The experience of women who self-identify as perceiving feelings of aversion while breastfeeding

By Melissa Morns

Thesis submitted in fulfilment of the requirements for the degree of

Doctor of Philosophy

under the supervision of

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Certificate of Original Authorship

I, Melissa Morns, declare that this thesis is submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the Faculty of Health at the University of Technology Sydney.

This thesis is, to the best of my knowledge and belief, wholly my own work unless otherwise referenced and acknowledged. I certify that all information sources and literature used are indicated in the thesis. This research was supported by the Australian Government Research Training Program. This document has not been submitted for qualifications at any other academic institution.

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Publications incorporated into this thesis

Statement of Authentication of jointly authored publications

The meta-ethnography and results chapters of this thesis have been submitted for publication in quartile 1 peer-reviewed journals. Below is an explanation of the contributions made by the authors. I take full responsibility for the accuracy of the findings presented in these papers. All authors have given permission for these publications to be included in this thesis.

Thesis format

This is a thesis by compilation and contains seven chapters, four of which are published manuscripts; Chapters 2, 4, 5 and 6. Manuscript details for each chapter are outlined below with percentage contributions for each author.

Incorporated as Chapter 2

Morns, M., Steel, A., Burns, E., & McIntyre, E. (2021). Women who experience feelings of aversion while breastfeeding: A meta-ethnographic review. Women and Birth, 34(2), 128-135. doi:10.1016/j.wombi.2020.02.013

Statement of Contribution	Percentage of contribution
Concept and design of the study	MM 70%, AS, EB 20%, EM 10%
Supervision and conduct of the study	MM 70%, AS, EB 20%, EM 10%
Data analysis and interpretation	MM 70%, AS, EB 20%, EM 10%
Writing of initial manuscript	MM 75%, AS, EB 15%, EM 10%
Manuscript revision and editing	MM 75%, AS, EB 15%, EM 10%

Incorporated as Chapter 4

Morns, M., Steel, A., McIntyre, E., & Burns, E. (2022). "It Makes My Skin Crawl": Women's experience of breastfeeding aversion response (BAR). Women and Birth, 35(6), 582-592. doi:10.1016/j.wombi.2022.01.001

Statement of Contribution	Percentage of contribution
Concept and design of the study	MM 90%, AS, EB, EM 10%
Supervision and conduct of the study	MM 80%, AS, EB, EM 20%
Data analysis and interpretation	MM 75%, AS, EB 15%, EM 10%
Writing of initial manuscript	MM 85%, AS, EB, EM 15%
Manuscript revision and editing	MM 75%, AS, EB 15%, EM 10%

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Morns, M., Steel, A., McIntyre, E., Burns, E. (2023). Breastfeeding Aversion Response (BAR): A Descriptive Study. Journal of Midwifery and Women's Health. doi:10.1111/jmwh.13474

Statement of Contribution	Percentage of contribution
Concept and design of the study	MM 90%, AS, EB, EM 10%
Supervision and conduct of the study	MM 80%, AS, EB 15%, EM 5%
Data analysis and interpretation	MM 85%, AS, EB 10%, EM 5%
Writing of initial manuscript	MM 85%, AS, EB 10%, EM 5%
Manuscript revision and editing	MM 75%, AS, EB 15%, EM 10%

Incorporated as Chapter 6

Morns, M., Burns, E., McIntyre, E., Steel, A. (2023). The prevalence of breastfeeding aversion response in Australia: a national cross-sectional survey. Maternal & Child Nutrition. doi:10.1111/mcn.13536

Statement of Contribution	Percentage of contribution
Concept and design of the study	MM 90%, AS, EB, EM 10%
Supervision and conduct of the study	MM 80%, AS, EB 15%, EM 5%
Data analysis and interpretation	MM 85%, AS, EB 10%, EM 5%
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Signed:

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Co-Supervisor	Dr Elaine Burns	Signature	Production Note: Signature removed prior to publication.	Date	11/09/2023

Presentations

During my candidature I was invited to present at seven conferences, and this research was presented on three podcasts.

Conferences presentations

1. Australian Breastfeeding Association, Back to Business Conference, 21 and 22 May 2022 – Speaker presentation.
2. 2022 International Conference of the HiPPP EMR-C: Multidisciplinary approaches to HiPPP research for maternal health across the globe – Speaker presentation.
3. New Zealand Lactation Consultants Association Online Conference 2022 – Speaker presentation.
4. Feeding the Future - iLactation Online Breastfeeding Conference 2021 – Speaker presentation.

5. Breastfeeding Insight Conference, September 1 - December 31, 2020. Breastfeeding conferences – Speaker presentation.
6. Queensland Women's Health Forum Conference 2021 – Poster presentation.
7. Queensland Women's Health Forum Conference 2022 – Speaker presentation.
8. Breastfeeding Beyond Babyhood Online Conference (USA) 2021 - The Evidence-Based Mommy (social media influencer) – Speaker presentation.

Podcasts

1. The Badass Breastfeeder Podcast (USA) presentation of manuscript one from this research: (https://badassbreastfeedingpodcast.com/episode/breastfeeding-aversion-creepy-crawlies-when-breastfeeding/)
2. Oh Baby! With Olesia Plokhii (USA) interview: (https://podcasts.apple.com/us/podcast/mel-morns-on-nursing-aversion/id1550794669?i=1000531270201)
3. The Badass Breastfeeder Podcast (USA) interview: https://badassbreastfeedingpodcast.com/episode/nursing-aversion-with-melissa-morns/)

Abstract

Background

Breastfeeding has many benefits for women, families, and society; however, women can experience various difficulties when attempting to breastfeed. Although literature exists for common breastfeeding difficulties like mastitis, there is scant published literature documenting the experience of women who have complex challenges such as breastfeeding aversion response. Breastfeeding aversion response is defined as a strong urge to unlatch in reaction to negative sensations while breastfeeding, which range from mild to repellent and conflict with the desire to breastfeed. Previously there has been limited understanding of this phenomena for women who breastfeed, and insufficient public health knowledge about how to best support women who experience complex difficulties, such breastfeeding aversion response.

Aims

This research aims to provide a foundational understanding of the phenomena of 'breastfeeding aversion response (BAR)' to inform those who may experience this challenge, and the health professionals who seek to support them. This research had five overarching objectives: (1) describe the lived experience of breastfeeding aversion; (2) explore the predisposing, precipitating and perpetuating factors of the experience of breastfeeding aversion; (3) explore the self-perceived factors that reduce or stop feelings of aversion while breastfeeding; (4) identify the main features of breastfeeding aversion; and (5) explore how many women describe breastfeeding aversion and if there are commonalities in their experience(s).

Methods

This mixed methods study had four phases and focused on women who self-identified as experience breastfeeding aversion response because there was not a measurable tool or scale to assess if women had the condition. Phase 1 was a qualitative meta-ethnography which was analysed using Noblit and Hare's seven-step meta-ethnographic method. Phase 2 included qualitative interviews with women who were experiencing this phenomenon (n = 10). These were analysed using interpretative phenomenological analysis. Phase 3 was a national quantitative survey of women in Australia who were experiencing feelings of aversion (n = 210). Qualitative findings from interview data were integrated into items in this survey to test if these findings resonated with the experience of BAR for a larger proportion of women. Phase 4 aimed to find the prevalence of BAR in Australia via a second national quantitative survey. This survey was distributed through an anonymous online platform to ask breastfeeding women (n = 5511) if they had experienced BAR in the context of other breastfeeding

difficulties. All phases of this research were undertaken in Australia. Participants who took part in this research were women who self-identified as experiencing feelings of aversion while breastfeeding, and who were currently breastfeeding or had breastfed. Data analysis was undertaken using Covidence for Phase 1, NVivo for Phase 2, and Statistical Package for Social Sciences (SPSS) for Phases 3 and 4. Integration of the findings occurred successively across all phases using an exploratory sequential design.

Results

The first qualitative phase of this research explored the peer-reviewed literature describing the experience of feelings of aversion while breastfeeding. The meta-ethnographic method produced five new themes; (1) “it’s such a strong feeling of get away from me”, (2) “I do it because I feel it is best for my baby”, (3) I can’t control those feelings”, (4) “I should be able to breastfeed my baby and enjoy it”, and (5) “I’m glad I did it". This phase revealed that the experience of BAR can inhibit some women from achieving their personal breastfeeding goals.

The second qualitative phase used interpretative phenomenological analysis to describe the lived experience of women who self-identified as experiencing BAR, and what this experience meant for them. This phase revealed four overarching themes of: (1) Involuntary, strong sensation of aversion in response to the act of breastfeeding, (2) Internal conflict and effects on maternal identity, (3) The connection between BAR and relationships with others, and (4) Reflections of coping with BAR and building resilience. Qualitative findings were then integrated into the next quantitative phases via two national surveys.

The first survey conducted in Phase 3 found that participants agreed with the results from the previous two qualitative phases, and descriptions of BAR were generalisable to a larger population. Almost half the participants in this study (48.6%) did not receive any support from a health care provider to continue breastfeeding with BAR. This phase highlighted that women need more support from healthcare professionals.

The survey conducted in Phase 4 revealed that around one in five women who breastfed (22.6%) self-identified as experiencing feelings of aversion while breastfeeding. Participants reported that their experience was better after the first child with subsequent nurslings. Almost half of those in this survey reported not receiving breastfeeding support from a health care provider (48.2%). Despite the experience of BAR, many reported an overall good or very good experience (82.5%) even with this breastfeeding challenge.

Integration of all phases of this research used a mixed methods approach to produce combined findings. The results indicate that the experience of BAR can have a negative effect

on maternal identity, mother-infant bonding, and breastfeeding duration. Notwithstanding, many women who overcome this breastfeeding difficulty report having a positive experience. Support from others is key for women to continue to breastfeed with BAR.

Conclusion

This research has identified the phenomena of BAR, which is feelings of aversion that can occur while breastfeeding for the entire feeding session and conflict with the desire to breastfeed. These findings provide greater clarity on aversion responses for breastfeeding women and those who wish to support them. More broadly this may contribute to an improved understanding of factors that can affect the experience of breastfeeding and how to better support women to achieve their personal breastfeeding goals. More research is needed to understand possible underlying causes of this breastfeeding challenge, and what treatments or supports are most effective for helping women who experience BAR.

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Chapter 1. Introduction

This thesis explores the experience of women who self-identify as having a breastfeeding aversion response. This research focuses on women who self-identify with this challenge because are no scales or tools to measure this experience. Breastfeeding aversion response is defined as negative sensations while breastfeeding, which range from mild to repellent and conflict with the desire to breastfeed (see Chapter 4). It is common for women who breastfeed to experience initial challenges such as low confidence and concern about low breastmilk supply (Shafaei et al., 2020). However, some women will experience more complex breastfeeding difficulties (Ureño et al., 2017). There is limited research about complex breastfeeding challenges such as breastfeeding aversion response. Those who experience complicated challenges such as feelings of aversion while breastfeeding may require additional support to achieve their desired outcomes (Watkinson et al., 2016).

This chapter initially presents a description of the purpose and background of this thesis, followed by a discussion of the benefits and epidemiology of breastfeeding in Australia. A summary overview of breastfeeding difficulties and the social and policy supports available are then considered, which is immediately followed by the project aims, objectives, research questions, and its significance and scope. The chapter ends with an outline and structure of this thesis.

The researchers' background and idea for this thesis

For the purpose of researcher integrity and transparency, I will describe my background and motivation for undertaking this research. This research problem was inspired by my personal experience of having feelings of aversion while breastfeeding. I first experienced this breastfeeding challenge in 2013 and was not able to find support or information to understand this phenomenon. This negative experience was confusing because my previous experience had been positive, and I had an attachment parenting style, meaning that I co-slept with nurslings while they breastfed. To meet the need to find information about these unexpected adverse feelings and to find support, I created an online breastfeeding support group for women who were experiencing feelings of aversion while breastfeeding. This group started with a small number of members but grew quickly over the first year. Currently this group has several thousand members who self-identify as experiencing feelings of aversion while breastfeeding. The group members offer peer-to peer support to each other. Women have continued to join this support group because they experience feelings of aversion while breastfeeding and have difficulty finding information about their experience, or support. So, this research was motivated by the need to improve the understanding of this breastfeeding

difficulty in the hope that this information will assist this community of women, and to better inform health practitioners who aim to support them.

Breastfeeding culture in Australia: An overview

The benefits of breastfeeding have been widely acknowledged in the literature and new research continues to further explore the many benefits for women and children, the family unit and population health (Bernardo et al., 2013). In Australia breastmilk is widely regarded as beneficial for infants with almost all Australian women initially breastfeeding following birth, however breastfeeding rates in Australia are not reaching World Health Organization and Australian public health targets (Netting et al., 2022).

Breastfeeding is beneficial for women and infants

There is a vast collection of research documenting the public health benefits of breastfeeding for women and infants (Binns & Lee, 2019; Netting et al., 2022; Victora et al., 2016). It has positive effects for every part of the body, including the human microbiome (Dieterich et al., 2013). A diverse microbiome is essential for health (Blaser, 2018), and research has shown that breastfeeding is vital for creating a healthy microbiome (Parker et al., 2013). Previous research has shown that breastfeeding also provides emotional and physical health benefits for women, in that those who have breastfed have lower incidence of some types of cancer, and a reduced risk for osteoporosis and diabetes (Blincoe, 2005). Women who breastfeed report higher levels of parenting satisfaction, better maternal mental health, and positive effects for mother-infant attachment (Forster & McLachlan, 2010).

Breastfeeding has been shown to provide many positive health outcomes for infants, with greater benefits for at risk infants (Atyeo & Alter, 2021; Victora et al., 2016). Previous research has shown that it is associated with higher levels of intelligence for infants, and breastfed infants have lower incidence of gastrointestinal infection (Horta et al., 2015; Ladomenou et al., 2010). Longer breastfeeding duration is associated with greater positive impacts on infant health (Marchant et al., 2017). Research continues to expand the understanding of the many short- and long-term benefits for infants and women.

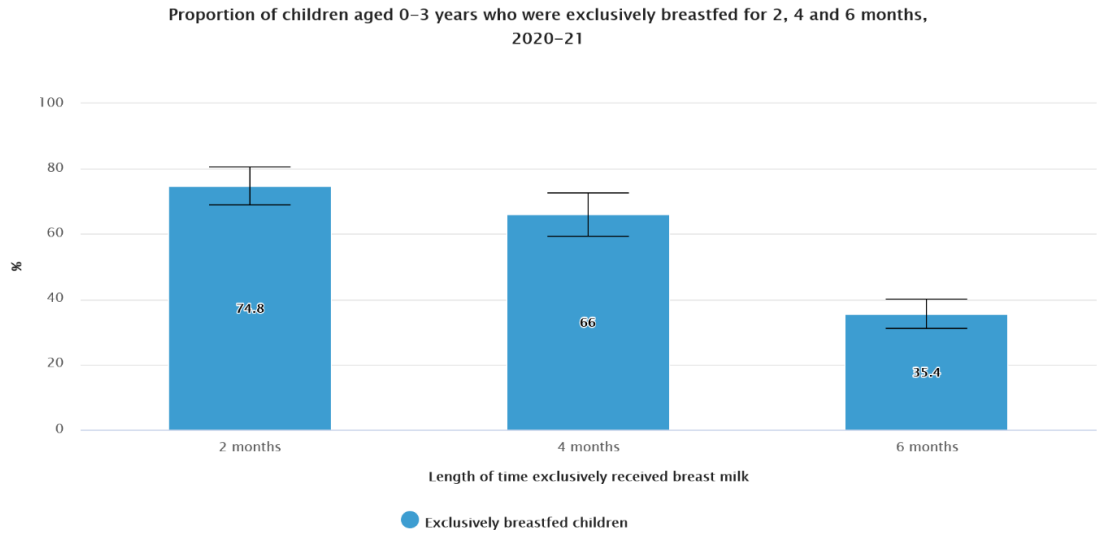
Epidemiology of breastfeeding in Australia

The rates in Australia are well below those recommended by the World Health Organization (WHO, 2003, 2018), which recommends exclusive breastfeeding (defined as only breast milk, no other liquid or solids) until the age of 6 months, and then continued for to 2 years or longer (WHO, 2018). The Australian Feeding Infants and Toddler OzFITS study (2021) found that Australian women have a high initiation rate of 98%, however the rates decline quickly with only around half still breastfeeding exclusively at one month (59%), and only 1%

predominantly breastfeeding at 6 months (Netting et al., 2022). This study also found that less than half (44%) of infants are receiving any breastmilk till 12 months, and only 4% are receiving any breastmilk at 2 years (Netting et al., 2022).

A previous National Infant Feeding Survey (2010) found that 96% of mothers initiate breastfeeding but only 39% were still exclusively doing it at 3 months. The rates for exclusive breastfeeding dropped further to 15% at 5 months (Australian Institute of Health & Welfare, 2011). Another study in 2008, the Australian Institute of Family Studies (AIFS) longitudinal study found that only 28% of infants in Australia are receiving any breast milk at 12 months, and this number fell to 9% at 18 months, with only 5% of infants were still receiving any breast milk at 2 years (Gray & Smart, 2008). According to the Australian Bureau of Statistics (2020-2021) 95.9% of children aged between 0-3 years had received some breastmilk, however only one in three (35.4%) were exclusively breastfeed up to six months of age (see Figure 1.1). These statistics show that women and infants can initiate breastfeeding after the birth while in hospital, yet many women-infant dyads are not continuing to breastfeed past the first few months.

