and the median age was 54. Women aged 20 to 44 represented 23.3% of the women in Northumberland County, or 11.88% of the total population. The mean number of children per mother in this research study was 1.91, which is comparable to the Northumberland County mean of children in census families of 1.7. Of note, study participants all identified as married or in a common-law relationship, which is not reflected as both marital statuses account for only 60.29% of women aged 15 years and older in Northumberland County. Study participants identified a higher level of education than the equivalent population as demonstrated in Table 16. However, it is important to note that census data identifies the level of education for women aged 25 to 64 and was based on 25% sample data, rather than the age range of participants for this research study of 23 to 44. In this identified census group, a higher percentage of individuals reported a high school diploma or Ontario High School Equivalency Certificate as their highest degree of education compared to study participants. A lower percentage of individuals reported university and graduate or post-graduate degree completion as the highest level of education compared to study participants. College degree completion was similar across both groups. As such, the average level of education of study participants appears higher compared to the general population of women in Northumberland County.

Table 15.

Highest Level of Education of Study Participants Compared to Northumberland County Census

Highest level of education	Study Participants		Northumberland County Census Data[a]	
	%	n=94	%	n=22,215
High school diploma/Ontario High School Equivalency Certificate	7.45	7	27.8	6,175
College degree	45.74	43	42.17	9,370
University degree	35.11	33	16.7	3,710
Graduate or post-graduate degree	11.70	11	5.65	1,255

[a]Women aged 25 to 64 in Northumberland County, based on 25% sample data according to the 2021 census.

Northumberland County experienced an increase in population of 4.4% between 2016 and 2021 (Government of Canada, 2022). Prior to the novel coronavirus pandemic, intraprovincial migration within Canada was becoming a phenomenon, particularly from the three major Census Metropolitan Areas (CMA) of Canada, Toronto, Montreal, and Vancouver (McQuillan, 2024). This trend increased during the pandemic, particularly for the CMA of Toronto, with a noted increase in migration for young adults aged 25 to 34 (McQuillan, 2024). Out-migrants from Toronto were notably more likely to settle in other CMAs, but retain ties to the city, whether for commuting or recreational purposes (McQuillan, 2024). Among the five highest CMA recipients of out-migrants from Toronto, three: Belleville, Peterborough, and Oshawa (McQuillan, 2024), are geographically encompassing Northumberland County. These changes in geographical settlement and population may explain the variation in the highest level of education, as well as the increase in mean number of children per family in this study compared to the broader population. Additionally, the wider age range in the census data may account for variations in the identified highest level of education. Of significance in the study findings related to demographics were the negative correlations between a participant's level of education and their frequency of posting or commenting in certain social media settings. In the context of the population having higher rates of high school diplomas as highest level of education, it is

possible that the broader population may take a more active role in posting and commenting within social media settings compared to the study sample. As well, positive correlations were noted between a participant's number of children and their active interactions within certain social media settings, indicating that the greater the number of children, the more likely a mother was going to interreact with social media. Given similarities in the mean number of children per mother between the study sample and the broader Northumberland County population, these findings are likely generalizable.

Use of Social Media by Mothers

To understand how mothers utilize social media to make decisions about infant sleep practices, it is important to understand how mothers globally use social media. In this study, participants expressed an interest in passive consumption of social media, often reporting scrolling through content or reviewing posts within social media mother groups out of curiosity or interest. At times, they referenced this information to answer specific infant-related questions. The convenience of the information was highlighted as a positive attribute by many, reinforcing findings by Moon et al. (2019) that social media provided nearly unlimited and instantaneous parenting and infant health information. Additionally, this aligns with the data collection times observed by participants, with the majority accessing the questionnaire outside of conventional business hours. This further reinforces the importance of rapid and accessible information to mothers, as well as providing important implications with regards to the dissemination of future research and support for new mothers. Kothari et al. (2020) investigated the creation of a mobile application for mothers to access resources and health information in an exploratory, focus-group methodology study. When engaging participants in the development of the application (n=7), it was identified that participants wanted an application with functionalities similar to social media networking sites, as well as a platform to pose questions with immediate feedback (Kothari et al., 2020). Additionally, participants highlighted that they wanted information geared

towards the needs of the mother, not solely that of the infant, highlighting a discrepancy in the available resources focusing solely on the needs of an infant (Kothari et al., 2020). This aligns with findings that mothers accessed social media for validation of the challenges they experienced in their journey (Kothari et al., 2020). In this current study, participants' responses highlighted that their own experiences as mothers supporting an infant with sleep struggles were validating. This nuanced difference highlights the importance of how infant sleep practice discussions are approached by health care providers, family, and friends, highlighting the need to focus not only on the infant, but also on the needs and priorities of the mother.

There has been a shift in the literature identifying how mothers access health information, with studies from prior years (Baker et al., 2007; Bernhardt & Felter, 2004; Kennedy et al., 2011; Yoo, 2004) identifying health care providers as a primary source, and later studies (Alwhaibi et al., 2017; Weiner et al., 2015) identifying the internet as the predominant source of health care information for mothers (Lee, 2018). Furthermore, mothers (n=272) in the United States utilized the internet as their primary source of health information, followed by friends who have kids, and then followed by health care providers (Lee, 2018). Lee (2018) compared the access of information between mothers in the United States (n=272) and Korean immigrant mothers (n=208). While both groups referenced the internet as their primary source, Korean immigrant mothers ranked health care providers as their fifth choice compared to third choice for mothers in the United States (Lee, 2018). Korean immigrant mothers were more likely to use social networking sites such as Facebook compared to mothers in the United States (Lee, 2018). These findings highlight an increase in reliance on the internet and social media platforms for access to health information, aligning with findings of this study.