Figure 1.1 Exclusive breastfeeding prevalence for 0-6 months in Australia (2020-2021)



Source: Australian Bureau of Statistics, Breastfeeding 2020–21 financial year

Sociocultural barriers for women breastfeeding in Australia

It is widely understood that breastfeeding is the healthiest feeding option for women and their infants; however, many women experience unforeseen problems when trying to breastfeed. Women commonly experience obstacles such as being offered breast milk substitutes after the birth of their infant while still in hospital (Netting et al., 2022). Previous research has shown that breastfeeding outcomes are better for women who receive positive support from their partners, however this type of support is not always available for women and some partners

can actively discourage breastfeeding (Davidson & Ollerton, 2020; Mannion, Hobbs, McDonald, & Tough, 2013). A social barrier can also be the non-acceptance of public breastfeeding by some members of the public, and this perceived stigma can also cause breastfeeding women to want to avoid doing it in public (Hauck et al., 2021). There are many hurdles that breastfeeding women must overcome which are outside the scope of support available from a lactation consultant or maternal healthcare expert.

Public health and breastfeeding in Australia

Research on breastfeeding outcomes has shown that breastfeeding is good for social health determinants of whole populations (Victora et al., 2015). Higher rates are associated with improved population health, and it is also reported to be beneficial for mediating the health effects of climate change, and 'at risk' populations (Joffe et al., 2019; Victora, et al., 2016; Victora et al., 2015). In Australia, federal laws have been applied that support breastfeeding women in public without discrimination under the federal Sex Discrimination Act 1984, and Australian policymakers are encouraging social change to enable breastfeeding (COAG, 2019). To encourage breastfeeding, Australia has the Marketing in Australia of Infant Formula (MAIF) agreement, which while not legally binding, it makes recommendations to milk substitute companies to monitor their own harmful marketing of breastmilk substitutes (Munzer et al., 2022). This agreement was intended to be based on the WHO international code of marketing of breast milk substitutes (WHO code) to control the marketing of infant formula; however, the MAIF agreement in Australia does not meet the WHO recommended standards (Munzer et al., 2022).

General practitioners (GPs) in Australia typically have positive attitudes toward breastfeeding, however research has found that most are lacking relevant knowledge and are not trained in providing support as breastfeeding is not included in curriculum course standards for medical courses (Holtzman & Usherwood, 2018). Most medical centres do not offer any formal breastfeeding support to patients (Holtzman & Usherwood, 2018). Research has also found that Australian GPs often draw on their personal experiences with breastfeeding, or the experiences of their partner's when providing support to patients. They conclude that further training about breastfeeding for GPs is needed (Brodribb et al., 2008).

Breastfeeding difficulties

Breastfeeding difficulties are not uncommon for women who choose to breastfeed, and this has been widely reported in the literature (Beggs et al., 2021; Burns et al., 2020; Burns & Schmied, 2017). The difficulties can sometimes be complex and may affect the woman-infant dyad along with partners and siblings (see Chapter 4).

Initiating breastfeeding can be challenging

Breastfeeding problems which impede a woman from breastfeeding can include physical and emotional challenges (Amir, 2014b). Women who aim to breastfeed can experience barriers when initiating breastfeeding, and may need to overcome practical, personal and social obstacles to achieve their personal breastfeeding goals (Snyder et al., 2021). Some previously identified common difficulties women might experience include a lack of confidence with the physiology of breastfeeding, breastfeeding pain, and concerns with low milk supply or engorgement (Gianni et al., 2019). Women also report experiencing practical difficulties, such as difficulty returning to work and continuing to breastfeed without supportive workplaces (Burns & Triandafilidis, 2019). The practicalities of breastfeeding in public can also be challenging for women (Acker, 2009). Many women do not feel comfortable breastfeeding in public and find it difficult to locate a place where they feel relaxed and able to efficiently feed their infant (Amir, 2014a).

For some women the cause of various complications can come about before they have even started to breastfeed, such as those who have had a complicated birth. Women who experience complications around birth such as an unplanned epidural or caesarean section are at greater risk for poor breastfeeding outcomes (Brown & Jordan, 2013; Chaplin et al., 2016). Likewise, research about women who choose not to breastfeed has shown that women from lower socioeconomic groups are at a higher risk for poor outcomes (Ajami et al., 2018), and fathers from low socioeconomic groups can also have attitudes that have a negative effect on breastfeeding duration (Flacking et al., 2010). Although the above mentioned difficulties and barriers are well documented in the literature (Gianni et al., 2019), many public health interventions aiming to overcome these challenges and improve breastfeeding rates are largely ineffective (Flaherman & Von Kohorn, 2016).

Maternal mental health

Breastfeeding may have short-term and long-term emotional implications for women and maternal mental health can be negatively affected for women who experience breastfeeding challenges (Krol & Grossmann, 2018). Conversely, previous reviews have reported that breastfeeding women have less perceived stress and less negative mood than bottle-feeding women (Kroll & Grossmann, 2018). It is widely understood that women who are able to meet their personal breastfeeding goals have better mental health outcomes, however those who want to breastfeed and are unable may experience maternal mental health complications such as feelings of shame and guilt. Research has identified that women who stop breastfeeding in the first 3 months after birth are more likely to experience psychological distress (Cooke et al., 2007), and there is an association between breastfeeding difficulties and higher levels of

depression (Dias & Figueiredo, 2015; Krol & Grossmann, 2018). These difficulties can also affect a women's sense of self as 'mother' and research has confirmed a strong connection between a woman's self-confidence and her breastfeeding success (De Jager et al., 2013). Breastfeeding difficulties are associated with negative effects on mother's mental wellbeing; however, successful breastfeeding can help to reduce anxiety and depression in mothers 6 months postpartum (Ystrom, 2012).

International Board Certified Lactation Consultant are trained to identify postpartum depression, anxiety and psychosis and offer support, however this is not an aspect of breastfeeding support that most health professionals are trained to focus on when supporting women to breastfeed (Chrzan-Dętkoś et al., 2021). Women who experience breastfeeding difficulties which may lead to feelings of inadequacy and maternal guilt often report a lack of adequate support to overcome their breastfeeding issues (Burns & Schmied, 2017; Hoddinott et al., 2012). A detailed consideration of maternal mental health and infant feeding, and the mental health affects of BAR are discussed throughout this thesis in chapters, 2, 4, 5, 6, and 7.

Physiological factors can affect breastfeeding

Breastfeeding physiology involves a complex interplay of nutritional biochemistry, hormones, and neurotransmitters (Jonas et al., 2013). The production of breastmilk is most affected by the positive feedback of supply and demand. Breastmilk supply is created by the stimulation of the suckling of the infant and emptying of the breast, which causes oxytocin to be released. Oxytocin is the peptide hormone and neuropeptide associated with breastfeeding, bonding and loving feelings (Magon & Kalra, 2011). Oxytocin originates in the hypothalamus, then moves to the posterior pituitary and then, for breastfeeding, binds to myoepithelial cells of the mammary gland (Soloff, Alexandrova, & Fernstrom, 1979). The myoepithelial cells sit around the outside of the milk producing alveoli in a basket-like network between the luminal epithelial cells and the stroma (Gudjonsson et al.,, 2005), which contract in response to the presence of oxytocin, which causes the letdown reflex and ejection of breastmilk from the nipple (Soloff et al., 1979; Sriraman, 2017). Given the complex nature of breastfeeding physiology many individual or idiopathic physiological issues can arise for women who want to breastfeed. One such example is those who have a genetic mutation of the oxidation receptor, which may impact negatively on breastfeeding enjoyment, duration and success (Jonas et al., 2013). Some physiological causes for breastfeeding complications such as nutritional deficiency can, in most cases, be corrected; however issues stemming from endocrine or genetic factors may require further investigation and support (Lee & Kelleher, 2016).

Support available for women who have breastfeeding difficulties

In hospital, new mothers receive support from midwives who encourage all women to breastfeed within the first hour after birth, if they choose to and are able (Hall, McLelland, Gilmour, & Cant, 2014). Midwives or a child health nurse also often visit new mothers in their home in the weeks following birth. This early support is frequently able to identify and correct common complications such as a poor latch or feeding position (James, Sweet, & Donnellan-Fernandez, 2020). The Australian Breastfeeding Association (ABA) offers a 24-hour hotline for women to call and talk through any breastfeeding issues with an ABA trained phone counsellor. The ABA phone counselling is limited in that counsellors cannot see women or comfort them in person, however, research has shown that these phone counselling sessions do offer highly effective support to women who breastfeed in Australia (Tawia et al., 2020). Many women obtain ongoing support for their challenges from friends and family, and their partner (Davidson & Ollerton, 2020). Online peer-to-peer breastfeeding support groups have been shown to offer helpful and timely assistance for women who may otherwise not have access to specific breastfeeding support (James et al., 2020). Some women who have ongoing issues seek the support of a lactation consultant, however not all lactation consultants have international board-certified lactation consultant (IBCLC) training (Haase, Brennan, & Wagner, 2019). International board-certified lactation consultants offer a high level of useful and targeted support for women who have complex difficulties with breastfeeding. Unfortunately however, some women are not able to access IBCLC care due to several reasons including lack of geographical access, and economic barriers (Haase et al., 2019).

The anecdotal experience of aversion while breastfeeding in the online breastfeeding community

As previously mentioned in this chapter, I experienced feelings of aversion while breastfeeding, and motivated by a lack of information and support created several online breastfeeding support groups for women who experience this difficulty. These groups now have thousands of members who encourage each other to continue breastfeeding through peer-to-peer support. Social media discourse in online Facebook breastfeeding support groups, on Instagram, TikTok and YouTube about the experience of women who have feelings of aversion has increased in recent years (Morns, 2013). Lay literature and anecdotal information about women who experience feelings of aversion has now become available with a number of podcasts, blogs, books and websites dedicated to this breastfeeding challenge (Flower, 2019; Kusi, 2018; Yate, 2017). Anecdotal findings from these online support communities about women who have feelings of aversion have also been added to lay

literature (Flower, 2019). However, empirical research on women who have feelings of aversion while breastfeeding remains scant.

Aim and scope of the thesis

Research Aim

This research aims to enhance understanding of the experience and characteristics of women who experience feelings of aversion while breastfeeding.

Research objectives

This research addresses the following five objectives:

1. Describe the lived experience of breastfeeding aversion by women who self-identify as experiencing this aversion.
2. Identify the main features of breastfeeding aversion described.
3. Explore the predisposing, precipitating, and perpetuating factors of the experience of breastfeeding aversion.
4. Explore the self-perceived factors that reduce or stop feelings of aversion while breastfeeding.
5. Explore how many women describe breastfeeding aversion and whether there are experiential commonalities.

Research question

These objectives are focused in terms of the following question:

> *What is the experience of women who self-identify as having feelings of aversion while breastfeeding?*

Significance and scope of thesis

The benefits of breastfeeding for women, children, and society are universally accepted (Victora et al., 2016) however, breastfeeding women can experience a broad range of complex difficulties (Flower, 2019; Watkinson et al., 2016). These difficulties can inhibit a woman's ability to achieve her own breastfeeding goals (Burns et al., 2020). Furthermore, these challenges may be complex and involve a range of emotional factors (Burns, Schmied, Sheehan, & et al., 2010). Negative feelings are mentioned in lay literature (Flower, 2019), and there are reports of women experiencing feelings of aversion while breastfeeding from social media discourse in online support groups (Morns, 2013).

This research is significant as it aims to describe and clarify a problem which has not been empirically researched or previously named: breastfeeding aversion response. A primary aim in addressing this phenomenon is to stimulate and guide further breastfeeding research which will raise health practitioners' awareness of the need to provide support to those who experience this breastfeeding challenge.

Structure of the thesis

This thesis is comprised of seven chapters, including four published peer-reviewed papers introduced in Chapters 2, 4, 5 and 6.

Chapter 1 presents the overarching research question, and the research aims. This chapter also introduces common concepts around breastfeeding culture, the issue of breastfeeding difficulties, and the types of support available for women and families.

Chapter 2 is a published paper describing the first phase of this research. It explores what was currently known about women who experience negative sensations and feelings of aversion while breastfeeding. This published article provides the context for the subsequent research phases.

Chapter 3 details the methodology of this research. It describes the research design, the participants included, and the processes of data collection and data analysis.

Chapter 4 describes the qualitative data collection processes, and presents an analysis and description of the study participants and their relevant lived experience in relation to experiencing feelings of aversion while breastfeeding. In-depth interviews of 11 women who self-identified as experiencing 'breastfeeding aversion response' (BAR) were analysed using interpretative phenomenological analysis. The study was subsequently published.

Chapter 5 is a published article that describes the integration of the previous qualitative findings into the first of two quantitative surveys described in this thesis. This survey further investigated the experience of BAR in a larger group of women (n=210) using items informed by the prior qualitative findings. This survey found that this experience, as described in the earlier qualitative phase, was shared by other women.

Chapter 6 is a published article detailing the method and findings from a second quantitative survey. This survey used the findings from the previous phases of research to inform a definition of BAR which was then used to test the prevalence of this phenomena in a larger sample of Australian women (n=5511) who were currently breastfeeding, or had previously breastfed an infant.

Chapter 7 presents an integrated discussion of the Phase One, Two and Three findings combined. This covers the confirmed findings from three phases, the new integrated findings such as the sub-types of BAR, and some hypotheses for future research. The research impact is considered, as well as the study's limitations and strengths.

Appendices contain the Phase 2 participant information sheet, invitation letter, consent form, distress protocol, and an example of a transcribed participant interview. They also include: the Phase 3 mapping of findings table, invitation letter, social media tile and link, the survey 1 questionnaire, the Phase 4 social media invitation, and the survey 2 questionnaire.

Chapter 2. Women Who Experience Feelings of Aversion While Breastfeeding: A Meta-ethnographic Review

Context

The following chapter is a published paper and Phase 1 of this research about the experience of women who have feelings of aversion while breastfeeding. This chapter answered a broader question than what was currently known about this phenomenon and synthesised the qualitative literature about this experience to produce new findings.

This study includes five qualitative studies published between 2000 and 2019 which describe women having negative sensations and feelings of aversion while breastfeeding. Of these five studies only two use the word aversion when describing this negative sensation while breastfeeding, and of those, the first identified the experience of negative sensations while breastfeeding unexpectantly while studying postnatal psychosis (Watkinson, 2016), and the second was undertaken by an independent researcher without human ethics approval (Yate, 2017).

This study used the seven-step meta-ethnographic process laid out by Noblit and Hare (1988), to explore and integrate new findings about the experience of aversion while breastfeeding, and found that some women have negative sensations and feelings of aversion while breastfeeding and that they describe these feelings as overwhelming.

This published paper relates to the following research objectives 1 and 3:

> (1) Describe the lived experience of breastfeeding aversion for women who self-identify as experiencing breastfeeding aversion.
>
> (3) Explore the predisposing, precipitating and perpetuating factors of the experience of breastfeeding aversion as described by women.

Publication details

The paper was accepted for publication in Women and Birth in February 2020 and published in 2021. This paper has been cited 13 times, and shared on social media 54 times, and has an Altmetric score of 21.

Morns, M., Steel, A., Burns, E., & McIntyre, E. (2021). Women who experience feelings of aversion while breastfeeding: A meta-ethnographic review. Women Birth, 34(2), 128-135. doi:10.1016/j.wombi.2020.02.013

Abstract

Problem: Limited literature is available about women who wish to breastfeed but experience unexpected feelings of aversion in reaction to their infant suckling at the breast while breastfeeding.

Background: Breastfeeding benefits mothers, infants and society yet breastfeeding rates continue to fall below recommendations in part due to inadequate tailored support after hospital discharge. Influences on breastfeeding are complex and include many physiological, psychosocial, and cultural factors.

Aim: To better understand the experience of women who have feelings of aversion during breastfeeding by synthesising the existing literature.

Methods: MEDLINE, CINAHL, PsycINFO, Maternity and Infant Care databases were searched for relevant literature published between 2000 to 2019. Using Covidence software, five qualitative research studies were identified. Studies were then analysed using meta-ethnographic qualitative synthesis.

Findings: Feelings of aversion during breastfeeding were described as visceral and overwhelming; leading to feelings of shame and inadequacy. This synthesis identified five findings; a central conceptual category of “it’s such a strong feeling of get away from me” with four key metaphors translated from this central conceptual category: “I do it because I feel it is best for my baby”, “I can’t control those feelings”, "I should be able to breastfeed my son and enjoy it", and “I’m glad I did it”. This phenomenon may negatively affect a women’s sense of self and impact on the mother-infant relationship.

Conclusion: Some women who want to breastfeed can experience feelings of aversion while breastfeeding. The feelings of ‘aversion’ while breastfeeding can inhibit women from achieving their personal breastfeeding goals.

Keywords: Mothers, Breast feeding, Emotions, Lactation, Aversion, meta-synthesis.

Statement of Significance
Problem or Issue
Some women experience the complex breastfeeding difficulty of feeling aversion during breastfeeding which is in opposition to their desire to breastfeed.
What is Already Known
Limited literature exists on women who experience feelings of aversion while breastfeeding and this phenomenon is poorly understood.

What this Paper Adds
This study adds to the understanding of women who desire to breastfeed and experience feelings of aversion while breastfeeding, and will provide preliminary information to inform future research with the aim of supporting this population.

Introduction

The numerous long-term benefits of breastfeeding for women, their infants, and society, are widely acknowledged and understood (Rollins et al., 2016; Victora et al., 2016). Despite this, some women who wish to breastfeed experience complex difficulties that can inhibit their ability to continue (Burns et al., 2010; De Jager et al., 2013). Breastfeeding has the potential to cause positive and negative experiences for mothers and involves physiological and psychological processes that are unique for each mother-infant dyad (Knox, 2017). Challenges that arise for breastfeeding women, which can lead to cessation, are well documented (Gianni et al., 2019) yet, little research exists on unexpected negative sensations and emotions that women describe as feelings of aversion while breastfeeding, which are in opposition to their desire to breastfeed (Flower, 2003). This study describes the phenomena of feelings of aversion that occur as a response to the act of breastfeeding, in contrast to physical pain during breastfeeding, or feelings of disgust caused by the thought or sight of breastfeeding.

Research and lay literature report some negative embodied experiences associated with breastfeeding. The phenomena of dysphoric milk ejection reflex (D-MER) which is a diagnosable condition is one such experience, which is characterised by feelings of dysphoria that last during the milk ejection reflex and then cease (Heise & Wiessinger, 2011; Ureño et al., 2017). Research on breastfeeding women, who have a history of childhood sexual assault (CSA), describes another type of aversion experience during breastfeeding, Which is known and has a defined rationale as the presentation includes feelings of dissociation and triggered trauma memories (Elfgen et al., 2017). In contrast to these aversion categories described in the empirical literature, anecdotal social discourse from online breastfeeding support groups ("Nursing Aversion/Breastfeeding Aversion Support," 2019) and lay literature (Flower, 2003) suggests women describe a different experience of aversion which occurs in other circumstances. Examples include: breastfeeding while pregnant, tandem breastfeeding (Flower, 2003), and breastfeeding around the time of ovulation and menses ("Nursing Aversion/Breastfeeding Aversion Support," 2019). In contrast to D-MER, these lay sources indicate breastfeeding women, in any of these circumstances, may experience negative sensations (Flower, 2003), or feelings throughout the entire breastfeeding session ("Nursing Aversion/Breastfeeding Aversion Support," 2019). Research on primates has explored mother-

led weaning (Maestripieri, 2018) and feeding refusal in many species, such as primates and mammals, that increasingly reject infants when mothers resume cycling and mating (Mandalaywala et al., 2014). However, the nature of this phenomenon in humans, and the associated mechanisms and underlying processes, are largely unknown which may inhibit the ability of midwives and health professionals to support this population.

Understanding women's experience of an aversion to breastfeeding, and how they manage this, is fundamental to our understanding of the phenomenon (Hargreaves & Crozier, 2013). Breastfeeding women need to articulate their own experience, and shared embodied knowledge, and this firsthand information must not be overshadowed by the biomedical narrative of breastfeeding (Burns et al., 2010). Breastfeeding provides short-term and long-term health benefits for women, children and society, and is a collective societal responsibility and not the sole responsibility of women (Rollins et al., 2016). Given that little is understood about these phenomena this review aims to synthesise what is currently known about women who describe feelings of aversion while breastfeeding.

Methods

This study was conducted to identify original research describing women's experience of feelings of aversion while breastfeeding. Results from literature searches yielded no quantitative studies and five qualitative studies. In order to synthesise this qualitative literature, Noblit and Hare's seven-step meta-ethnographic method (Noblit & Hare, 1988) was employed. This method was selected to understand how women describe feelings of aversion and "to enrich human discourse, not produce a formal body of knowledge" (Noblit & Hare, 1988, p. 24). First, the research question was identified as 'what are the experiences of breastfeeding women who describe feelings of aversion while breastfeeding?'. Second, the relevant studies were identified. For the third and fourth step the studies were read and re-read to determine how they were related, including the similarities and differences. Step five and six involved synthesising translations. Finally, step seven expressed the synthesis (Noblit & Hare, 1988).

Search Method

The review protocol was registered and published with PROSPERO (CRD42018115103). The search strategy was developed by MM and agreed upon by AS, EB, EM and included the following electronic bibliographic databases: MEDLINE (OVID), CINAHL (EBSCO), PsycINFO (EBSCO), Maternity and Infant Care (Ovid). Sources used to identify studies for the review include bibliographic databases, reference lists of eligible studies, key journals, Internet resources, and contact with experts. The search strategy used only terms relating to the research question. Terms used as mapped key words include; aversion, agitation, nursing

aversion, sensory, sensation and negative affect, and MeSH (Medical Subject Heading) terms include; anxiety, sensation, affect and emotions (see Table 2.1).

Table 1

Table 2.1. Medline (OVID) search string terms with results

1.	exp Breast Feeding/ or breast fe*.mp. (41672)
2.	Breastfe*.mp. (22907)
3.	breast-fe*.mp. (41573)
4.	Tandem breastfe*.mp. (2)
5.	Tandem-breastfe*.mp. (2)
6.	exp Lactation/ or lactati*.mp. (60499)
7.	1 or 2 or 3 or 4 or 5 or 6 (102167)
8.	aversion.mp. (8176)
9.	agitat*.mp. (19655)
10.	exp ANXIETY/ or anxiety.mp. (202492)
11.	anxious.mp. (14493)
12.	emotion*.mp. or exp Emotions/ (325156)
13.	nursing aversion.mp. (2)
14.	sensory.mp. (189901)
15.	exp SENSATION/ or sensation*.mp. (317468)
16.	exp Affect/ or negative affect*.mp. (37711)
17.	8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 (896273)
18.	7 and 17 (3090)
19.	limit 18 to "review articles" (491)
20.	limit 18 to animals (971)
21.	18 not 19 not 20 (1744)
22.	limit 21 to English language (1590)
23.	limit 22 to yr="2000 -current" (1239)

Searches were limited to English language and human studies. Review articles were excluded. Due to the evolution of social and cultural practices regarding breastfeeding, the research team felt that it was appropriate to place a 20-year limitation on searches, studies published between January 2000 to 2019 were included. Database searches were re-run before final data extraction for further retrieval. The full search strategy for all databases is available online at https://www.crd.york.ac.uk/PROSPERO/display_record.php?RecordID=115103

Screening and Selection

Literature searches resulted in 2843 references imported into Covidence systematic review software ("Covidence systematic review software," 2018) for title and abstract screening by

MM and AS, in accordance with the 'Preferred Reporting Items for Systematic Reviews and Meta-analyses' (PRISMA) guidelines (Liberati et al., 2009) (Figure 2.1). Full text screening of 34 studies against eligibility criteria (Table 2.2) by MM and reviewed by AS and EB.

Table 2.2 Inclusion and exclusion criteria.(Hawker et al., 2002)

Inclusion criteria	**Exclusion criteria**
1. Relevance to the research question: what are the experiences of breastfeeding women who perceive an aversion to breastfeeding? 2. The context: Feelings of aversion while breastfeeding: a. The major focus of the study? b. Minor focus of the study? c. Mentioned in the study? 3. The source (the population being studied): breastfeeding women who have or who do experience feelings of aversion while breastfeeding. 4. Type of study: peer-reviewed; original research, empirical studies or theoretical studies (Hawker et al., 2002). 5. English language. 6. Human studies. **7.** Studies published after January 2000.	1. Studies that do not contain terms relating to the research question: What are the experiences of breastfeeding women who perceive feelings of aversion while breastfeeding? 2. Non-peer-reviewed studies. 3. Review studies. 4. Case studies. 5. Studies published before January 2000. 6. Non-breastfeeding women. 7. Animal studies. 8. Non-English language.

After title, abstract and full text screening 2058 studies were deemed not relevant by MM and AS, as they did not meet the research criteria. Although some excluded studies shared key concepts with the included studies, such as exploring women's experience with a history of CSA, studies were only included if they specifically described women's experience of feelings of aversion while breastfeeding. The research team agreed on five final included studies. MM and EB completed data extraction and quality assessment using Covidence software. Quality assessment was performed using the CASP critical appraisal tool ("CASP Qualitative Checklist," 2018).

Figure 2.1. Flowchart describing the citation screening and selection process in accordance with the PRISMA guidelines. (Liberati et al., 2009)

Synthesising translations

After final extraction and quality assessment five included studies were synthesised for translations, Dietrich Leurer and Misskey (2015), Forster and McLachlan (2010), Watkinson, Murray, and Simpson (2016), Wood and Van Esterik (2010), and Yate (2017); see Table 3. Meta-ethnographic methodology, first used in the late 1980's (Noblit & Hare, 1988) was chosen to produce a whole that is greater than the sum of its parts, and interpretive and inductive reasoning was used to synthesise the findings from included studies. Studies were read and re-read, metaphors were compared, and key metaphors identified. Researchers then collaborated to determine how the studies were related and to translate the meaning of studies into one another for final synthesis of the central concept. Key metaphors illuminating the central concept were expressed using the words participants chose to describe their experience.

Table 2.3. Qualitative papers included in synthesis.

Number	1	2	3	4	5
Title	The Psychosocial and Emotional Experience of Breastfeeding: Reflections of Mothers.	Women's views and experiences of breast feeding: positive, negative or just good for the baby?	Maternal experiences of embodied emotional sensations during breast feeding: An Interpretative Phenomenological Analysis.	Infant feeding experiences of women who were sexually abused in childhood.	A qualitative study on negative emotions triggered by breastfeeding; describing the phenomenon of breastfeeding/nursing aversion and agitation in breastfeeding mothers.
Author	Dietrich Leurer and Misskey (2015)	Forster and McLachlan (2010)	Watkinson et al. (2016)	Wood and Van Esterik (2010)	Yate (2017)
Aims	To explore how mothers in Western Canada felt about their breastfeeding experience.	To explore women's views and experiences of breastfeeding, regardless of whether or not they breastfed, or length of breastfeeding.	To explore mothers' experiences of embodied emotional sensations during breast feeding and to understand the meaning and consequences that such experiences may have on mothers' sense of self and the relationships they form with their children.	To explore the effects of childhood sexual abuse (CSA) on women's breastfeeding and infant feeding decisions and experience.	To explore the phenomenon of breastfeeding aversion and agitation in breastfeeding.
Country	Canada	Australia	United Kingdom	Canada	United Kingdom
Participants	Women (N=191) who had initiated breastfeeding and	Women (N=889) booking as public patients; having a first	Women (N=11) who were currently breastfeeding or had	Women (N=6) breastfeeding with a history of CSA.	Women (N=694) who were breastfeeding.

	whose infant was between 6 and <12 months of age at the time of the survey.	child; between 16 and 24 weeks pregnant at the time of recruitment, who had 6-month data available.	done so in the past five years; who had experienced embodied emotional sensations during breastfeeding.		
Methodology	Qualitative based on open-ended survey questions.	Qualitative based on telephone interview questions embedded within a larger RCT.	Qualitative Semi-structured interviews with phenomenological design.	Qualitative interviews with thematic analysis.	Qualitative based on open-ended questions in an online survey.
Themes	1. Positive experience. 2. Mixed experience 3. Negative experience.	1. Positive comments/feelings about breast feeding. 2. Negative comments/feelings about breast feeding. 3. Doing it for the baby. 4. Breastfeeding in public.	1. Breastfeeding an unexpected trigger of intense emotional embodied experiences incongruent with view of self. 2. Fulfilling maternal expectations, maintaining closeness with the child 3. Making sense of embodied emotional sensations essential to acceptance and coping.	1. Shame. 2. Touch. 3. Breasts. 4. Dissociation. 5. Medical care. 6. Healing.	1. Anger/rage. 2. Agitation. 3. Skin crawling /itching. 4. Wanting to unlatch. 5. Guilt and shame.

Findings

The included studies, when combined, reveal a meta-ethnographic line of argument (Noblit & Hare, 1988) with the central conceptual category of “it’s such a strong feeling of get away from me” (Watkinson et al., 2016, p. 56). Four key metaphors are translated from the central conceptual category across included studies: “I do it because I feel it is best for my baby” (Dietrich Leurer & Misskey, 2015), “I can’t control those feelings” (Watkinson et al., 2016), "I should be able to breastfeed my son and enjoy it” (Watkinson et al., 2016), and “I’m glad I did it” (Dietrich Leurer & Misskey, 2015). In most cases the studies did not provide the context of these phenomena; therefore, possible precipitating factors such as the recommencement of ovulation, could not be linked in these findings.

Table 2.4. Summary of metaphors in included studies.

Overarching Concepts	***“it’s such a strong feeling of get away from me”***	***“I do it because I feel it is best for my baby”***	***“I can’t control those feelings”***	***"I should be able to breastfeed my son and enjoy it”***	***I’m glad I did it***
Dietrich Leurer and Misskey (2015)	√	√	√	√	√
Forster and McLachlan (2010)	√	√	√	√	√
Watkinson et al. (2016)	√	√	√	√	√
Wood and Van Esterik (2010)	√	√	√	√	√
Z. M. Yate (2017)	√	√	√	√	

“It’s such a strong feeling of get away from me” (Watkinson et al., 2016)

Women described concomitant feelings of irritation, anxiety and anger, and felt a strong desire to unlatch baby from the breast (Watkinson et al., 2016); “it’s a sudden rush that makes me want to pull my son off immediately, want to run away” (Yate, 2017); “It just kind of feels, I don’t know, like, I never want to be touched again” (Watkinson et al., 2016 p. 56). Participants defined the feelings of aversion while breastfeeding as a physical reflexive sensation that is intense and overwhelming, like having the “creepy crawlies” and a feeling of “can’t stay still” (Yate, 2017 p. 451). Women recounted the experience as a “neuralgia like feeling, toe curling” (Yate, 2017 p. 451), “throat tightening and gut wrenching” (Watkinson et al., 2016 p. 56) and “I felt like my skin was crawling” (Yate, 2017 p. 451).

For many women, the physical feelings of aversion continued until the breastfeeding session ended (Watkinson et al., 2016). Postnatal menstruation coincided with feelings of aversion

while breastfeeding for some participants; “Nearing the start of my cycle I experience aversions that are quite strong. During this time I have extreme agitation” (Yate, 2017 p. 452) Women stated that the long duration of physical contact required to breastfeed was difficult to successfully maintain while experiencing feelings of aversion while breastfeeding; “I end up having to take my son off as I can’t stand it any longer” (Yate, 2017 p. 451) Participants spoke of having “all the physical contact I could possibly take” (Wood & Van Esterik, 2010 p. 139).

“I do it because I feel it is best for my baby” (Dietrich Leurer & Misskey, 2015 p. 4)

Participants expressed feeling conflicted between negative feelings of aversion during breastfeeding and both the expected benefit breastfeeding conferred to the infant as well as the woman’s positive feelings of connection with their infant as a result of breastfeeding (M. Watkinson et al., 2016). Many women reported a desire to breastfeed with the intention to provide closeness and nurturing to their child and as such continued to breastfeed despite feelings of aversion (Watkinson et al., 2016; Yate, 2017), stating that they were “doing it for the baby”, and “…very tiring, quite stressful but still think it’s the best for him” (Forster & McLachlan, 2010 p. 120). Women repeatedly spoke of having loving feelings for their child that were incongruent with their feelings of aversion “because right together with it [aversion] comes another feeling, like very close attachment to the baby, like I care a lot about my baby. I feel the love” (Watkinson et al., 2016 p. 57). Many women emphasised that they continued with breastfeeding despite not enjoying it, describing breastfeeding as ‘best for their babies health’ (Dietrich Leurer & Misskey, 2015; Watkinson et al., 2016; Yate, 2017); “I’ve just persevered. I’ve thought of her more than me” (Forster & McLachlan, 2010 p. 120).

“I couldn’t control those feelings” (Watkinson et al., 2016 p. 56)

Women described feeling confused by the internal conflict of wanting to nurture and feed their infant while also experiencing feelings of aversion while breastfeeding (Watkinson et al., 2016b; Yate, 2017) commenting that these feelings were “irrational” (Watkinson et al., 2016 p. 56). Some women noted that their breastfeeding relationship had once been enjoyable before they began to experience feelings of aversion “I think that’s another reason why (..) I persevered is because I looked forward to having maybe what we did have as a breastfeeding relationship again” (Watkinson et al., 2016 p. 57). Women expressed having uncontrollable feelings that were in sharp opposition with their sense of self and the nature of their relationship with their child; “I have extreme agitation and sometimes want to hurt my baby… I can’t shake the feelings when they occur” (Yate, 2017 p. 452). Some women were alarmed to experience violent thoughts towards their baby (Watkinson et al., 2016; Yate, 2017). In three out of five of the included papers women described feeling powerless when experiencing feelings of aversion during breastfeeding and that the experience caused them to feel out of

control; “I was so angry at myself that I couldn’t control it” (Watkinson et al., 2016 p. 56). Included studies reported women’s expressed need to take breaks or end breastfeeding sessions early because they were experiencing feelings of aversion; “I have to unlatch and take a break” (Yate, 2017 p. 452). Many participants acknowledged that the feelings of aversion were beyond their control, describing it as like a biological instinct to wean; “it was just a biological thing that I couldn’t really control” (Watkinson et al., 2016 p. 58).

Those with a history of CSA described the experience of aversion as triggering feelings of dissociation and memories of trauma; “It always amazed me as to how beautiful of an experience [breastfeeding] could be and yet for me it was such a trauma” (Wood & Van Esterik, 2010 p. 138). Some women with a history of CSA described being able to breastfeed without positive or negative emotions because they dissociated while breastfeeding; “I didn’t register any body sensation anyway. I was just… the breasts were functional for that time” (Wood & Van Esterik, 2010 p. 139). Another type of aversion was described by women who identify as experiencing D-MER, which was portrayed as an emotional overwhelming feeling of dread that is stimulated by the letdown reflex and occurred even when using a breast pump; “I just felt like something terrible just had happened and I needed to cry about it but nothing terrible did happen”(Watkinson et al., 2016 p. 56). Although women in the included studies understood breastfeeding can be difficult, many reported that they had not heard of feelings of aversion while breastfeeding before experiencing it, many stating that they did not know what was happening to them (Yate, 2017).