In both quantitative and qualitative responses, participants overwhelmingly engaged in passive consumption of infant sleep practice content on social media, such as reading posts rather than commenting or posting, particularly in private social media groups. As such, a small

percentage of group members are responsible for most of the content available to the larger membership. Moon et al. (2019) identified that many mothers (n=28) perceived social media content as relatively trustworthy. These findings (Moon et al., 2019) are in contrast with this research study's findings, in which participants identified social media content as the least trustworthy source compared to family, friends, and health care providers. However, when considering the level of interaction within social media groups, participants identified increased trustworthiness in social media content the more frequently they posted or commented. In turn, participants who identified a higher frequency of active interactions, such as commenting or posting, reported a lower level of comfort discussing infant sleep practices with their health care provider. This is an interesting contrast as those with more children or a lower level of education were responsible for generating much of the content reviewed by mothers. Based on qualitative responses in this study, a certain amount of content with the participant groups included information in favour of bed sharing. Variations in whether social media content aligned with existing guidelines was noted by Kallem et al. (2018), with posts by users not aligning, but responses to others' posts aligned with AAP guidelines. Mothers with more children may feel more confident in interpreting these guidelines in a manner that works for them compared to new mothers, as well as feeling confident in sharing these thoughts with others. Additionally, those with a lower educational background may have barriers to accessing safe infant sleep practice knowledge. While most participants rated social media platforms as the setting with the lowest perceived trustworthiness and comfort when discussing infant sleep practices, those actively contributing to the group attributed lower scores for these components with their health care providers. This finding suggests that not all mothers use social media as a source of information for infant sleep practices, but for those not feeling supported by their health care providers, the information gleamed from these platforms is of more significant value.

Validation of Infant Sleep Struggles

Participants in this study highlighted the positive impact of social media groups in the validation of the struggles of motherhood, particularly related to infant sleep practices. It was commonly identified that the community effect of social media and of others with similar lived experiences, supported participants in their motherhood journey particularly when they had an infant who did not adhere to societal expectations of normal sleep. Of concern was the highlighted self-doubt and self-criticism identified by mothers secondary to infant sleep practice concerns, which were reported to be alleviated by the validation found in social media groups. The first six months of an infant's life is the period of greatest uncertainty for mothers regarding their confidence in parenting, stabilizing approximately one year postpartum (Perez et al., 2025). This fragility may render them more vulnerable to seek alternate sources of support when making difficult decisions about infant sleep practices. This association was likely strengthened for mothers in the study, as many discussed their experiences with infants who had poor sleep habits. Mothers with poor sleep quality are more likely to reflect lower emotional availability and infant-mother attachment (Bai et al., 2022). Additionally, parents reporting a lower reported parenting confidence were those with low to moderate levels of perceived social supports (Fierloos et al., 2023). Maternal confidence and overall social support have been identified as positively correlated (Huang et al., 2022). These findings are consistent with those of this current study; participants reported social media groups as overwhelmingly positive community supports, validating their concerns and offering alternative interventions to implement. In the qualitative responses, mothers highlighted that this sense of validation was mostly associated with reviewing existing content. In situations where participants would require posting or commenting, many shared concerns about embarrassment or judgement by others.

Reinforcement of Maternal Instinct

In addition to the validation experienced by participants related to their feelings of motherhood, many identified social media as a source of reinforcement for their maternal instinct. Moon et al. (2019) previously identified the importance of the internet to mothers as a tool to reinforce their intended behaviour by providing broader consensus and confidence when making decisions about parenting or infant health. While previously discussed that social media was identified by participants as the least trustworthy source, it appears that mothers continue to utilize social media as reinforcement and validation to decisions they had already made or intended to make. This is supported by the IBM framework which was used to underpin this study. The IBM framework highlights that perceived norms as a factor influencing an individual's behaviour, composed of both injunctive (social expectations of the individual engaging in the behaviour) and descriptive norms (individual's perception on interventions others are engaging in). Referencing social media by mothers for infant sleep practice support can influence the descriptive perceived norms and may ultimately influence the decision made by the mother. This current study highlights the challenges when injunctive and descriptive norms do not align, such as when safe sleep guidelines emphasize the importance of not bed sharing, yet social media groups provide reinforcement for bed sharing.

The use of algorithms in social media settings can significantly influence the information provided to mothers. Schafer (2020) identified that short posts within social media, known as 'snack news', can lead to increased perceived knowledge but not an increase in factual knowledge. In conjunction with the use of social media algorithms which will continue to identify similar topic posts to users, and the perceived increase in knowledge of mothers, it is concerning how this information is used with regards to infant sleep practices. Based on these findings, mothers may then feel confident that a certain sleep behaviour is more commonly implemented than it is. As well, they may feel more confident that they are knowledgeable about

this intervention when in fact this is perceived knowledge rather than factual knowledge. This ties into the IBM framework further, as knowledge and skill are highlighted as influencers to an individual's behaviour. Recent evidence highlights that knowledge of safe sleep guidelines and environmental barriers, such as lack of a safe sleep surface, are no longer the barriers to safe infant sleep practices as experienced by most mothers (Sahud et al., 2025). Yet little is known what occurs when opposing elements of knowledge collide, such as when a mother is aware of safe sleep guidelines but has increased perceived knowledge regarding a sleep approach opposing these guidelines. When opposing pieces of knowledge are presented to a mother, such as in the case of social media posts promoting bed sharing and safe infant sleep guidelines recommending against it, mothers may rely on other components of the IBM to inform their behaviour.

This information is important to interpret in the context of the second framework incorporated in this study, the ODSF. With mothers accessing social media groups for validation or reinforcement of infant sleep practice decisions, they appear to be identifying a decisional need and accessing social media groups as an informal approach to decision support. Despite social media content not having the highest perceived trustworthiness by participants, the use of this content to support decision-making may lead to inherent risk in infant sleep practices. The level of personal validation shared by participants from social media sources is important to consider, as this may provide the established rapport highlighted within the ODSF. Additionally, the ODSF highlights the importance of an informed decision as part of the decisional outcome (Hoefel et al., 2020). In this study, participants identified social media groups as a source used to make informed decisions. Participants who engaged in social media valued its use as a multimodal approach, with their comments suggesting that this approach is not supported in other settings, such as health care providers or family. The importance of obtaining information from a variety of sources is grounded in participant responses indicating that social media allowed for informed

decision-making. Data from this study suggests that mothers want to make the best decision for infant sleep practices and want to take an active role in exploring options best suited to their needs, rather than receiving prescriptive instructions. Informed decision-making is a highlighted factor by the RNAO in their best practice guideline for registered nurses supporting parents with infant sleep practices (Registered Nurses' Association of Ontario, 2014). The RNAO guideline highlights the importance of facilitating informed decision-making by ensuring evidenced-based information when supporting families making decisions regarding infant sleep practices (Registered Nurses' Association of Ontario, 2014). This highlights two concerns. First, social media group content may or may not reflect up to date and evidence-based information. Second, information regarding bed sharing is inconsistent, and scholarly articles examining its links to SIDS have been highlighted as low quality due to the ethical constraints of this field of research. It is important for providers to understand the use of social media and its importance as a tool to mothers when discussing infant sleep practices. Participants stated acknowledgement that health care providers remained the most trustworthy source of information regarding infant sleep practices, yet comfort was higher with family and friends. Both private and public social media groups ranked lowest for perceived trustworthiness and comfort. Despite this, qualitative data overwhelmingly implies that mothers continue to reference social media for infant sleep practice queries, although the majority of participants passively consuming social media content were able to leverage this information without solely relying on it. However, upon active engagement in groups, participants were more inclined to have an increased trust in social media content and a decrease in comfort or trust in health care providers. These constraints may lead to additional decisional conflict, further reinforcing the need for decision support tools related to infant sleep practices.