"I should be able to breastfeed my son and enjoy it" (Watkinson et al., 2016 p. 56)

This analysis revealed that a number of women reported feeling sadness with the unexpected change in their relationship with their baby after experiencing feelings of aversion while breastfeeding; “I really want to give affection, love and cuddles, but I may not want to give the milk, so I end up inadvertently rejecting him” (Watkinson et al., 2016 p. 57). Participants expressed concern that the feelings of aversion might damage their breastfeeding relationship with their child; “honestly looking back now I probably would have weaned him entirely because for a good while our relationship was extremely strained” (Watkinson et al., 2016 p. 57). Women also spoke of feeling that they had failed their child because of earlier than expected cessation of breastfeeding; “I feel like I let my baby down because I didn’t breastfeed after 2 months” (Dietrich Leurer & Misskey, 2015 p. 5).

Although women wanted to breastfeed several were not able to continue as a result of feeling an aversion during breastfeeding (Watkinson et al., 2016). They described ending the breastfeeding relationship as both a relief because the feelings of aversion had stopped, but also felt sadness that the breastfeeding relationship had to end; “at six weeks he went on the

bottle… and it was a loss for me. I felt 'touched out'" (Wood & Van Esterik, 2010 p. 139). Participants identified that feelings of aversion while breastfeeding affected their ability to continue to breastfeed even though they did not want to stop breastfeeding; "I really wanted to breastfeed my daughter, but the reality was very hard" (Yate, 2017 p. 452).

Participants who experienced feelings of aversion while breastfeeding identified concomitant feelings of inadequacy with feelings of guilt and shame. Women described feeling "let down and guilty" when they were not able to successfully breastfeed (Dietrich Leurer & Misskey, 2015 p. 5) and reported feeling disappointed in themselves for experiencing aversion while breastfeeding (Watkinson et al., 2016). Women expressed unfulfilled personal expectations stating that they felt "disappointed in myself for not trying harder" (Dietrich Leurer & Misskey, 2015 p. 5) and were "trying to be a perfect as [I] could be with [daughter]" (Watkinson et al., 2016 p. 57). Women stated that feeling aversion was an obstacle to breastfeeding success that led to feelings of guilt; "it makes you want to stop all together and then it makes you feel guilty for feeling like this" (Yate, 2017 p. 451), "I felt awful for feeling like that" (Yate, 2017 p. 451), "I felt like I was a failure" (Forster & McLachlan, 2010 p. 120). Women equated failing at breastfeeding to failing at motherhood; "if I stop nursing then I don't have any proof for myself that I'm a good mother" (Watkinson et al., 2016 p. 56). Women also linked the concepts of breastfeeding and mothering; "its nature's way… we [mothers] were designed to nourish our babies in this way" (Dietrich Leurer & Misskey, 2015 p. 4). Feelings of brokenness were reported by women stating that they felt "something is wrong with me", and "my body doesn't work the way it's supposed to"(Watkinson et al., 2016 p. 56). Participants also reported feeling shame at not being able to provide milk for their babies (Wood & Van Esterik, 2010), and that this shame caused some to cease breastfeeding altogether "that was the end of my experience with breastfeeding" (Wood & Van Esterik, 2010 p. 138).

"I'm glad I did it" (Dietrich Leurer & Misskey, 2015 p. 3)

Several women who experienced feelings of aversion continued to breastfeed believing it was, "too valuable to take away" (Watkinson et al., 2016 p. 57). In particular, participants with a history of CSA expressed positive outcomes. Despite experiencing flashbacks breastfeeding had allowed them to heal from past trauma; "everything was so new, but in a wonderous way, not in a rejection way" (Wood & Van Esterik, 2010 p. 139). Descriptions included positive self-regard at being able to persevere through difficulties; "I feel proud that I was able to get through tougher times and continue to breastfeed" (Dietrich Leurer & Misskey, 2015 p. 3). Women with a history of CSA also commented that breastfeeding had allowed them to see their body in a new positive way; "this is what my body was designed for" (Wood & Van Esterik, 2010 p. 140). Respondents stated that breastfeeding was a unique gift that only they

could give to their infant; “breastfeeding is something special that only I can do” (Forster & McLachlan, 2010 p. 119).

Discussion

This is the first meta-synthesis exploring women's feelings of aversion while breastfeeding. This study revealed that some women experience strong negative embodied emotions and feelings of aversion while breastfeeding. These negative feelings were overwhelming and incongruent with womens’ sense of self. Feelings of aversion during breastfeeding may have negative implications for the mother-infant relationship. Women who want to breastfeed but encounter breastfeeding difficulties may experience lasting feelings of sadness, disappointment and inadequacy (Ayton et al.,, 2019).

Breastfeeding aversion is unexpected and confusing for women

Included studies reported that women who experience feelings of aversion while breastfeeding have a desire to breastfeed and understand the benefits for the mother-infant dyad but were psychologically unprepared to experience feelings of aversion. Many participants expressed a high regard for breastfeeding using positive phrases when describing their willingness to breastfeed. Although several women wanted to breastfeed for the health of their child and perceived benefit in establishing attachment bonds, some were unable to continue to breastfeed. For several women in the included studies feelings of aversion while breastfeeding began after the woman had already established breastfeeding and had overcome many initial breastfeeding challenges. Previous research has documented that women are often unprepared for breastfeeding difficulties (Sheehan et al., 2013); however, those who are more prepared for breastfeeding challenges may have more favourable breastfeeding outcomes (Ahluwalia et al., 2005). The unpreparedness for the challenges and emotions experienced by women in these studies may partly be explained by the lack of published literature resulting in poor awareness of the phenomena among midwives, and other health professionals, as well as absence of solutions to support women experiencing breastfeeding aversion.

Breastfeeding aversion the embodied experience

Researchers have previously described breastfeeding as a sensory embodied experience (Schmied et al., 2013). Women in the included studies have described breastfeeding as intense, visceral, and overwhelming. These women also described the feelings of aversion while breastfeeding as a neuralgia type feeling that irritated their nerves to the point of revulsion and extreme displeasure. Feelings of aversion have been described in lay literature as intense and like an instinct or innate reaction that women could not control (Flower, 2003). This synthesis links the physical feelings of aversion while breastfeeding with the negative

emotions of anger and disgust and highlights that participants may experience the physical feelings and negative emotions of breastfeeding aversion all at once.

Breastfeeding aversion affects a woman's sense of self

Complex breastfeeding difficulties such as feelings of aversion while breastfeeding, as explored through this review, may affect more than the immediate mother-infant breastfeeding relationship and can cause negative impacts on a woman's sense of self (Papinczak & Turner, 2000). Development of the maternal identity is key to maternal fulfilment and negative self-judgments around breastfeeding can have negative impacts on maternal identity and self-confidence (Thomson et al., 2015). In contrast, positive self-judgments around breastfeeding can increase maternal confidence (Charlick et al., 2019; De Roza et al., 2019). Complex breastfeeding difficulties may cause long-term feelings of inadequacy for women (Hegney et al., 2008). Therefore, support for women who have experienced an aversion to breastfeeding may need to be ongoing. A woman's wellbeing may be negatively affected when they are not able to meet their own self-prescribed goals for breastfeeding (Hegney et al., 2008). Previous research has found that women who experience complex breastfeeding difficulties or were not able to achieve their own breastfeeding goals were more likely to suffer from low mood (Brown et al., 2007). Based on the findings of this research, breastfeeding support should include a focus on the mental wellbeing of women who experience complex breastfeeding difficulties such as an aversion to breastfeeding.

Breastfeeding aversion may impact on the mother-infant relationship

Our review found that women who experienced feelings of aversion had concerns that these feelings might cause negative outcomes for their breastfeeding relationship. Other research has found that similar breastfeeding experiences do negatively affect the breastfeeding relationship. For example, early sensitivity in breastfeeding mothers was found to predict the duration of breastfeeding during the first years of breastfeeding (Weaver et al., 2018). In addition, previous research by Schmied and Barclay (1999) found a disrupting and distorting experience of breastfeeding gave some women the sense that they were separate from their baby and working in opposition to each other; however, women in this study also expressed a desperate desire for connectedness and intimate relationship with their infant through breastfeeding (Schmied & Barclay, 1999).

Weaning infants before mothers otherwise would have, as a result of experiencing feelings of aversion while breastfeeding, is a negative impact that can have implications for mental wellbeing. For example, research has shown that shorter breastfeeding duration may increase postpartum depressive symptoms (Dias & Figueiredo, 2015). Due to limited literature about women who experience negative emotions while breastfeeding, it is unknown what initial

impact these feelings may have on the mother baby dyad and what might be the possible short and long-term outcomes. Further research is needed to explore possible co-morbidities and etiological factors affecting breastfeeding aversion and the impacts of feelings of aversion while breastfeeding on the mother-infant dyad relationship. Similarly, the included studies did not provide details of participant characteristics such as breastfeeding histories and demographics. As such, it is unclear whether women's unique experiences of breastfeeding aversion were linked with such characteristics. Additional research is needed to better understand the similarities and differences in the experience of women who are; for example, tandem breastfeeding compared to breastfeeding while menstruating, or breastfeeding with D-MER.

Implications for practice

This review found that women can describe experiencing strong physical and emotional reactions to breastfeeding at the same time as wanting to continue to breastfeed their infant. It is critical that midwives, and other health practitioners, are able to support women who have this experience. Breastfeeding women report not feeling adequately supported by midwives and health professionals when experiencing breastfeeding difficulties (McFadden et al., 2017). Limited literature exists, on women who feel aversion while breastfeeding, which limits the availability of a language to describe these phenomena for midwives and health professionals. Furthermore, given our current climate of promoting the positive attributes of breastfeeding (Rollins et al., 2016), it may be difficult for women to discuss negative breastfeeding feelings—such as aversion—with midwives and other health professionals. In addition, midwives and health professionals currently may not know what to advise women who might present with these challenges. Nonetheless, those who support breastfeeding women must extend extra care to women experiencing aversion while breastfeeding, in order to ensure optimal health outcomes for the mother and child.

Breastfeeding support in this context must emphasise understanding of the unique experience of each mother-infant dyad. Prior research has found that mechanistic support, that focuses on a rules-based approach to breastfeeding, causes women to separate themselves into those who could and those who could not breastfeed (Hunt & Thomson, 2017). Women who wish to breastfeed and receive useful support from midwives, and other health professionals, or lay people, are more likely to achieve a longer duration and period of exclusive breastfeeding (McFadden et al., 2017). Midwives, and other health professionals must be cognizant of how they interact with breastfeeding women who experience negative feelings, as these women may perceive they are being judged leading to feelings of failure and guilt. It is also important to be mindful not to exacerbate feelings of guilt and shame, which may further potentiate

negative implications of shame such as isolation and/or breastfeeding discontinuation (Thomson et al., 2015). Due to the scarcity of literature on the phenomena of feelings of aversion while breastfeeding it is not known what types of support would be appropriate for women who experience this phenomenon.

Limitations

Limited literature exists on the phenomenon of women who experience feelings of aversion while breastfeeding; therefore, some included studies do not specifically mention aversion while breastfeeding. Of the five included studies only two specifically state aversion as a keyword (Watkinson et al., 2016; Yate, 2017) Of these two, the study by Yate (2017) had major limitations as it was undertaken without ethics approval (Yate, 2017), and the survey instrument development was not documented. However, this paper was published in a peer-reviewed journal and, due to the lack of published work in this area, we agreed to include it. In presenting the synthesised findings we have avoided using key metaphor subheadings from this study as the data may be unreliable, nonetheless the Yate (2017) study sheds light on this phenomenon and enriches the discourse. We are mindful that technology is changing the landscape of data collected online and understand that the inclusion of this study by Yate (2017), using opt-in methodology, might previously have been unpublished or negated (Pang et al., 2018).

This research may not be exhaustive; however, all attempts were made to capture relevant papers. This is an underexamined topic and there are limited conventions in describing this phenomenon; as such, it is possible that some relevant manuscripts may have been overlooked.

Conclusions

This meta-ethnographic synthesis revealed that some women experience physical sensations and emotions that they describe as feelings of aversion while breastfeeding. These feelings may cause internal conflict and impact on the mother-infant relationship. However, some women who experience feelings of aversion while breastfeeding, and persist, may have positive outcomes. Breastfeeding aversion is a phenomenon that is poorly understood and there is limited literature available to guide midwives, and other health professionals providing care to breastfeeding women during pregnancy and the postnatal period. Feelings of breastfeeding aversion may negatively impact a woman's sense of self and relationship with her young child. The phenomenon of breastfeeding aversion must be researched further, to provide information for midwives, and the health services community, to enhance understanding and support for this population and their families.

Postscript

At the time of publication there were five studies that were eligible to include in this meta-ethnography. The search strategy which was used in this meta-ethnography was run again in MEDLINE (OVID) prior to submission of this thesis for additional studies about the experience of women who have feelings of aversion while breastfeeding using the limit post 2020 (yr="2020 -current"). This search found seven more papers which mentioned breastfeeding aversion. Of those papers, 2 were papers published as part of this thesis, 3 were studies citing papers in this thesis, and 2 were excluded as one explored infant aversion to breastfeeding (O'Connor et al., 2022), and the other explored women's experience of cultural aversion to breastfeeding (Leeming et al., 2022). Since the publication of this meta-ethnography some studies have cited this research and mentioned breastfeeding aversion in the context of other breastfeeding difficulties such as dysphoric milk ejection reflex (D-MER) (Deif et al., 2021; Frawley & McGuinness, 2023), and sensory issues with breastfeeding for autistic women (Grant et al., 2022) which is discussed later in this thesis (see Chapters 5 and 7). However, there are no new published studies which explored women's feelings of aversion while breastfeeding.

Chapter conclusion

This chapter has presented a published meta-ethnography of five studies that explored the experiences of women who had negative embodied feelings of aversion while breastfeeding. This review found that some women have feelings of aversion while breastfeeding, and that the empirical literature on this phenomenon is limited. The absence of focused research investigating women who have feelings of aversion while breastfeeding highlighted the need to take and open approach to explore this phenomenon and therefor a mixed methods approach was chosen to capture a comprehensive understanding of this breastfeeding challenge. The following chapter presents the theoretical framework for this thesis and describes the mixed methods approach which was chosen to investigate this breastfeeding challenge.

Chapter 3. Methodology

Introduction

This chapter describes the methodology and methods used in this thesis. This research aims to understand women's experience of feelings of aversion while breastfeeding by using a phenomenological mixed methods approach. Here, the researcher's position, reflexivity and philosophical world view are explored, followed by an explanation of the overarching research aims, objectives and questions. The chapter ends with a rationale for choosing the methodology of mixed methods exploratory sequential design.

Outline of this research

As previously stated in Chapters 1 and 2, this research aims to understand and uncover the experience of women who self-identify as having feelings of aversion while breastfeeding (BAR), with the following objectives:

1. Describe the lived experience of breastfeeding aversion for women who self-identify as experiencing BAR.
2. Identify the main features of BAR described by women.
3. Explore the predisposing, precipitating and perpetuating factors of the experience of BAR as described by women.
4. Explore the self-perceived factors that reduce or stop BAR.
5. Explore how many women describe BAR and if there are commonalities in their experience.

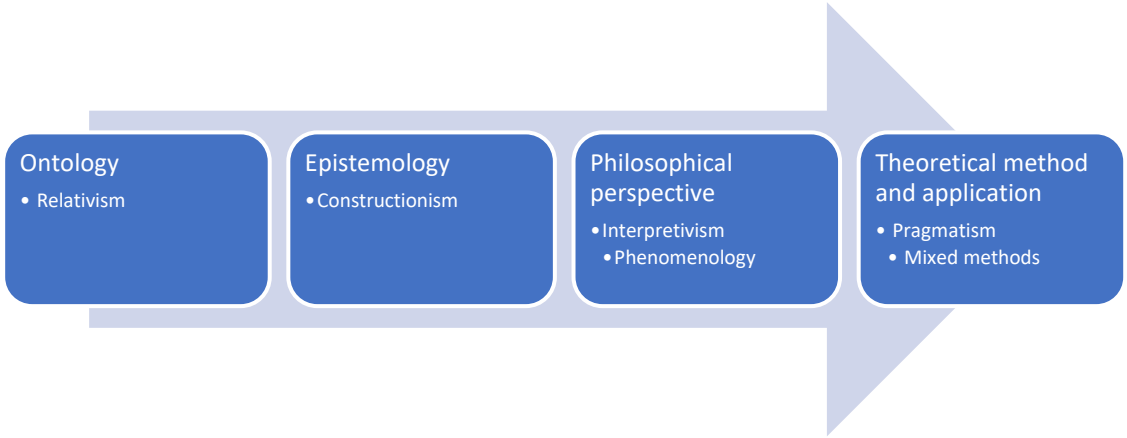
This research uses a mixed methods exploratory sequential design with the primary focus being qualitative (QUAL>quant). There are four phases to the research design: (1) qualitative meta-ethnography, (2) qualitative in-depth interviews, (3) quantitative survey 1, and (4) quantitative survey 2. Each phase of this research informs the next, and the initial qualitative phases inform the following quantitative phases (see Fig. 3.2).

Theoretical framework

All researchers begin the research journey with pre-existing ways of understanding what is knowable, how knowledge is created, and a philosophical orientation that is used to acquire knowledge. Therefore, it is important to position the researcher's orientation within the research to better understand the theoretical framework background and philosophical positions chosen (Moon & Blackman, 2014). If a researcher's ontological understanding is from a relativist perspective, believing that knowledge must be contextualised to be fully

understood (Burr & Dick, 2017), then that researcher's epistemological standing is constructionism, interpretivist and inductive (Burr, 2017; Crotty, 1998), with an understanding that the inductive approach forms the philosophical foundation for interpretivism (Crotty, 1998; Schwandt, 1994). This research used an inductive interpretivist approach to begin to understand the experience of women who have feelings of aversion while breastfeeding with phenomenology (Moon & Blackman, 2014; Van Manen, 2017). The methodological approach of mixed methods is based on pragmatism and aims to use the most effective and efficient approach to the problem being studied, for the construction of the appropriate research question(s). It is that pragmatism which allows for this research to be conducted using a mixed methods approach which used qualitative and quantitative perspectives and methods to answer the research question (Creswell, 2017; Creswell & Poth, 2017). Figure 3.1 below represents the theoretical and methodological stance to be adopted in this research.

Figure 3.1. Philosophical approach



Axiology; Integrity and achieving practical outcomes

This research aims to achieve impactful and practical outcomes for the population being studied, to benefit and be of use to this community (Arminio & Hultgren, 2002). Research integrity is situated in this project by embodying, discussing, and illustrating the following:

- Clear philosophical position of epistemology in theory that informs methodology and provides context.
- Methodology that links the choice of method to outcomes.
- Methods of data collection that uses appropriate techniques.
- Reflection by the researcher upon her relationship with the participants and phenomenon.
- Interpretation of data guided by the selected methodology.
- Applications for professional practice and practical outcomes for the population being researched. It is important to note that "*It is not for the sake of research that we*

embark upon this work but rather to improve the lives of others" (Arminio & Hultgren 2002 p.450).

Phenomenology

Phenomenology is used as the theoretical lens to identify the self-perceived understanding of BAR by those who have this experience (Creswell, 2018). Phenomenology is the study of the lived experience of human beings and has several subtypes, such as Husserl's theory of transcendental phenomenology. This is reductionist in nature and posits that the essence of pure experience can be unbiased (Van Manen, 2017). This thesis, however, uses the philosophical position of hermeneutic phenomenology which asserts that as humans we create embodied knowledge (Smith et al., 2009).

Hermeneutic Phenomenology

The philosopher Heidegger theorized that hermeneutic phenomenology is concerned with the meaning that we make of our embodied existence, and how we create meaning in the context of our culture, activities, things, time, language and relationships (Heidegger, 1962). Hermeneutics is the study of text to reveal and uncover the author's meaning by looking at small sections to understand the whole, and looking at the context of the whole to make sense of the parts (Smith et al., 2009). Hermeneutic phenomenology uncovers meaning within a phenomenon by exploring the part and the whole in a cyclic manner. It does this to uncover the layers of meaning and in this way reveal any awareness of the phenomena or experience being researched (Suddick et al., 2020). The interpretative phenomenological analysis approach to be used in this research of BAR is a double hermeneutic in that the researcher seeks to make sense of the participants' descriptions and understandings of BAR, and how they make sense of their own experience with it (Smith et al., 2009).

Pragmatism

Pragmatism asserts that the research approach selected to understanding a real-world phenomenon or problem should apply the best and most efficient methods to address a research problem, while also allowing for multiple sources and types of data (Weaver, 2018). The pragmatic paradigm is particularly suited to participant-oriented research in that this paradigm is not wedded to a particular ontological or epistemological perspective. It can therefore allow for the research participant to be the arbiter and expert on their own experience. This paradigm also allows the researcher to foreground the participants perspective when choosing the methodology (Allemang et al., 2022). For this research on the novel phenomenon of BAR, the pragmatic approach will be adopted as it means that the method selection to answer the research question is chosen for its effectiveness and efficiency (Creswell & Ploth, 2017).

Pragmatic method within a phenomenological foundation

The pragmatic perspective of this mixed methods research has an interpretative phenomenological foundation (Smith, Flowers, & Larkin, 2009), by gathering initial qualitative data using interpretative phenomenological analysis, which then informs the quantitative phases of the research (QUAL>quant). The quantitative phases of this thesis used postpositivist philosophical assumptions to test and confirm the qualitative phenomenological findings for validity. The qualitative and quantitative phases of this research combined to reveal new integrated results (see Chapter 7) (Creswell & Clark, 2017; Mayoh & Onwuegbuzie, 2015).

Mixed methods design

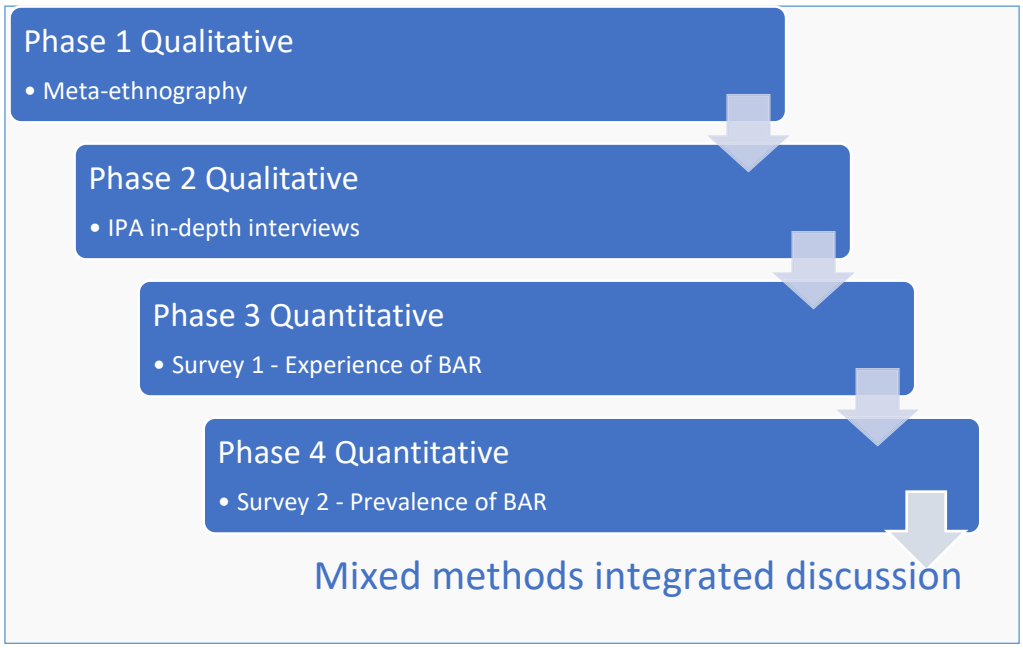
A mixed methods design has been chosen for this research (Davidsen, 2013; Mayoh & Onwuegbuzie, 2015). Mixed methods is an appropriate method to explore this novel phenomena because the integration of methods produces a stronger understanding and builds a wider picture than would be achieved using either qualitative or quantitative methods alone (Creswell & Poth, 2017). The combination of qualitative and quantitative approaches can reveal inaccessible findings through each separate design (Creswell & Clark, 2017). Qualitative researchers view the world through an interpretive, inductive lens to identify the essence of a phenomena (Van Manen, 2017), while quantitative data is deductive and focusses on identifying measurable variables (Creswell & Poth, 2017). A mixed method approach using both qualitative and quantitative data allows for confirmation of the results and enhanced validity of findings as they are used to answer the same questions. The qualitative phase provides the essence of breastfeeding aversion experience as understood by participants, and the quantitative phase confirms the findings, which then facilitate higher order mixed methods findings (Creswell & Plano Clark, 2018). Mixed methods research has some limitations in that the definition of this method is not always clearly defined in the literature, and the agreed definition can be simplistic and only requires the mixing of both qualitative and quantitative methods (Fàbregues et al., 2021).

Exploratory sequential design

An exploratory sequential mixed methods design which uses a qualitative methodology focus (QUAL>quant) was used for this research, as shown below in Figure 3.2. The qualitative phases were completed first to create a methodological foundation rooted in the lived experience of women who have BAR (Creswell & Poth, 2016). A meta-ethnography (Phase 1) and in-depth interviews (Phase 2) make up the first two qualitative phases of this research. The data from the qualitative phases informed the development of the next two quantitative Phases, 3 and 4. These two national surveys tested the qualitative findings with a larger population and explored further quantitative domains such as participant demographics and the prevalence of

this phenomena (Creswell & Plano Clark, 2018). Finally, the mixed methods findings are further explored in an integrated discussion. The mixed method integration and sequential phases of this design are considered specifically in more depth throughout this chapter.

Figure 3.2. Exploratory sequential design with points of integration



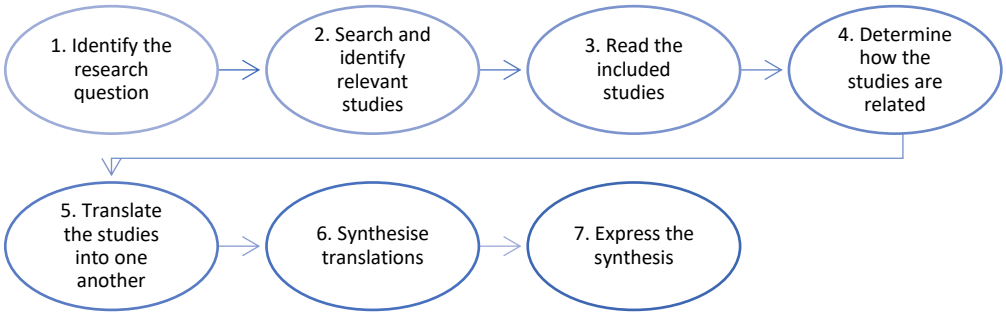
Ethics

This project was approved for three high-risk phases of human research. Ethics for Phase 2 interviews (UTS HREC REF NO. ETH19-4161), Phase 3 survey 1 data collection (UTS HREC REF NO. ETH20-5341), and Phase 4 survey 2 data collection (UTS HREC REF NO. ETH21-6211) were approved through the University of Technology Sydney Human Research Ethics Committee. Participant information sheets, social media invitations, consent forms and the survey tools are provided in Appendices 1, 2, 3, 4, 7, 8, 9, 10 and 11.

Phase 1: Meta-ethnography

The first phase of this research uses the meta-ethnographic method to identify what women described as negative sensations and feelings of aversion while breastfeeding, and their experience of this. This meta-ethnography synthesised new findings about the experience of BAR using Noblit and Hare's seven-step process (see Figure 3.3) (Noblit & Hare, 1988).

Figure 3.3. Noblit and Hare's (1988) Seven-step process of analysis



Translations were synthesised by reading and rereading, and by comparing metaphors and evaluating key words. Findings were integrated into the following qualitative in-depth interview Phase 2 design and analysis (see Chapter 4).

Phase 2: Qualitative in-depth interviews

In-depth interviews were conducted to gather and explore the lived experience of those who self-identify as experiencing this phenomenon (Smith et al., 2009). The qualitative method of interpretative phenomenological analysis was chosen to generate an understanding of this phenomena, and the experience of BAR because this method aims to examine in detail each participants personal account of their lived experience before making more general claims (Smith et al, 2009). Interpretative phenomenological analysis is iterative and doubly hermeneutic in that this method allows for the researcher to interpret the participant making sense of their own personal experience, and what their experience meant to them. This method is well suited to examine and uncover experiences that are complex, emotionally laden and ambiguous (Smith & Osborn, 2015). Interpretative phenomenological analysis was used to reveal the perceived experience of breastfeeding aversion from the perspective of the participants (Smith et al., 2009), and the impact that participants felt that this experience had on themselves and their families.

Ethical considerations for Phase 2

I had previously created several online breastfeeding support groups with over 10,000 collective members, and so I used an arm's length approach (see below detail in recruitment) for dissemination of participant recruitment invitations for anonymity. A distress protocol was developed for interviews, which included referral contact details if any participant felt distress because of the interviews, and I undertook mental health first aid training (see Appendix. 1).

Participants were contacted a week following the interviews to 'check-in' and ask if they felt that they needed extra support or counselling after the interviews (as per the distress protocol). All participants responded that they did not have any post-interview distress and did

not need any further information or ongoing support. After this qualitative phase was published the paper was shared with participants via email.

Recruitment

Participants were recruited from online breastfeeding support groups for phase 2 of this research using purposive sampling from already established support group communities that had been created for those who were experiencing BAR. Administrators from the support groups were sent a written request to share the screening invitation in their groups (see Appendix 2). A screening tool, and study information invitation created in Qualtrics was then circulated in social media breastfeeding support groups by the support group administrators (see Appendix. 3). The researcher then made contact via email with participants to share the information sheet and plan the most convenient time for interviews (see Appendix 4).

Confidentiality

All information from the interviews were treated confidentially by de-identifying audio files and using pseudonyms for participants. Interviews were transcribed verbatim by the researcher using NVivo. Names were de-identified if participants accidently disclose names during their interview, and children names were de-identified and renamed by birth order e.g., child 1. All information used for analysis and publication will be de-identified. Published results of this research have been reported using pseudonyms so that participants cannot be identified (see Chapter 4).

Data storage

De-identified data was stored for future use in research projects that may be an extension of this research project. According to the requirements of the Australian Code for the Responsible Conduct of Research for data safety, confidentiality and ethics, the researcher constructed a data management plan (RDMP) using Stash and UTS eResearch fileshares safe storage (https://stash.research.uts.edu.au).

Participants

Women were included if they are 18 years of age or older, live in Australia and had breastfed an infant and self-identified as having experienced BAR while breastfeeding. Participants also needed access to a computer or phone to participate in the online or phone interview.

Data collection and analysis

This second Phase used a qualitative approach to ask those who experience BAR about what this breastfeeding challenge means to them. The researcher used the following pre-prepared script at the beginning of each interview which included distress protocol considerations:

"The purpose of this interview is to have a conversation that will facilitate you telling your own story in your own words. So, for the most part you will be speaking, and I will be listening. I am not able within the context of this interview to provide counselling for you, however if you feel that you would like counselling for anything that we speak about here today you will be provided with information for free counselling services. I may ask for clarification on points that you make, not because you are being unclear but because you need to explain the meanings in your own words. I'm recording this interview but only the audio will be retained for transcribing, and it will be de-identified, so I assure you that your name will never be associated with this research. Please take your time to answer questions and if at any time you would like a break, we can stop the interview and restart after a short time. Once again, you are free to withdraw at any time from this research without giving a reason. Are you ready to begin?"

This research used interpretative phenomenological analysis to understand the descriptions by participants of the phenomena (Leeming et al., 2017; Smith et al., 2009). This was done to provide an idiographic representation of this breastfeeding difficulty from those who had this experience which then provided the foundation for the following quantitative Phases (3 and 4) of this research (Creswell & Poth, 2017; Smith et al., 2009). In-depth interviews with women who self-identified as having feelings of aversion while breastfeeding was undertaken with women across Australia to uncover the essence of this phenomena (Creswell & Poth, 2016; Moustakas, 1994) using Zoom to simulate face-to-face contact (Archibald et al., 2019; Hanna, 2012). Interviews were recorded and transcribed (see Appendix. 5 example of transcribed interview), and data analysis was performed using interpretative phenomenological analysis (IPA). During phase two IPA interviews the researcher used reflective practices and bracketed her own personal experience (see Chapter 7)(Moustakas, 1994; Smith et al., 2009). Qualitative data collection and analysis was undertaken concurrently and iteratively.

The interviews provided a description of the lived experience of BAR, and were focused on three broad questions:

1. What have you experienced in terms of feelings of BAR?
2. What contexts or situations have influenced or affected your experiences of BAR?
3. Have you used any strategies to overcome BAR?

Integration

Findings from Phase 2 qualitative interviews were used to inform Phase 3 quantitative survey items, and the experience of BAR reported in the qualitative findings. These findings were then

transformed into the first of two national surveys. This survey tested the results from the quantitative position in order to ascertain whether the descriptions taken from the qualitative interviews and used as items in the survey were generalisable to a larger population and accurately described the experience of BAR. Qualitative Phase 2 findings were also combined with the following phases of research to create new mixed methods findings (see Chapter 7).

Phase 3: Quantitative Survey 1

This survey aimed to address the following overarching research objectives:

- Identify the main features of BAR described by women.
- Explore the predisposing, precipitating and perpetuating factors of the experience of BAR as described by women.
- Explore the self-perceived factors that reduce or stop BAR while breastfeeding.
- Test the generalisability of the description of the lived experience of breastfeeding aversion for women who self-identify as experiencing BAR from the phase one results.

Survey design

The Phase 3 Survey 1 items were informed by the Phase 2 qualitative interview findings. Where appropriate, validated instruments were built into the survey to measure features of the phenomena that were uncovered in the phase two interviews. Design and implementation of Phase 3 survey followed these mixed methods strategies:

- Refine quantitative research questions or hypotheses that build on the qualitative results and determine the quantitative approach.
- Determine how participants will be selected for the quantitative sample.
- Design quantitative data collection instrument.
- Obtain permissions (ethics).
- Test face validity and pilot test the quantitative data collection instrument.
- Collect closed and open-ended data with the instrument.
- Analyse the quantitative data using statistics to answer the quantitative and mixed methods research questions (Creswell & Plano Clark, 2018).

To achieve research objectives 1, 2, 3 and 4, the Phase 2 qualitative findings were operationalised and embedded into the Phase 3 survey. Validated scales and items were included in the survey which were informed by participant statements and theoretical domains from the previous qualitative phase (see Table 3.1).