It is important to note that participants highlighted the importance of social media groups as a source of information for sleep related questions, such as recommended sleep products or

sleep training approaches. Among others, mothers used these platforms to receive feedback or reviews on sleep sacks, white noise machines, and sleep training approaches. These products are not in opposition to infant sleep guidelines and highlight the use of social media as a marketing and product review tool for mothers. Participants did not discuss whether these products were being implemented to achieve infant sleep practices in alignment with existing guidelines, or simply as a preferred approach to infant sleep. Regardless of the intention, this highlights that mothers seek multiple information sources and reinforcement in parenting decisions regarding infant sleep practices, which can be achieved with social media groups.

Social Media as a Paradox

A common comment made by participants was regarding the overuse of social media, yet, many highlighted the positive attributes of online communities. Additionally, participants highlighted specific negative attributes of social media groups for mothers, such as embarrassment when asking questions, yet these participants continued to access this information. One mother identified that social media use contributed to her obsession with sleep schedules, yet she continued to access the groups. While algorithms in social media explain the reason why similar posts or those from the same groups are constantly presented to users, this leads to a question of why mothers who have a negative experience with social media are struggling to abandon its use. Participants indicated negative rhetoric by external sources regarding the use of social media, particularly in the context of infant sleep practices. While previously identified that social media is a positive source of reinforcement and validation for mothers, such external perceptions and comments may contribute negatively to mothers' perception of their social media use. It would be interesting to explore any potential links between these feelings of guilt surrounding social media use for infant sleep practice guidance, with the low perceived trustworthiness and comfort of social media by participants. This study did not examine the causes or contributing factors to this perception, however this would be

valuable information to gather in future studies, particularly given mothers have identified concerns regarding infant sleep guidelines and associated discussions on this topic with health care providers.

Effectiveness of Current Infant Sleep Guidelines

Participants emphasized significant concerns that existing safe sleep guidelines do not reflect the realities of infant sleep practices. Some participants noted the impact of safe sleep guidelines, not only as not feasible, but also negatively influencing maternal self-worth. Many participants highlighted that they engage in bed sharing, and used social media groups to help them determine safer approaches to bed sharing. While the latest iteration of the Joint Statement available from the PHAC highlights an increase in bed sharing in Canada and the importance of discussing factors which render bed sharing more dangerous, these specific factors are not listed in the Joint Statement (Public Health Agency of Canada et al., 2021). Participants identified that most health care providers do not condone bed sharing, resulting in a reduced inclination for mothers to discuss any sleep concerns beyond existing infant sleep guidelines. Existing literature identifies that based on sample data, 33% of Canadian mothers (n=497,000) would have reported partaking in bed sharing every day or almost every day (Gilmour et al., 2019). Mothers appear to access social media groups for a variety of reasons, of which infant sleep practice is of priority concern. The inclination to review infant sleep practice content but not contribute to further content creation reflects the contentious discussions regarding infant sleep in the literature. Additionally, participants defined infant sleep practices as a topic which was divisive and likely to elicit strong opinions. Existing literature has discussed varied approaches in communication reported by mothers regarding infant sleep practices, whether when engaging social supports or health care providers (Landsem & Cheetham, 2022; Moon et al., 2024). It is of interest that lay people have identified similar findings as to what has been discussed at the scholarly level. The review of infant sleep guidelines (Table 1) identified

limitations in available content from certain professional associations, such as the local health unit and the Association of Ontario Midwives, alongside significant variations in approaches and recommendations. Available guidelines to mothers in Northumberland County reflect variations in their approaches, particularly risk reduction for SIDS. It is important to interpret available information in the context of a society which has global access to significant information through the internet. This is particularly relevant given the existence of guidelines from NICE in the UK, which share recommendations that do not align with those published by the PHAC (National Institute for Health and Care Excellence, 2021b; Public Health Agency of Canada et al., 2021). Of note, these publicly available guidelines do not require abstinence of bed sharing in the absence of additional risk factors (National Institute for Health and Care Excellence, 2021b). Additionally, rationale and evidence as to the published guidelines by the NICE (2021b) are linked within the publicly available guidelines. Given participants in this study identified that social media groups provided an initial source for information that they then discussed or reviewed elsewhere, availability of guidelines allowing bed sharing and relevant rationale may provide further reassurance to mothers who seek to implement this intervention for their infant's sleep.

Participants did not discuss the occurrence of bed sharing unintentionally, whether on a specific occasion or prior to their infant's birth. Unintentional bed sharing is a mounting topic in bed sharing and SIDS literature, particularly in the context of a parent relocating to a couch to avoid bed sharing and unintentionally falling asleep (Blair et al., 2014). Additionally, the majority of parents who bed share have identified that this was not their intention at the time their infant was born (D'Souza et al., 2024). Many participants shared that social media allowed them to obtain information to bed share safely, yet specifics on what these risk reduction strategies were, are not discussed. It is possible that despite the best efforts to implement safe bed sharing strategies, these do not align with those identified in the literature, such as ensuring bed sharing on a bed not a couch, and ensuring the parent has not consumed alcohol, drowsy

medications, or recreational drugs. Social media algorithms would also influence the content to continually align with previously reviewed content, reinforcing a mother's assumption that they have implemented the safest approaches to bed sharing. The impact of poorly implemented bed sharing despite a mother's best intentions could be devastating. Ultimately, the cascading impact of stringent guidelines and social media algorithms need to be carefully analyzed to understand their impact on public health, infant safety, and maternal wellbeing.