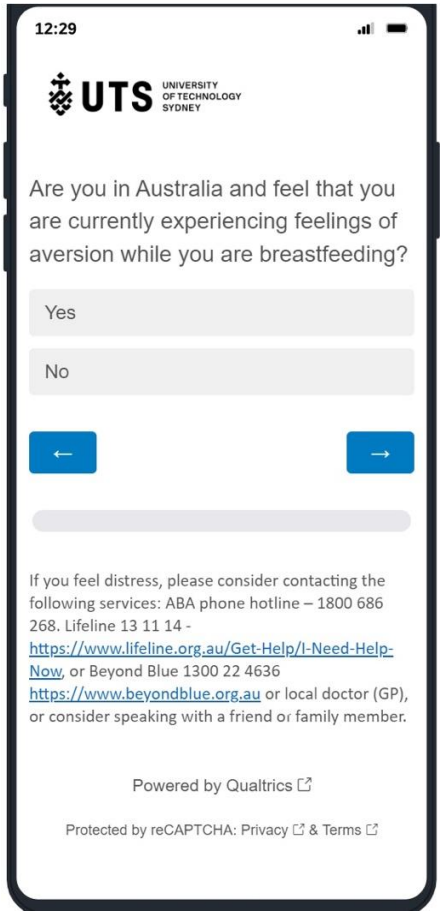
Table 3.1. Example of mapping phase two qualitative findings to survey one item pool (see Appendix. 6 for full table) (Fetters, Curry, & Creswell, 2013).

Superordinate Theme Operationalised	Theme Operationalised	Theoretical Domains (constructs)	Statement / survey question pool	Indicator type
Undesirable feelings	Emotions of aversion	Anger	"I would just start feeling really angry"; "irritation"; "frustration"	Dimensions of Anger Scale (DAR)
		Anxiety	"Anxiety in the pit of your stomach"	DASS21 Scale
		Disconnection	"issues with allowing me to bond properly with her because it was just so intense"	Being a Mother scale (BAM)
		Disgust	"it almost had become to the point of repulsion" "I have to stop you feeding because this is causing me to feel so yuck"	Scale point intervals with Likert statements

Ethical considerations

The researcher is known to some groups within the online breastfeeding community and so an arm's length approach was used whereby a different member of the research team distributed the survey to disseminate the survey tool anonymously. This survey was considered high-risk so the researcher added appropriate distress protocol referrals and clickable live links on each page of the survey. If a participant clicked on one of the distress protocol links the participant was then redirected to a support webpage (see Image 3.1).

Image 3.1. Example of distress protocol referral contact numbers and clickable links in survey.



Recruitment

This survey was distributed nationally within Australia. The researcher may well be known to some of those in the online breastfeeding community, so the survey tool and invitation to participate was initially shared with the Facebook (Meta) breastfeeding support group administrators (see Appendix. 7). Group administrators shared the survey invitation social media tile (see Appendix. 8) and link to the survey tool (see Appendix. 9) within their groups, which created the required arms-length approach. The Australian Breastfeeding Association (ABA) agreed to support this research and shared the survey in their online support and social media spaces (ABA Research Approval Number 2021-1). Survey distribution also occurred via snowball sampling and some social media influencers, and breastfeeding advocates shared the survey with their online breastfeeding communities. Survey data was collected via social media for four months to give the breastfeeding community enough time to schedule completing the survey.

Testing the survey

This survey was tested for functional validity by the researcher and supervisors, and also reviewed for face validity and functional validity by the three maternal and child health experts with the following credentials:

1. Midwife and Doctoral Candidate at the Centre for Midwifery, Child, and Family Health at the University of Technology Sydney.
2. Midwife and University of Technology Sydney Course Coordinator for the Graduate Diploma in Midwifery.
3. Midwife and Masters of Primary Maternity Care Student, School of Nursing and Midwifery, Griffith University, Brisbane, Queensland.

Data storage

Phase two survey will used the UTS eResearch recommendation for data storage in the Qualtrics survey platform, and eResearch storage platform, which is recommended for health data, and is a network drive which requires the UTS VPN Client to connect.

Participants

Participants were invited to complete this survey if they lived in Australia, were 18 years and older, and self-identified as currently experiencing BAR while breastfeeding. Participants needed to be currently experiencing BAR because the survey contained several validated instruments that would not have been valid retrospectively.

Data analysis

Survey data was exported from Qualtrics directly into SPSS for cleaning and analysis. Data results tables were produced by exporting SPSS findings to Excel spreadsheets for further examination. As this survey was exploratory, descriptive frequencies, means, and standard deviations were used to describe the findings.

Integration

The survey was informed by the findings from the previous qualitative research phase. The findings from this quantitative phase three survey provided clarification and confirmation of the description of BAR, as well as a definition that was then used in the following Phase 4 survey 2.

Phase 4: Quantitative Survey 2

This survey was conducted to better understand the experience of the general breastfeeding population in Australia, and specifically the prevalence of BAR in the context of other common breastfeeding difficulties. This phase explored the demographics of those who experienced BAR, the onset factors for BAR, prevalence of BAR.

Survey design

The survey design was informed by the preceding phases of this research; the Phase 3 survey, and the initial Phase 2 qualitative findings. These previous findings provided a description of

this experience which was then used in this final survey to test the prevalence of BAR in Australia. BAR was described as being experienced throughout the breastfeeding session, because that was part of the description of BAR that was provided by participants in the quantitative Phase 2 of this research (see Chapter 4). Also, for the purpose of this second survey, this factor differentiated BAR from the similar breastfeeding challenge of D-MER, which is only experienced in the first 1 to 5 minutes of the breastfeeding session, and D-MER was the very next survey answer option for this survey question.

Ethics

To achieve an arm's length approach, Facebook breastfeeding support groups administrators were contacted and invited to participate and share the survey link in their groups. This survey was considered high-risk and so as with the previous survey, distress protocol contact numbers and live support links were added to every page of this survey (see Image 1).

Recruitment

The survey was distributed nationally and anonymously unlike in Phase 3, and a separate social media strategy was used with a Facebook page constructed for the sole purpose of sharing this survey, named 'breastfeeding research' (see Appendix. 10). This page did not contain any other information other than the survey link. The survey was shared by Facebook administrators in breastfeeding support groups and by the Australian Breastfeeding Association in their online communities and social medica spaces (ABA Research Approval Number 2021-12). When participants clicked on the survey link, they were first taken to the survey participant information and informed consent page of the survey (see Appendix. 11).

Testing the survey

This questionnaire was reviewed by the researcher and supervisors for functional validity, and was also reviewed for face validity and functional validity by two maternal and child health experts and a psychology research expert with the following credentials:

1. Midwife and Masters of Primary Maternity Care Student, School of Nursing and Midwifery, Griffith University Brisbane Queensland.
2. Midwife and PhD candidate Faculty of Health, University of Technology Sydney.
3. Associate Professor, School of Psychology, University of Queensland.

Data storage

Data from this survey was stored in the Qualtrics survey platform as suggested by UTS eResearch, and in the eResearch storage platform for health data, which requires a network drive UTS VPN Client to connect.

Participants

Unlike the previous survey, this survey did not target those who self-identified as experiencing feelings of aversion while breastfeeding. This survey invited all women who were breastfeeding to participate. Women were invited to complete the survey if they were over the age of 18 years, lived in Australia, and had breastfed an infant or were currently breastfeeding.

Data analysis

This survey was analysed using the Statistical Package for Social Sciences (SPSS). Statistical tests used to analyse the data were Chi- square test, One-way Welch ANOVA, and one sample binomial tests to calculate demographic characteristics and a population proportion estimate. Descriptive frequencies, means and standard deviations were used to analyse questions relating to the descriptions of BAR and the breastfeeding experience (see Chapter 6).

Integration

The results from the Phase 4 quantitative survey, and previous Phase 3 survey and Phase 1 and 2 qualitative phases were merged through embedding, mixing, and combining (Creswell, 2017). Finally, these findings were integrated to produce new mixed methods findings in the final integrated discussion chapter, which also comprehensively describes the integration process (see Chapter 7).

Data storage and management

The researcher complied with the requirements of the Australian Code for the Responsible Conduct of Research for data storage and safety, confidentiality and ethics, by constructing a data management plan using Stash, and UTS eResearch with fileshares and safe web storage. https://stash.research.uts.edu.au

Reflexivity

Phenomenology research requires that the researcher engages with reflexivity as an important philosophical consideration (Smith et al., 2009). Reflexive practices such as bracketing and using a research diary allow for the researcher to reflect on their personal experiences and how their perspective and experience have influenced the research question and methods (Finlay & Gough, 2008). I applied these reflective techniques when interacting with the data that I collected, analysed, and interpreted to be mindful of the limits between my personal experience and broader philosophically assumptions. This reflexive practice was also used to justify my reasoning for enquiring about the experience of women who have feelings of aversion while breastfeeding, which is discussed and presented in the discussion chapter (Shaw, 2016) (see chapter 7).

Bracketing

During participant interviews the IPA researcher is encouraged to bracket their experience and leave their personal understanding to come into the reality of the participants, using interview techniques which allow the participant to be the sole contributor of information to the discussion and the researcher to be an observer. This is achieved by the researcher using qualitative interview techniques such as reflecting back to the participant what they have just said verbatim with a questioning tone, or simply asking if the participant if they can 'tell me more' about what was just said (Smith et al., 2009). Moreover, when analysing the data the IPA method lays out clear instructions for the researcher to use structured analytic methods such as contextualisation, numeration, polarization and abstraction (Smith et al., 2009). The complexity and challenges that I experienced with implementing reflexive techniques while undertaking this research are discussed in the discussion chapter (see Chapter 7).

Limitations

It is important to note that there are likely many other types of negative breastfeeding sensations which have not been identified in this research, and some populations were not purposefully targeted, such as those with sensory processing disorder (SPD) and women who switched to formula feeding early in their feeding journey and were therefore missed by this research (see Chapter 7).

Conclusion

This chapter has described the methodology and philosophical underpinnings that were applied in addressing the research questions. The following chapters of this thesis explain the results by presenting the Phase 2, 3, and 4 publications.

Chapter 4 presents the second publication of this thesis. This publication presents the data collection, analysis, and findings of the phase 2 qualitative in-depth interviews using interpretative phenomenological analysis.

Chapter 4. "It Makes My Skin Crawl": Women's Experience of Breastfeeding Aversion Response (BAR)

Context

This chapter is a published paper and Phase 2 of this research. This phase used interpretative phenomenological analysis (IPA) to explore the experience of ten women who had feelings of aversion while breastfeeding using in-depth interviews. Using the IPA guidelines laid out by Smith, Flowers and Larkin (2009), interviews were transcribed and analysed. This study identified the in-the-moment feelings of breastfeeding aversion response, the effect of this experience on maternal identity and relationships with others, and how some women were able to continue to breastfeed with the challenge.

This chapter relates to the following four research objectives:

1. Describe the lived experience of breastfeeding aversion for women who self-identify as experiencing breastfeeding aversion.
2. Identify the main features of breastfeeding aversion described by women.
3. Explore the predisposing, precipitating and perpetuating factors of the experience of breastfeeding aversion as described by women.
4. Explore the self-perceived factors that reduce or stop feelings of aversion while breastfeeding.

Publication details

This work was published in Women and Birth, November 2022. This paper has been cited 4 times and has an Altmetric score of 25. This paper has also been cited in the Midwifery textbook; Midwifery Preparation for Practice E-Book, 5th Edition (Pairman, Tracy, Dahlen, & Dixon, 2022).

Morns, M., Steel, A., McIntyre, E., & Burns, E. (2022). "It Makes My Skin Crawl": Women's experience of breastfeeding aversion response (BAR). Women and Birth, 35(6), 582-592. doi:10.1016/j.wombi.2022.01.001

Abstract

Problem: Some women who intend to breastfeed experience a breastfeeding aversion response (BAR) while breastfeeding.

Background: Little is known about the experience of those who have feelings of aversion while breastfeeding.

Aim This study aimed to investigate the experiences of women who have an aversion response to breastfeeding while their infant is latched at the breast. This is the first study that aims to understand this breastfeeding aversion response (BAR) as described by women who

experience this phenomenon.

Methods: Interpretative phenomenological analysis (IPA) was used to conduct and analyse ten semi-structured in-depth interviews with women who self-identified as experiencing BAR.

Findings: Four overarching themes were identified: 1) Involuntary, strong sensations of aversion in response to the act of breastfeeding, 2) Internal conflict and effects on maternal identity, 3) The connection between BAR and relationships with others, and 4) Reflections on coping with BAR and building resilience.

Discussion: Some women who intend to breastfeed can experience BAR, and this negative sensation conflicts with their desire to breastfeed. BAR can impact on maternal wellbeing. Those who experience BAR may benefit from person-centred support that directly addresses the challenges associated with BAR to achieve their personal breastfeeding goals.

Conclusion: The experience of BAR is unexpected and difficult for mothers. If support is not available, BAR can have detrimental effects on maternal identity, mother-child bonds, and intimate family relationships.

Statement of Significance

Problem or Issue: Some women who desire to breastfeed can experience involuntary feelings of aversion while breastfeeding, yet little is known about their experience of this phenomena.

What is Already Known: Some women experience complex breastfeeding difficulties, such as feelings of aversion while breastfeeding, which may inhibit them from achieving their personal breastfeeding goals.

What this Paper Adds: Women who experience ***breastfeeding aversion response (BAR)*** describe it as involuntary, overwhelming sensations of aversion in response to the act of breastfeeding that affects their maternal identity, mother-child bonds, and intimate family relationships.

Introduction

Breastfeeding has been proven to provide short- and long-term public health benefits for women and infants (Binns et al., 2016). The World Health Organization (WHO) recommends breastfeeding for two years and beyond (WHO, 2003), yet women continue to have difficulty in achieving their personal breastfeeding goals (Brown, 2018). Breastfeeding is a complex embodied experience (Säilävaara, 2020), which has personal and cultural implications for women and their families (Rollins et al., 2016). Breastfeeding can affect maternal identity as women enter the world of becoming a new parent (Marshall et al., 2007), and the experience of breastfeeding is culturally entwined with the concept of mothering (Brown, 2018). A positive or negative breastfeeding experience is understood to have an impact on maternal wellbeing (Shepherd et al,, 2017), and good breastfeeding outcomes are not only important for infant health, but also for maternal mental health (Krol & Grossmann, 2018).

Breastfeeding relationships between woman and child are complex, and an understanding of this complexity is necessary to assist women in meeting their own breastfeeding goals (Azad et al., 2021; Peñacoba & Catala, 2019). The woman-infant breastfeeding relationship necessitates a co-operative shared experience of physical connection and emotional intimacy between woman and child. The wellbeing of this dynamic relationship can be dependent upon many factors including maternal quality of life (Ajami et al., 2018), socioeconomic factors (McGinnis et al. , 2018), access to peer support (Burns et al., 2020), partner support (Davidson & Ollerton, 2020), and type of healthcare support provided can also have negative impacts on breastfeeding outcomes (Burns et al., 2020).

There are difficulties that can arise during the breastfeeding relationship that are more complex than functional issues such as latch and supply (Watkinson et al., 2016). Some women can experience negative breastfeeding sensations and experiences in response to their infant suckling at the breast while the infant is latched (Morns, Steel, Burns, & McIntyre, 2021). The most recognised of these is 'dysphoric milk ejection reflex (D-MER)' through which negative sensations are experienced during the milk ejection reflex (Heise & Wiessinger, 2011), and can happen for women throughout their entire breastfeeding journey (Heise & Wiessinger, 2011). A second type of negative sensation reported by women, distinct from D-MER and receiving little researcher attention (Morns et al., 2021), is the experience of strong feelings of aversion lasting throughout the breastfeeding session. In further contrast to D-MER, this aversion during breastfeeding has been described as occurring unexpectedly for some who have previously breastfed an infant for some time.

Those with a history of childhood sexual assault (CSA) may also experience negative emotions and sensations while breastfeeding (Coles, 2009). The primary difference between the experience of negative sensations that occur because of a history of CSA, and the experience of aversion, is that the latter can occur during the breastfeeding journey, whereas negative breastfeeding sensations triggered by a history of CSA can occur for women from the beginning of their breastfeeding journey (Elfgen et al., 2017). Some women have reported experiencing aversion in response to tandem breastfeeding (which is breastfeeding two nurslings concurrently), and around the time of menses (Morns et al., 2021) suggesting physiological mechanisms—such as serum prolactin levels (Al-Chalabi, Bass, & Alsalman, 2020)—may also be associated with aversion. However, until the phenomenon of sensations of aversion while breastfeeding is better understood the influence of any potential mechanisms and causative factors will also remain unclear.

This is the first empirical study to directly investigate the lived experience of women who have feelings of aversion while breastfeeding. This study also explored the impact that this

experience had on their view of self, on the mother-child relationship, the relationship with the partner, and on women's understanding of breastfeeding.

Methods

Design

Qualitative phenomenology was chosen as the preferred methodological approach for exploring the lived experience of breastfeeding aversion using in-depth interviews (Creswell & Poth, 2017; Moustakas, 1994; Van Manen, 2017). Interpretive phenomenological analysis (IPA) was used to enable analysis of participants making sense of their own experience (Smith et al., 2009). IPA uses a double hermeneutic approach in that the researcher is reflecting on the significance of the participant making sense of their own experience (Smith et al., 2009). The researcher used bracketing, whereby the interviewer put aside their own personal feelings and focused attention closely on the participants. The researcher's own pre-existing personal experience of feelings of aversion while breastfeeding was bracketed to assist them in leaving their world and coming into the hermeneutic circle of the participants world (Smith et al., 2009, p. 64).

Participant selection

Participants were recruited from online breastfeeding support groups using an online screening tool and consent form to identify those for inclusion. Participants were included if they gave informed consent, were Australian, and self-identified as experiencing an aversion response while breastfeeding. Participants were not excluded based on current medication or past medical history. One participant withdrew consent from this study when they learned that this research intended to be gender inclusive. This study gained ethics approval through the researcher's host institution health and medical research ethics committee (UTS HREC REF NO. ETH19-4161). Due to the sensitive nature of the experiences shared by these participants additional support was provided in the form of contact information for counselling and breastfeeding support before each interview. Participants were also contacted by email the following day to touch base and offer information for support and counselling.

Data collection

Interviews were audio recorded using Zoom video conferencing which has been described in previous research as highly satisfactory for participants, cost effective and convenient (Archibald et al., 2019). Interviews were transcribed using NVivo qualitative data analysis software (NVivo, 2020). Participant's accounts of their own experience of breastfeeding and their perspectives about living with aversion were collected using the IPA method which emphasises focusing on a smaller homogenous sample to allow for richer phenomenological

analysis of participant's experience (Smith et al., 2009) in one-on-one in-depth interviews that lasted approximately 1 hour. Questioning was generated by attentive listening to the participants and reflecting participant comments back to them, which completed the first phase of the double hermeneutic approach of IPA (Smith et al., 2009). Interviews were conducted using an iterative approach, so each interview informed the next. Saturation was achieved when participants who self-identified as experiencing feelings of aversion while breastfeeding described a shared consistent experience of BAR. However due to the novel nature of this phenomena, and self-identification of BAR by participants the researchers acknowledge that although saturation was attempted, this research may not be generalisable to the broader population.

Table 4.1. Interview question guide

Opening questions:
1. Please describe your family structure.
2. How did you feel about breastfeeding while you were pregnant?
3. Please describe the breastfeeding story for each of your children?
Following up questions:
4. Please describe your experience of feelings of aversion while breastfeeding?
5. What circumstances (settings) influence your experience of aversion while breastfeeding?
6. What situations (happenings) affect your experience of aversion while breastfeeding?
7. What makes this experience better for you - what makes is worse for you?
8. How do you make sense of (understand) your experience of aversion while breastfeeding?
9. Is there anything else that you would like to share about your experience of aversion while breastfeeding that we have not spoken about yet?

Data analysis

Participants were given pseudonyms to de-identify the interviews. Data analysis began with exploratory analysis of transcribed interviews to interpret the participants account by conducting a line-by-line evaluation of the transcribed interviews and adding a comprehensive and detailed set of notes and comments on the data. This was achieved using the guidelines laid out by Smith, Flowers, and Larkin (2009). Further analysis was undertaken using discrete methods of adding exploratory comments to the transcripts: descriptive, linguistic, conceptual, and similarities and differences. Authors then discussed the results of the exploratory commenting and agreed on the preliminary analysis of the transcribed interviews. Emergent themes were developed by mapping interrelationships, connections, and patterns of the

exploratory notes for each participant (Smith et al., 2009). Connections across emergent themes were then found by examining transcripts for clusters of similar findings, and questioning how emergent themes in each case related to the themes of other cases and which themes were most compelling (Smith et al., 2009). Themes across participants were grouped to develop a deeper understanding of superordinate thematic connection, polarization, and hierarchy. Using this technique, the researcher was able to develop higher superordinate themes that were grounded according to the account of the participants while also abstracted and conceptual. All authors discussed final data analysis and agreed on the results. Conflicts were settled by the research team talking through issues and reaching a consensus. The researchers acknowledge that some people who experience aversion may not use the pronouns she/her; however, all participants in this study did use these pronouns, so these terms with breastfeed and women/mother are used throughout this article.

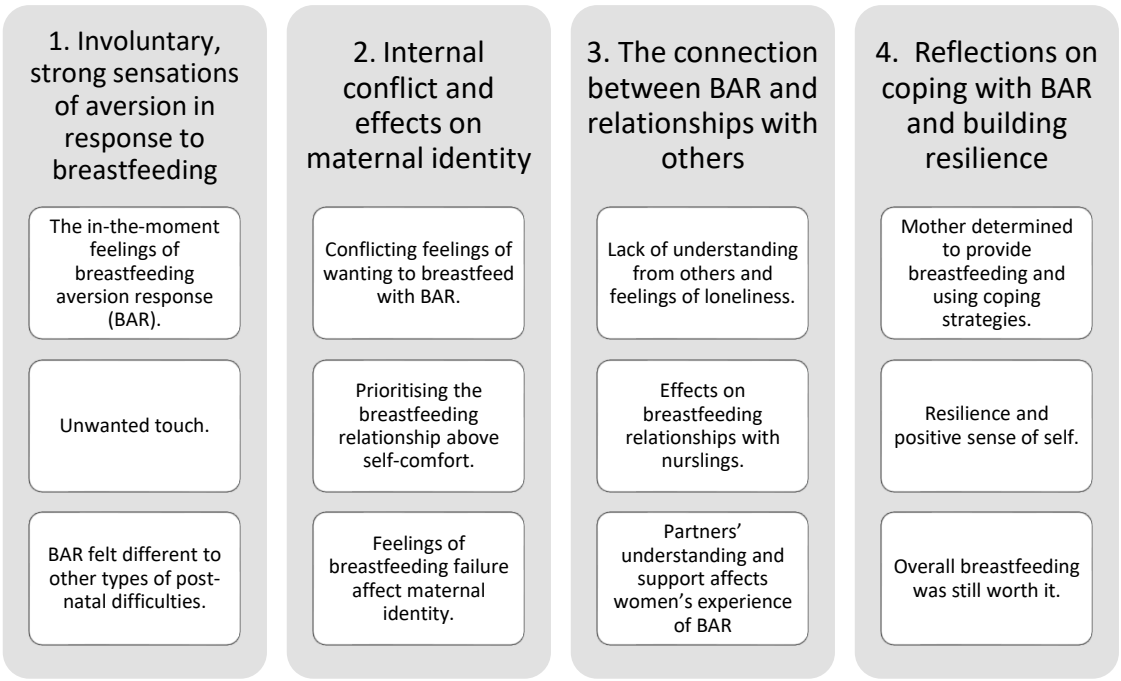
Table 4.2. Participant characteristics

Participant pseudonym	When did BAR occur?	Breastfeeding intention during first pregnancy - participant quotes	Total breastfeeding duration	Age and number of children	Relationship status
1. Ami	When breastfeeding while pregnant.	"I planned to breastfeed, I had a goal of one year"	>12 months	4 years 2 years	Married
2. Blair	While pregnant and tandem breastfeeding with the oldest nursling.	"I didn't give it a lot of thought"	> 12 months	4 years 1 year	Married
3. Drew	When pregnant and tandem breastfeeding with oldest nursling.	"I always wanted to breastfeed"	>12 months	9 years 7 years 6 years	Single
4. Eden	When pregnant and tandem breastfeeding with the oldest nursling.	"I didn't think about it when I was pregnant"	>12 months	2 years 1 year	De facto
5. Fon	When breastfeeding while pregnant.	"I was super keen to breastfeed"	>12 months	3 years 4 months	Married
6. Gabi	When pregnant and tandem breastfeeding with the oldest nursling.	"I expected it to be natural and easy"	>12 months	3 years 1 year	Married
7. Haven	All feeds from the first breastfeeding session.	"I was unsure if it would be manageable"	<6 weeks	2 years	De facto
8. Inge	When pregnant and tandem breastfeeding with the oldest nursling.	"It was the natural thing to do … I went to breastfeeding classes"	>12 months	7 years 4 years	Married
9. Jem	Around the time of menstruation with an older nursling.	"I always planned to breastfeed"	>12 months	3 years	De facto
10. Kim	When breastfeeding while pregnant.	"…never excited about it but thought I'd give it a go"	>12 months	3 years & Pregnant	Married

Results

Four themes were identified that were shared across the sample (see Figure 4.1). These results reflect participants descriptions of their experience of breastfeeding aversion response (BAR). BAR is defined as a compulsion to unlatch in reaction to negative sensations while breastfeeding, which range from mild to repellent and conflict with the desire to breastfeed. All participants shared their personal understanding of what BAR meant for them, and how this experience changed their maternal identity and how it affected intimate family relationships. The four themes shared across participants are: 1) Involuntary, strong sensations of aversion in response to breastfeeding, 2) Feeling out of control and effects on maternal identity 3) Impact on relationships triggering maternal guilt and feelings of isolation, and 4) Reflections on coping with BAR and building resilience. These themes are presented with a detailed account of how each theme applies to the study participants.

Figure 4.1. The Experience of BAR themes and subthemes across participants



Involuntary, strong sensations of aversion in response to breastfeeding

Participants described a shared understanding of BAR and used strong emotive language to describe this experience. Women frequently reported experiencing BAR as negative sensations that were "visceral", "overwhelming", and "uncontrollable". All participants described BAR as temporary, stating the sensations would cease when the breastfeeding session ended. Many participants described the feeling of BAR as "skin crawling". BAR was described by participants as feeling distinct compared to other types of common postnatal difficulties, giving examples such as being touched out, breastfeeding resentment and postnatal depression.

The in-the-moment feelings of breastfeeding aversion response (BAR)

There was a shared feeling between participants that the experience of BAR was unwanted, and they felt they were not able to stop the negative sensations. Many described the sensations as frustrating and unpleasant;

> *"Irritating. Uncomfortable. Like you have got ants or bugs under your skin, so infuriatingly annoying, but you can't do anything about it" (Ami).*

The sensations of BAR were reported as strong and overwhelming. Many participants used the word "throw" when speaking of an intense feeling to remove their child from the breast;

> *"I wanted to throw him across the room. I would say to my husband just get him away, get him off me, get him off me [sic]. My internal thoughts were just so awful" (Inge).*

Almost all participants repeated the word "throw" and described thoughts of pushing their infant away and of physical urges to remove their child from the breast using this same word;

> *"It was intense and it was both a mental and physical feeling like you want to throw your child off. You just can't feel this feeling like you've got something crawling underneath your entire skin, that's why this felt like you wanted to rip your skin off and just, you know, escape it […] it was just like you just wanted to throw the child away from you just to make it stop" (Drew).*

Participants described the strong physical reflexive sensations associated with their experience of BAR and spoke of feeling irritability and restlessness;

> *"I get restless leg syndrome sometimes and it feels a bit like that, I just can't lie still. I just want some space and I can't lie still with this. It just doesn't feel comfortable, I just want him off me" (Fon).*

Many participants described BAR as an involuntary experience that was so horrible it caused them to dread breastfeeding and triggered a 'flight or fight'-like response in anticipation of breastfeeding and described the anxiety they felt before breastfeeding with the expectation of experiencing BAR;

> *"it's like a sense of dread, it just makes my heart race. It makes me come out in cold sweats [...] that feeling in the pit of your stomach of dread or anxiety of like makes me feel shaky with a cold sweat" (Eden).*

Many participants described the bedtime feed as being most difficult and the time that they felt they most needed to use self-distraction to complete feeding sessions;

"for the bedtime feed the aversion was there to the point that I had to distract myself with either a TV show or my phone. I couldn't focus on her feeding or look at her or I just would want to tear her off or stop" (Blair).

Unwanted touch

For some participants who continued breastfeeding older nurslings while experiencing BAR, the feeling of persevering with breastfeeding was likened to the feeling of being physically violated. Several participants compared enduring the feelings of BAR to being physically abused. Interviewees who may or may not have had a history of abuse described the feeling as like tolerating unwanted touch;

"it's like being touched when you don't want to be touched. If he wasn't little and three, it would almost be like maybe a relative at a gathering touching you inappropriately or, in a way that you don't want. It is really hard to describe. It was almost like suddenly it was a very foreign, kind of almost like an invasion. A little bit like an invasion of space and an invasion of my body" (Fon).

Comparing the sensation of BAR to the feeling of being violated was expressed by more than half of those included in this study. Eden described the feelings of BAR that she experienced as tolerating unwanted touch and not being able to get away;

"Anxiety in the pit of your stomach or the anger. Like the anger that you feel that this is happening and you can't do anything to stop it. […] It makes your blood shiver. It makes me shiver, it makes me feel like there's something crawling on me and I just can't get away" (Eden).

Several interviewees had difficulty finding the words to explain the negative sensations they had experienced while breastfeeding. Kim used the concept of a sliding scale to try to describe BAR;

"revulsion feels like too strong of a word, but I don't have a like a mediating word that would cover it. Yeah if revulsion is a ten, and neutral is zero. I was probably always at least 4 or 5 on the scale of neutral to revulsion" (Kim).

BAR felt different to other types of postnatal difficulties

All interviewees described the sensations of BAR as temporary and only while breastfeeding and explained that it was different from other postnatal difficulties in that way. Participants reported the shared experience of the negative sensations ending at the cessation of each feeding session. Drew interpreted this to mean that BAR was dissimilar to her experience of postnatal depression;

"The breastfeeding aversion was only ever a temporary feeling. So as soon as I stopped feeding, that feeling would stop. So I guess they [doctors] couldn't really associate it to the postnatal depression because it was only temporary" (Drew).

The experience of BAR was described as unlike other known breastfeeding and postnatal difficulties. Many participants described a difference between feeling "touched out" and "breastfeeding resentment" and the experience of BAR. Participants explained that BAR was a specific "in-the-moment" response the act of breastfeeding and the experience of BAR was not the same as having feelings of resentment and being touched out during breastfeeding;

"I have had periods of breastfeeding aversion and I've had periods of breastfeeding resentment and I differentiate between those [...] I guess, the aversion is when there is a physical reaction. I talk about it as breastfeeding resentment when it's more psychological or emotional, of me being over it " (Blair).

Several participants explained that they would not describe the sensations of BAR as a feeling of physical pain and explained the sensation in more abstract terms: "it wasn't pain, it was more like anger, like my boobs would make me feel angry" (Jem). Participants described the complexity of BAR as being more than only a physical feeling;

"it's not related at all to enjoyment. And it was not related completely to pain. It is like it's on this whole separate other axis of who you are. And it's almost like if you're itchy, but you can't get it, can't actually get to the specific spot where it itches" (Ami).

Internal conflict and effects on maternal identity

Participants shared a belief that breastfeeding was beneficial not only for the health of themselves and their infant, but also for the relationship they had with their child, and their conceptual understanding of maternal identity. Many participants felt that breastfeeding was their maternal responsibility. Participants described that the experience of BAR had conflicted with their values of mothering, which triggered a challenge to their maternal identity and caused a changed understanding of their breastfeeding relationship. Participants expressed losing internal locus of control when experiencing BAR and described the unwanted physical and psychological feelings had conflicted with their own personal values and desire to continue to breastfeed. Many who described having BAR struggled with the contradictory experience of being physically able to breastfeed but feeling negative sensations while feeding. A willingness to continue to breastfeed was a common characteristic to almost all participants included in this study;

"I found it really challenging because I wanted to follow his lead with the breastfeeding and I wanted to be able to provide the comfort that obviously at his age still gives him a lot of comfort […] I wanted to be able to provide that, so I felt really disappointed when there were days where I just felt like I couldn't" (Fon).

Conflicting feelings of wanting to breastfeed with BAR

Participants described wanting to breastfeed yet experiencing BAR and how this contradictory experience was unsettling and upsetting. These antagonistic feelings of wanting to breastfeed and not wanting to breastfeed at the same time were described as confusing;

"It's just a very anxious feeling because I didn't want to feel that way. I felt bad about it. I didn't want to be feeding him, but I wanted to be feeding him. So it was just sort of anxiety because I couldn't work it out" (Fon).

Confusion about incongruent thoughts of desiring to breastfeed while at the same time disliking the feeling of breastfeed was a shared theme among the sample. Many separated the concept of wanting to breastfeed from the negative feelings of BAR by stating that it was not breastfeeding *per se* that they felt opposed to;

"it's the aversion, not the act of breastfeeding, but just the feeling of the breastfeeding was like, yeah, I just don't want that. That was what it was. I didn't want that feeling. What I was averse to was the aversions, I don't know what the correct word is" (Jem).

Ironically, participants felt that they were physically able to breastfeed with adequate milk supply and feeding techniques, yet BAR had caused them to question if their experience of breastfeeding was inadequate;

"I suppose, aversion in terms of me not enjoying the experience anymore. Not wanting to do it. I suppose you get the women that can't breastfeed, but this is when they can. And it just is not a bonding experience. It's not a connection. It's not what it's supposed to be" (Inge).

Prioritising the breastfeeding relationship above self-comfort

A common theme described by participants in this study was parents not wanting to end the breastfeeding relationship before their child was ready to stop breastfeeding. Several participants prioritised an acceptable end to the breastfeeding relationship for their child as being more important than their personal experience of BAR;

"He just wants his mum. He wants to have a feed and feel close. Which is why I persisted with breastfeeding him anyway. I didn't wean him at all and I won't wean

him either until he decides that he doesn't want any anymore booby and that doesn't seem to be happening any time soon" (Gabi).

Some who continued to breastfeed spoke of the determination needed to continue breastfeeding despite BAR and reported making a conscious decision to keep going while not enjoying it; *"So I just push through the aversion of wanting to push her off my boob and just have her weaned already" (Eden).*

Many described willingly surrendering their bodily autonomy for the sake of the breastfeeding relationship, commenting that they would rather sacrifice their personal comfort than end the breastfeeding relationship, *"But at the same time, I was happy to sacrifice, I guess myself" (Drew).*

Breastfeeding was viewed as an important tool for soothing infants and assisting with sleep habits. Many participants felt that breastfeeding was the best way to settle their infant which was of greater importance to them than their own negative feelings in response to breastfeeding;

"It was hard enough getting her back to sleep anyway, if she woke up then it would take even longer to feed her so it was just like, I have to really work on breathing and mind exercises to get through that feeling and the longer it went on the more I just wanted to like pull her off me and throw her across the room" (Jem).