While participants identified health care providers as trustworthy, they identified a higher level of comfort with family and friends. In addition, many participants identified concerns in discussing infant sleep practices with their health care providers for reasons such as inconsistent advice or variations between their own practices and what health care providers would prescribe. Some participants noted a difference in recommendations regarding infant sleep practices depending on the designation of the health care provider. Of note, participants identified a higher level of comfort and perceived trustworthiness discussing infant sleep practices with midwives and nurse practitioners compared to other provider types. The guideline published by the RNAO (2014) identifies the ODSF as a framework for mothers experiencing decisional conflict regarding infant sleep practices, whereas other guidelines do not reference the use of decision support tools. This guideline would be most relevant to nurse practitioners, given their professional designation. Further research is required to understand the approach nurse practitioners may undertake when discussing infant sleep practices with mothers, and whether they incorporate recommended decision support tools as recommended by the RNAO. One participant noted the disconnect between their midwife's recommendation for better quality sleep with less focus on safety, compared to their family doctor who focused on safe sleep but not on achieving a high quality of sleep. The Ontario Association of Midwives did not have any safe sleep guidelines available on the internet at the time of data collection, however the CPS did, with recommendations in alignment with those published by the Joint Statement on Safe

Sleep by the PHAC. Inconsistent resource availability may render it challenging to providers to deliver consistent, feasible advice to mothers regarding infant sleep practices. Mothers identified frustration with existing guidelines and their perceived frequent changes to practice. This identifies that mothers are seeking not only improvement in the content of guidelines, but also greater transparency in dissemination of knowledge and practice recommendations. Participants highlighted that frequent iterations of guidelines lead to concerns with trustworthiness. Updated guidelines regarding infant sleep practices in the UK highlight not only risk reduction messages, but also facilitate knowledge translation by providing rationale, an evidence review, and links to full guidelines directly in the public facing website (National Institute for Health and Care Excellence, 2021b). Ultimately, this study identifies that available guidelines are not well implemented, may cause more harm to both the infant and the mother, may erode confidence in health care providers, contribute to decisional conflict, and influence the patient provider relationship.

Implications for Research, Practice and Policy

Practice and Public Health Policy

Despite certain negative attributes, social media continues to exist as a significant resource for mothers regarding infant sleep practices. This can contribute to unsafe infant sleep practices not aligned with existing guidelines. Seeking to eliminate the use of social media by mothers for infant sleep practice resources is unlikely to succeed, given mothers' identification of these groups as a vital element of their social supports. However, reassessment of existing infant sleep guidelines in the context of this study's findings would allow for the development of risk reduction strategies for SIDS. Additionally, the development of a decision support tool specific to infant sleep practices would facilitate the discussion regarding this topic between mothers and health care providers. This tool should carefully identify not only the infant's sleep needs but also examine the mother's current needs, as well as incorporate social media as a potential

source of information. Updated guidelines should use language that validates challenges related to infant sleep and provides realistic and safe interventions. Rationale for guideline recommendations should be clearly communicated in lay terms and readily accessible directly within family facing resources. Discussions regarding infant sleep practices should be undertaken in an open, bidirectional dialogue, ensuring adequate support and a psychologically safe environment for mothers to pose questions. Public health policy and resources must support primary care providers in these discussions, to ensure the best outcome for both the mother and infant. Additional consideration needs to be undertaken to ensure that resources are available to mothers with immediate and evidence-based information. Strategies, such as after-hours telephone support, could satisfy this significant need currently identified by social media groups.

Future Research

While this study explored the comfort level of mothers when discussing infant sleep practices with health care providers, it did not seek similar evaluation of health care providers' comfort when discussing infant sleep practices or social media use by mothers regarding public health questions. Further research is required to understand how existing guidelines and the use of social media by mothers impact health care providers' approach to discussing infant sleep practices. Further, existing literature regarding the risks and benefits of bed sharing has highlighted a need for further high-quality research on this topic. Larger scale studies examining smaller observational studies have identified limitations with regards to consistent use of terminology and examined risk factors, rendering analysis challenging (Das et al., 2014, 2021). Longitudinal studies, including provincial or federal repositories, would enhance data collection and contribute to the development of higher quality and reliable evidence. Lastly, social media provided an environment to discuss practical elements of infant sleep practices, such as sleep training approaches or recommendations on various products. Participants highlighted the

extensive variety and cost of products available to mothers for infant sleep practices. However, they did not discuss whether these approaches or products were sought due to challenges from attempting to implement safe sleep recommendations or their own preference. In the context of mothers identifying the negative impacts of an infant's poor sleep on their self-worth as a mother, further research exploring the impact of guidelines on available sleep products, and in turn, on the mental wellbeing of mothers is warranted. At the time this study was conducted, limited research regarding social media and infant sleep practice decisions by mothers was available. A continued review of this research field will allow for better support for mothers and health care providers as they approach infant sleep practice related discussions.

Education

Social media has readily incorporated itself within the medical community as a source of information. Education is needed for health care providers in initial training, and updated iterations, to help guide their understanding of how social media is used by patients, as well as communication strategies with patients regarding their social media use for health information. Health care providers must understand underlying factors which may contribute to increased reliance on social media by certain populations, as well as the impact on perceived versus factual knowledge by patients.

Strengths and Limitations

This novel study provided initial data regarding the use of social media by mothers when making decisions about infant sleep practices. Previously, there was limited literature regarding this research topic, and the findings of this study can provide the groundwork for further research. The findings are limited to a particular sample within Northumberland County and may be challenging to reproduce in larger communities. Findings may not be generalizable to larger communities; however, they do highlight the need for further research in this field. As well, with the rapid evolution of social media applications, findings may not be generalizable to the use of

other social media applications, such as Instagram or TikTok. Additionally, further exploration of the impact of race, socioeconomic status, employment, and social supports would be beneficial in identifying the use of social media for infant sleep practice decisions specific to these communities. This study was limited to the use of social media by mothers when making decisions about infant sleep practices and did not capture the role of fathers or parents not identifying as mothers in this decision-making process. Further research identifying these parents would strengthen the understanding of the full breadth of infant sleep practice decision-making. Lastly, analysis of the content of posts by mothers within social media groups would be beneficial to understand infant sleep practice related discussions occurring on social media, however this level of analysis was beyond the scope of this research study.

Conclusion

Infant sleep practice is an all-encompassing concern for many mothers. Stringent guidelines provide a framework for safe sleep interventions yet have been found to have limitations in their implementation, particularly with regards to bed sharing. While health care providers remain a trusted resource for mothers, mothers are frequently seeking information regarding infant sleep practices from social media platforms. This can be attributed in part due to frustration with existing guidelines, and their dissemination by health care providers. Findings in this study indicate that mothers reference social media groups as a forum for informal decision support regarding infant sleep practice decisions. Most engage with social media groups in a passive manner, with a small portion of group members contributing to the active content found on these platforms. Mothers emphasize the importance of social media groups as critical to their social supports, primarily as validation for infant sleep struggles and reinforcement of maternal instinct. Existing infant sleep guidelines appear to be causing a chasm between mothers and health care providers on the topic of infant sleep practices, with social media groups cautiously bridging these two groups. Without amendment of existing

guidelines and careful revision of infant sleep practice discussion approaches, the chasm will widen at the expense of mothers and their infants. Social media should be embraced as a resource rather than a hindrance to communication between mothers and their health care providers, and can be helpful in knowledge dissemination for updated guidelines and available rationale. Mothers want to be heard, they want community, and they want support in making the best decisions for themselves and their children. Rather than functioning in silos, we, as health care providers, are responsible for incorporating the advent of social media into our care strategies, rather than circumventing their existence. By doing so, bi-directional dialogue will be facilitated, for the benefit of all.

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Appendices

Appendix A

Thesis Proposal Approval

ÉCOLE DES SCIENCES INFIRMIÈRES
Programmes des études supérieures

u Ottawa
Faculté des sciences de la santé
Faculty of Health Sciences

SCHOOL OF NURSING
Graduate Programs

APPROBATION DU PROJET DE THÈSE
THESIS PROPOSAL APPROVAL

DATE	NOM DE L'ÉTUDIANT/E – *NAME OF STUDENT*	N° D'ÉTUDIANT/E – *STUDENT NO.*
July 11 2024	Kasia Gingras Little	[redacted]

Graduate Program: ☑ NSG 7999 (M.Sc.Inf. / MScN) ☐ NSG9999 (Doctorat / Ph.D)

Thesis Title / Titre de la thèse: Understanding Maternal Decision-Making Regarding Infant Sleep as Discussed on Social Media Platforms

Directrice de these / Thesis Supervisor: Michelle Lalonde (Nom/Name) [redacted] (Signature)

Co-directrice de these/ Thesis Co-supervisor (s'il y a lieu / if applicable): _____ (Nom/Name) _____ (Signature)

Autres membres du comité de direction de thèse / Other Thesis Committee Members

Julie Chartrand (Nom/Name)	Associate Professor, University of Ottawa School of Nursing (Position/Institution)	[redacted]
Brandi Vanderspank-Wright (Nom/Name)	Associate Professor, University of Ottawa School of Nursing (Position/Institution)	
_____ (Nom/Name)	_____ (Position/Institution)	_____ (Signature)
_____ (Nom/Name)	_____ (Position/Institution)	_____ (Signature)

Rapport d'évaluation / Evaluation Report

☒ La proposition est acceptée / Proposal accepted.

☐ La proposition devra être soumise à nouveau aux membres du comité, avec révisions, avant d'obtenir l'approbation finale / Proposal must be resubmitted to Committee members, with revisions, to obtain final approval.

☐ La proposition est rejetée. L'étudiante doit refaire le processus d'approbation à nouveau / Proposal is rejected. The student must complete the thesis proposal approval process again.

Approuvé par / Approved by : [redacted] (Directrice adjointe, études supérieures / Assistant Director, Graduate Programs)

July 11 2024 (Date)

_____ (Date)

Appendix B

Certificate of Ethics Approval

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 | CERTIFICATE OF ETHICS APPROVAL

Numéro du dossier / Ethics File Number	H-09-24-9954
Titre du projet / Project Title	Understanding Maternal Decision-Making Regarding Infant Sleep as Discussed on Social Media Platforms
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)	21/10/2024
Date d'expiration (jj/mm/aaaa) / Expiry Date (dd/mm/yyyy)	20/10/2025

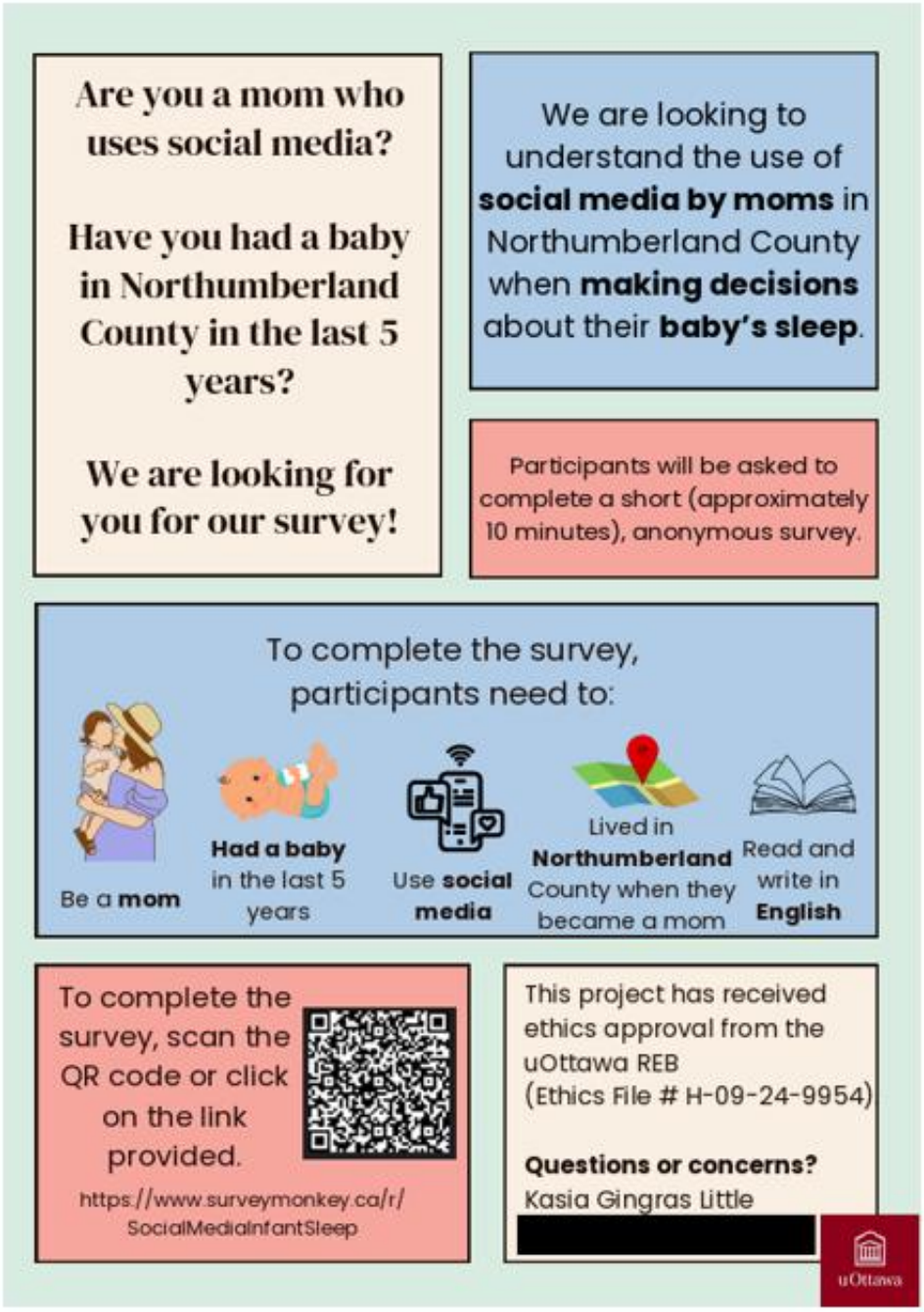
Équipe de recherche / Research Team

Chercheur / Researcher	Affiliation	Role
Kasia GINGRAS LITTLE	École des sciences infirmières / School of Nursing	Chercheur Principal / Principal Investigator
Michelle LALONDE	École des sciences infirmières / School of Nursing	Superviseur / Supervisor

Conditions spéciales ou commentaires / Special conditions or comments

Appendix C

Recruitment Poster



Appendix D

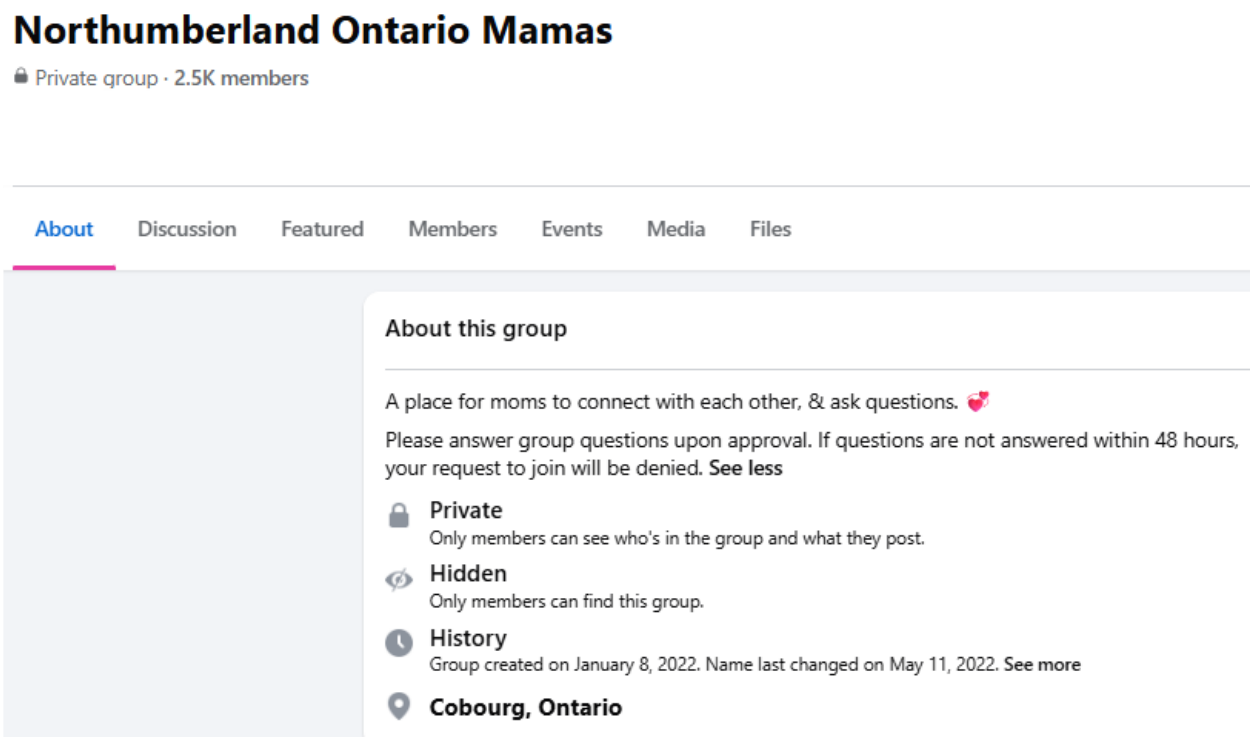
Permission to Join Private Facebook Groups to Post Questionnaire

I am requesting permission to join this group to complete research related to infant safe sleep. I am a registered nurse enrolled in the Master of Science in Nursing at the University of Ottawa. I am also a mother of two children and live (redacted). The purpose of the study is to understand how mothers use social media when making decisions about infant sleep. To gather this data, I will be asking local mothers who have had a baby in the last 5 years to complete a survey. I am asking permission to post my recruitment poster with links to the survey within the group at a weekly interval for one month. This information may help identify how public health organizations and providers can better support new mothers in making decisions that are safest and most appropriate for themselves and their infant. Individual members who choose to complete the survey will be prompted to complete a consent form prior to completing the survey. My contact information is available for any members who would like to ask questions prior to accessing the survey. Once my research is completed, I will share my overall findings with the group. Beyond these posts, I will not be sharing any information within the group or communicating with members. I understand that administrators play an important role in maintaining privacy and security within these local mom groups – my intention is simply to gather data for my thesis and not to breach this carefully built trust administrators have created. Please reach out with any questions you or other administrators may have regarding my research.

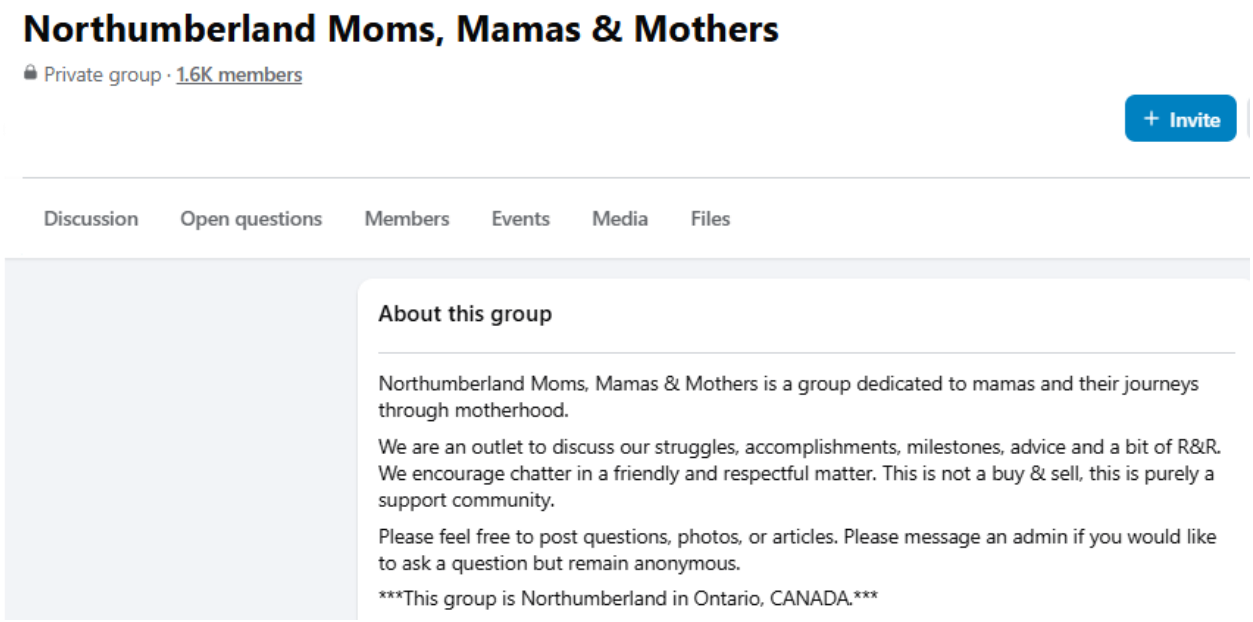
Appendix E

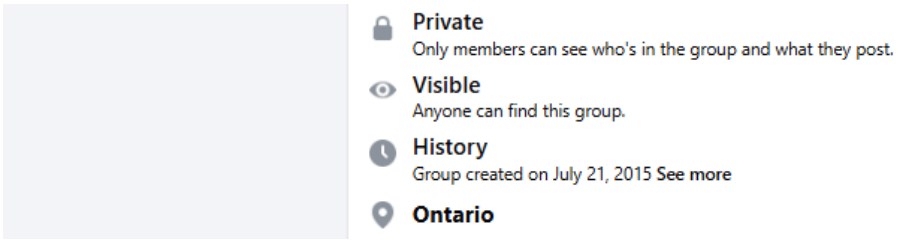
Admission Criteria and Group Descriptions

Northumberland Ontario Mamas

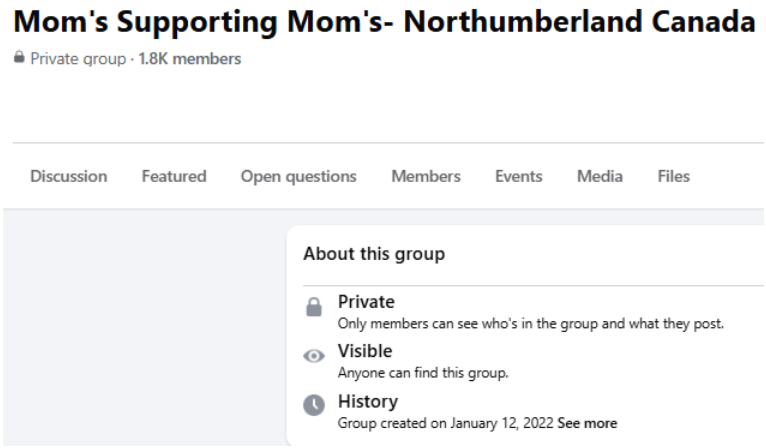


Northumberland Moms, Mamas & Mothers





Mom's Supporting Mom's - Northumberland Canada



Appendix F

Questionnaire

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Understanding Maternal Decision-Making Regarding Infant Sleep as Discussed o Social Media Platforms

Eligibility Criteria

Data gathered from this survey will help us understand how social media is used by mothers when making decisions about their baby's sleep. To be eligible to complete this survey, participants will need to:

· have had a baby in the last five years while living in Northumberland County,

· have used social media mom groups available to moms in Northumberland County, and

· be able to read and write in English.

* 1. Have you had a baby in the last five years while living in Northumberland County?

- [ ] Yes
- [ ] No

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· have used social media mom groups available to moms in Northumberland County, and
· be able to read and write in English.

* 2. Have you used social media mom groups available to moms in Northumberland County?

- ◯ Yes
- ◯ No

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Data gathered from this survey will help us understand how social media is used by mothers when making decisions about their baby's sleep. To be eligible to complete this survey, participants will need to:

· have had a baby in the last five years while living in Northumberland County,
· have used social media mom groups available to moms in Northumberland County, and
· be able to read and write in English.

* 3. Are you able to read and write in English?

- ◯ Yes
- ◯ No

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Understanding Maternal Decision-Making Regarding Infant Sleep as Discussed o Social Media Platforms

Consent

Title of the study: Understanding Maternal Decision-Making Regarding Infant Sleep as Discussed on Social Media Platforms

Kasia Gingras Little, BScN, RN
University of Ottawa
Faculty of Health Sciences, School of Nursing
[redacted]
Michelle Lalonde, MN, PhD, RN
Associate Professor
University of Ottawa
Faculty of Health Sciences, School of Nursing
[redacted]

Invitation to Participate: I am invited to participate in the abovementioned research study, being completed as part of Kasia Gingras Little's graduate thesis under the supervision of Michelle Lalonde.

Purpose of the Study: The purpose of the study is to understand how mothers use social media when making decisions about infant sleep.

Participation: My participation will consist of completing an electronic survey consisting of 18 questions (approximate completion time of 10 minutes) regarding my use of social media when making decisions about infant sleep.

Risks: My participation in this study will entail that I volunteer personal information and discuss my use of social media and past decisions regarding infant sleep which may differ from available recommendations. Revisiting these decisions may be uncomfortable and cause emotional stress.

Benefits: My participation in this study will help researchers understand how mothers use social media when making decisions regarding infant sleep, as well as influences from others such as family, friends, or health care teams. Findings will help health care providers better understand how they can support mothers when discussing infant sleep practices.

Confidentiality and Privacy I have received assurance from the researchers that the information I will share will remain strictly confidential. Personal identifiers will not be collected, and my identity will remain anonymous. I understand that the contents will be used only for the completion of the highlighted research study and that my identity will be protected.

Conservation of Data: The data collected, including consent forms, survey responses, and research notes will be kept in a secure manner on a password protected device and destroyed after five years. The student researcher and supervisor will have access to the data collected.

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 suffering any negative consequences. Given the anonymity of the questionnaires once submitted, data cannot be withdrawn once the questionnaire is submitted, and this data will be included in the study.

If I have any questions about the study, I may contact the researcher or their supervisor. If I have any questions regarding the ethical conduct of this study, I may contact the Office of Research Ethics and Integrity via email (ethics@uottawa.ca) or telephone (613-562-5800 ext. 5387).

It is recommended that I retain a copy of this consent form for my records.

* 4.
Acceptance: By selecting "I agree to participate", I agree to participate in this research study.

☐ **I agree**

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Understanding Maternal Decision-Making Regarding Infant Sleep as Discussed o Social Media Platforms

Demographics

5. What is your age?

6. What is the highest level of education you have completed?

- ◯ Some high school, no diploma
- ◯ High school diploma/Ontario High School Equivalency Certificate (GED)
- ◯ College degree
- ◯ University degree
- ◯ Graduate or post-graduate degree

7. What is your marital status?

- ◯ Single
- ◯ Married
- ◯ Common-law
- ◯ Separated

8. How many children do you have?

- ◯ 1
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5 or more children

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Understanding Maternal Decision-Making Regarding Infant Sleep as Discussed o Social Media Platforms

Accessing Public Mom Content

Mom content is defined as posts, blogs, groups, and other digital content created by or for mothers, either in public or private forums. Public forums are accessible by any individual, whereas private forums require membership or subscription to the content, for example, private Facebook groups.

Mom content has the goal to educate the audience or provide a platform for audience interaction. It can vary from humour related to motherhood, parenting strategies, community building, and support.

9. Do you access publicly available mom content on social media?

- ◯ Yes
- ◯ No

10. How often do you access publicly available mom content on social media?

- ◯ More than once per day
- ◯ Once per day
- ◯ 2-3 times per week
- ◯ Once per week
- ◯ Less than once per week

11. Please enter any additional details below regarding the frequency by which you access public mom content on social media.

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Understanding Maternal Decision-Making Regarding Infant Sleep as Discussed o Social Media Platforms

Private Mom Groups

Mom content is defined as posts, blogs, groups, and other digital content created by or for mothers, either in public or private forums. Public forums are accessible by any individual, whereas private forums require membership or subscription to the content, for example, private Facebook groups.

Mom content has the goal to educate the audience or provide a platform for audience interaction. It can vary from humour related to motherhood, parenting strategies, community building, and support.

12. Do you access private mom groups on social media?

- ◯ Yes
- ◯ No

13. How often do you access private mom groups on social media?

- ◯ More than once per day
- ◯ Once per day
- ◯ 2 - 3 times per week
- ◯ Once per week
- ◯ Less than once per week

14. Please enter any additional details below regarding the frequency by which you access private mom groups on social media.

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Understanding Maternal Decision-Making Regarding Infant Sleep as Discussed o Social Media Platforms

Social Media Engagement

15. In what capacity, if any, did you engage with social media regarding infant sleep?

	Never	Not often	Neutral	Somewhat often	Very often
Posting questions to private groups	○	○	○	○	○
Commenting on posts in private groups	○	○	○	○	○
Reading posts in private groups	○	○	○	○	○
Posting questions to public groups or threads	○	○	○	○	○
Commenting on posts in public groups or threads	○	○	○	○	○
Reviewing content from influencers	○	○	○	○	○

16. Please share any additional information regarding how you engaged in social media use for information regarding infant sleep.

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Understanding Maternal Decision-Making Regarding Infant Sleep as Discussed o Social Media Platforms

Discussion of Infant Sleep by Setting

17. Please identify your level of comfort in asking questions and discussing infant sleep in the following settings.

	Very uncomfortable	Somewhat uncomfortable	Neutral	Somewhat comfortable	Very comfortable	I did not discuss infant sleep in this setting.
Family doctor	○	○	○	○	○	○
Midwife	○	○	○	○	○	○
Obstetrician	○	○	○	○	○	○
Nurse practitioner	○	○	○	○	○	○
Public health nurse	○	○	○	○	○	○
Private social media groups (i.e. mom groups)	○	○	○	○	○	○
Public social media groups or threads (i.e. reddit)	○	○	○	○	○	○
Family	○	○	○	○	○	○
Friends	○	○	○	○	○	○

18. Please share any additional information regarding your level of comfort when discussing infant sleep in the settings listed above.

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Understanding Maternal Decision-Making Regarding Infant Sleep as Discussed o Social Media Platforms

Trustworthiness of Information

19. Please identify how trustworthy you would rate the information regarding infant sleep from the various sources.

	Very untrustworthy	Somewhat untrustworthy	Neutral	Somewhat trustworthy	Very trustworthy	I did not discuss infant sleep in this setting
Family doctor	○	○	○	○	○	○
Midwife	○	○	○	○	○	○
Obstetrician	○	○	○	○	○	○
Nurse practitioner	○	○	○	○	○	○
Public health nurse	○	○	○	○	○	○
Private social media groups (i.e. mom groups)	○	○	○	○	○	○
Public social media posts (i.e. reddit)	○	○	○	○	○	○
Family	○	○	○	○	○	○
Friends	○	○	○	○	○	○

20. Please share any additional information regarding how trustworthy you would rate the information provided from the sources above.

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Understanding Maternal Decision-Making Regarding Infant Sleep as Discussed o Social Media Platforms

Making Decisions about your Baby's Sleep

21. How has the information gathered on social media impacted the decisions you make about your baby's sleep?

22. Please describe any additional experiences regarding making decisions about your baby's sleep.