Feelings of breastfeeding failure affect maternal identity

Participants saw the act of breastfeeding as intrinsically intwined with the concept of mothering. The experience of BAR caused many women to question their maternal identity. Participants had difficulty reconciling the experience of BAR and the accompanying unwanted negative thoughts together with their understanding of their own maternal identity. Several interviewees perceived themselves as failing in their role as a breastfeeding mother because they were not enjoying the experience of breastfeeding. Although participants described wanting to continue breastfeeding and that the experience of BAR was involuntary, many reported the contradictory feeling that BAR was somehow their fault;

"it felt like it was something that I was doing wrong, like that it was something that was wrong with me. When I first hadn't heard of anyone having it, then I was like, why am I experiencing this? Like, why doesn't anybody else seem to be experiencing it? Why do people say it's so enjoyable when I am finding it so tough"(Drew).

Some participants were able to objectively comment that they would not act on the feelings of BAR or the thoughts that they had while experiencing BAR, and could identify that some of these thoughts were inappropriate;

> *"You know, I'd never do it. I have never actually wanted to throw him across the room, you know, I just wanted him to get as far away from my boob as possible. So Yeah, that is a pretty awful thought to have" (Inge).*

The experience of BAR had negative effects on women's perception of maternal worth and confidence. One participant in this study commented that the experience of BAR had caused her to question her value as a parent and described feelings of self-blame and inadequacy;

> *"I feel like I'm not doing good enough. I am not a good parent. Maybe I should not have had a child […] Even looking back, I think maybe I should have kept trying to get assistance and support about it, because everything is about the benefits of breastfeeding and why you should do it. So, there's a lot of well maybe I was just doing it wrong or I didn't try hard enough" (Haven).*

The connection between BAR and relationships with others.

All participants in this study reported that the experience of BAR had affected not only their relationship with their child but had also changed other family relationships. Partner-to-partner relationships were altered in positive or negative ways in relation to how much the breastfeeding woman felt that her partner had understood BAR, and if the partner had provided timely and helpful support. Mother-child bonds were challenged; however, these challenges were perceived less negatively if the breastfeeding relationship was able to continue, or finish in a way that was perceived by the mother as satisfactory for the child.

Lack of understanding from others and feelings of loneliness

Participants found it difficult to speak to others about their experience of BAR because they were concerned that it would be perceived as a *taboo* subject, and they struggled to find words to describe BAR. All of those included in this study expressed feeling misunderstood when sharing their experience of BAR with others. The sensations of BAR were difficult for participants to describe because they had not heard of this or experienced anything like that before;

> *"I think it's hard to describe because it was an experience I've never experienced before, like I've never felt it, so like prior to obviously having it I've never, I don't know, it's just hard to explain, I guess" (Eden).*

Several participants did not feel that they had received support or understanding for their psychological wellbeing while experiencing BAR and commented that the focus from health professionals was solely on the health benefits of breastfeeding for their child;

> *"I don't think anyone ever considered my mental health during it all. 'This is the best for your baby in terms of the antibodies and the breastmilk', and just suck it up and deal with it" (Eden).*

Participants reflected on how breastfeeding was thought of as almost disposable by those that they had spoken to in the community about their experience of BAR. Participants felt that if they did share their experience of BAR they then had to justify why they continued to breastfeed with BAR;

> *"I suppose we're trying to look for words that justify it almost. When that is not really the case. Yeah, I sort of almost feel like that is what we try and do. Like we try and justify why we keep going through the issues" (Ami).*

Almost all of those in this study wanted more support to continue breastfeeding while experiencing BAR. Many women expressed a desire for more support from others to achieve their personal breastfeeding goals despite experience BAR. Participants spoke of wanting more helpful advice and support rather than being told to wean;

> *"it's one of those things people are very quick to be like. Okay. We'll just stop breastfeeding then. And that wasn't what I wanted to do. So I sort of, I found that it amplified the feelings because the only kind of feedback that I'd gotten was, okay, don't breastfeed anymore. And that wasn't what I wanted" (Kim).*

Some participants described a sense of loneliness in their experience of BAR and believed the experience was unique to them. This caused them to feel that they could not talk about their experience or seek support from others;

> *"So people would be like, oh, yeah, I like breastfeeding and I'm like, oh, I guess I'm the weird one and it didn't feel like something I could talk about" (Kim).*

Effects on breastfeeding relationships with nurslings

The experience of BAR caused tension in the breastfeeding relationship with the child who triggered the BAR response, which was often the older nursling when tandem feeding or a single older nursling around the time of menses. Women reported feeling that BAR had affected their bonding experience with the affected child, which for those who were tandem feeding was often only the eldest nursling;

"It made it very difficult to enjoy that whole bonding experience, I think it was just really, I don't know, overwhelming. It just made you feel like you just wanted to escape, almost escape your own body because it just felt so horrible" (Drew).

One participant likened the emotional aspect of BAR to an unwanted relationship. The participant described negative emotional impacts they had felt with the affected child and commented that they had felt the urge to withdraw emotionally and physically;

"I felt like my boundaries were being crossed […] But there's this little person who's really needing it. So I felt torn. I felt very torn [sic]. And it felt like it wasn't working. It felt a little bit like when you're having a relationship with someone and you want to break it up but you kind of you don't want to do it, but you kind of know it needs to happen. It felt like that like breaking up with someone" (Fon).

Several participants spoke of having to disassociate themselves from their child in the moment while breastfeeding. Many participants could not think about the breastfeeding bond or relationship, and were not able to look at their child while breastfeeding as this would further trigger BAR;

"I couldn't focus on her feeding or look at her or I just would want to tear her off or stop. I would get quite almost irritated with her and annoyed. But I was very determined to try and meet her where she was at emotionally" (Blair).

Many participants spoke of the negative impact that BAR had on the relationship with their child and described feeling anxiety about the thought of breastfeeding. BAR affected the relationship with the nursling and not just the breastfeeding relationship;

"I would hope that she would stay asleep longer so I didn't have to feed her […] I started to resent her a bit every time she woke up, my emotional state went downhill very quickly from there. So we weren't connecting, I didn't want to be around her, I didn't want her near me and just the idea of feeding her made me feel physically ill" (Haven).

Several participants included in this study described needing to physically distance themselves from their affected child when the experience of BAR became too much for them. Almost all participants described having feelings of guilt about their relationship with their child;

"feeling a bit guilty for wanting to push her away when I don't want to push her away […] I probably overcompensate in a way to make sure that I'm giving her extra attention and affection throughout the day when I can do that" (Jem).

Some participants did not feel that the experience of BAR had affected their bond with the affected child and saw breastfeeding as a way to show comfort and nurturing to their child despite experiencing BAR. Women reported that despite experiencing BAR, breastfeeding was still a source of comfort and connection with their affected child;

> *"And even later on, even during the aversions, I still loved the fact that I could comfort him really easily with the breast feeding, even if it didn't feel quite the same or if it was something I had to sit with a bit, sit with some emotions and feelings, I still loved that I could have that connection and be able to comfort him, I guess. Does that make sense?" (Fon).*

Participants who tandem breastfed and experienced BAR described a positive breastfeeding relationship with their younger nursling and reported experiencing BAR only with their older nursling. Many commented that they could breastfeed their younger nursling without BAR but then would breastfeed their toddler and experience BAR;

> *"It was more [child 1] that I had the aversion with, like even now even now with [child 1] I say no. And I've never had that feeling with her [child 2] that has never happened with her" (Inge).*

Partners' understanding and support affects women's experience of BAR

Many women included in this study reported that their partners had made a significant difference to their ability to cope with experiencing BAR. Participants felt that some partners had given timely support that had allowed the breastfeeding relationship to continue, while others reported that their partners expressed a lack of understanding and did not offer support. Some women felt that their partners had placed negative judgements on them for experiencing BAR, which had exacerbated their negative experience. Several participants reported that the experience of BAR had positively or negatively affected the relationship that they had with their partner.

Many breastfeeding women in this study reported that their partners had not understood what was happening for them, and not provided support which had caused the women to feel discouraged. Many women spoke of feeling misunderstood by their partner;

> *"Like my partner, he just does not get it. He says "just give them both a feed, they both want it". I'm like, "I can't give them both a feed, like I literally just ergh", and he's like, "I don't see what the problem is"? And I'm like, "you just don't get it". He just doesn't understand. So it's disheartening and it makes you feel like you're not validated, like your opinion doesn't count" (Eden).*

Those included in this study felt that their partners did not understand how difficult the experience of BAR was for them. Participants reported finding it difficult to explain the experience of BAR to their partners and when they were able to communicate this experience, the reaction from some partners was judgmental and othering;

> *"I remember telling my husband, you know, I just want to tear her off and throw her across the room and him being horrified. I'm not going to do it, but that's what it feels like" (Blair).*

Partner responses were a common concern among those who experienced BAR. Several women spoke of the added difficulty of not receiving helpful support from partners. These participants described feeling misunderstood and frustrated when their partners had given unwanted advice to stop breastfeeding and wean the affected child;

> *"I'd sort of been like talking to my partner about this and he'd said a few times just why do you have to persist breastfeeding? Just give up like, you know, just give her formula. No need to worry about if it costs more or whatever. You know, it's not a big deal. Like you're just putting yourself through torture" (Jem).*

Another concern shared by women in this study was that the experience of BAR had added negative complexity to their partner relationship. Many reported feeling angry at their partners because they did not feel that they had received understanding or support, and spoke of feeling isolated within their relationship and frustration with their partners;

> *"it also might be anger at my husband as well for not being around, not being so supportive in a way. He was like "what's that's the problem?" I was quite lonely with it because it's like he was just saying, "what's the problem? Just do it" (Inge).*

BAR triggered changed relationship expectations which caused a challenge to partner relationships and some participants questioned their relationship and future family goals.

Positive impacts for partner-partner and child-father relationships when partner supportive

Some participants described receiving a supportive and encouraging response from their partner which had a beneficial effect on their relationship and also on the relationship between the father and affected child. Some partners provided support with older nurslings by providing care for their toddler when the mother felt that she could not breastfeed because of BAR;

> *"[husband] would recognise what was happening and would take [child 1] away and distract him with something, like let's go check a letterbox or let's go and feed the*

chickens. While I stayed inside and fed [child 2] quietly without someone hassling me for that feeding session" (Gabi).

Participants also spoke of partner-child bonds being strengthened and positive outcomes for partner-child relationships because of partners spending more time comforting older nurslings: "But in the positive for my husband and her, like, I really they have a wonderful relationship" (Ami).

Several participants who described their partners as supportive also reported that even the supportive partners had found the shared experience of BAR challenging;

"I certainly think my husband found it hard. Like, sometimes I just pumped and then the baby would cry and it would be like ok, you're hungry again. Great. And I just feel like I can't do this and hand him the baby. So he found that a challenge" (Ami).

BAR affected all aspects of maternal relationships from child and partner bonds, and the woman's own personal relationship with herself an understanding of her own maternal identity.

Reflections on coping with BAR and building resilience

Although some women who experienced BAR were not able to continue breastfeeding the affected child, more than half of the participants in this study did continue to breastfeed despite experiencing BAR believing that the experience of BAR was one negative aspect of an overall valuable breastfeeding relationship. Women continued to breastfeed using several coping strategies that they found useful including self-care, setting gentle breastfeeding boundaries, and distracting self while breastfeeding. Partner support and peer-to-peer online support were regarded as helpful and had enabled some women to achieve their personal breastfeeding goals.

Mother determined to provide breastfeeding and using coping strategies.

For those who persisted with breastfeeding while experiencing BAR, many described the personal determination that they felt they had needed to continue. Those who had experienced a previous positive breastfeeding relationship struggled to breastfeed despite BAR;

"the length of time I breastfed for, I wasn't going to let it control my ability or my determination to continue to breastfeed, but it did probably impact the enjoyment and bonding side" (Drew).

Some stated that the nutritional value of breastfeeding for their child was of great importance to them and that they had prioritised nutrition when considering whether or not to continue breastfeeding while experiencing BAR;

> *"I like had to fight it in my head to be like, no, I need to keep feeding this is the only way she is going to get nutrients. She doesn't eat food like, I have to just push myself through it" (Jem).*

Some participants were able to persist with breastfeeding despite experiencing BAR and described being motivated by their child's health concerns when making the decision to continue breastfeeding. One participant spoke of the health issues their child was experiencing and believed that due to these health concerns, continuing to breastfeeding was important;

> *"knowing how good it was for them, I knew with [child 1] something's not quite right […] I remember feeding her in recovery, leaning over the gurney as she came to. So I was really motivated" (Blair).*

Comfort breastfeeding was described as a valuable parenting tool for calming and soothing children when they were upset, and for aiding sleep. Women described this as an important factor when choosing whether or not to continue breastfeed;

> *"I didn't want to end that breastfeeding relationship for us because he loved it so much. And it's such a great way to get him to bed at night. So there were nights where I felt like, yes, I can stick with it, I can be okay with it" (Fon).*

Participants described being able to continue breastfeeding while experiencing BAR by implementing coping strategies that they used to tolerate the negative sensations while breastfeeding. Almost all participants in this study reported using different types of self-distraction techniques while breastfeeding to continue each breastfeeding session;

> *"I'd be willing to accept that the baby needed food. I really didn't want to do it. I would start and then be like ok what can I do to keep my mind off this?" (Kim).*

Personal distraction techniques were commonly used to complete each feeding session. Women described using a positive internal dialogue, or breathing techniques to calm themselves and persevere through difficult breastfeeding sessions;

> *"like relaxation script, which is like a guided meditation that talks you through relaxing like from the top of your head. It talks you through all the parts of your body and moving down, like all the way to your toes. I find that really helpful. To sort of take my*

mind away from the irritating feelings and also just the deep breathing to the count of four, hold and then out all the way through ten" (Ami).

Those who had previously used relaxation techniques were able to implement known methods of personal calming with success. Breathing techniques allowed some to continue to breastfeed while experiencing BAR. Fon gave an example of a specific relaxation method;

"I used a type of breathing exercise called a four-point breaths where you breathe in to the count of four and then you hold for the count of four, then out for the count of four and then hold it. I sort of visualize a square as I'm going around. And I just find that that gives my mind something else to focus on" (Fon).

Women repeatedly spoke of using whatever was readily available to them as a self-distraction tool while breastfeeding. Women reported using different forms of entertainment or social media to distract themselves as a way to continue to breastfeed while experiencing BAR;

"And sometimes just distracting myself like whether it be reading a book or, mindlessly watching TV or browsing Facebook or really distracting myself from what I was doing. So there was none of these nice breastfeeding moments where I was looking at her in the eyes or anything like that, because I couldn't tolerate that. It was about distracting my mind from what my body was doing" (Ami).

Breastfeeding boundaries with older nurslings were described as essential for some participants to continue breastfeeding while experiencing BAR. Women recounted that limiting of the amount, length or intensity of feeding sessions with the affected nursling had allowed the breastfeeding relationship continue;

"breastfeeding has been different in that I have set personal boundaries and I have found other ways to soothe him that don't involve breastfeeding. I don't deny him it either. Like if I couldn't get him to stop crying then I would just give the boob" (Eden).

The 'don't offer, don't deny' method as a gentle breastfeeding boundary was used by not intentionally offering the breast and offering food to older nurslings to reduce the number of breastfeeds;

"I didn't look forward to feeding him at all. I didn't want to avoid it at all, but I didn't encourage it. I let him if he wanted to feed then that's great. But I wouldn't ask him hey do you want some boob? And I guess to try and limit the feeding overnight, I didn't want to wean him at all, but I'd try and give him like a banana to eat before bed, just to try and fill him up" (Gabi).

Some participants first found information about BAR through social media support groups and felt that the peer-to-peer support they received online had enabled them to normalise the experience of BAR somewhat which had then allowed them to better cope;

> *"I'd stumbled across the words breastfeeding aversion I believe in one of the breastfeeding support Facebook groups that I'm part of […] I've found a lot of solace in other women's experiences other women having experienced it. I have a little bit more understanding now of the experiences that women have in relation to breastfeeding" (Ami).*

Some participants found that taking a magnesium supplement had caused the feelings of BAR to lessen to the point that they were able to continue breastfeeding, or that they were then able to reduce breastfeeding sessions in a gradual way rather than weaning quickly in response to BAR; *"So I did find that taking the magnesium helped… I still was experiencing it, but it was certainly dulled" (Ami).*

Women who experienced BAR felt psychologically unprepared; however, those who gained some understanding of BAR from online breastfeeding support groups felt they were able to make more empowering personal decisions about the progress of their breastfeeding relationship.

Resilience and positive sense of self

Several women described persevering with breastfeeding despite BAR and that continuing to breastfeed had contributed to a positive sense of personal achievement;

> *"I feel good that I've been able to get through that stage of it" (Drew).*

> *"I'm proud that we were able to continue breastfeeding and that I got through those feelings" (Fon).*

Some participants saw overcoming the experience of BAR as a personal challenge and continuing to breastfeed despite the experience of BAR was seen as a victory;

> *"It was my challenge to push through it and it became, I guess a source of pride" (Blair).*

Women who were able to breastfeed with BAR and not act on the negative feelings also described resisting the urge to act on the feelings of BAR had contributed to feelings of positive self-regard;

"I've never lashed out or, you know, I've never actually thrown her off me even though I wanted to. So I feel quite happy as well at the same time that I haven't acted on those feelings" (Jem).

Several women describe intentionally reframing the experience of BAR to move past associated feelings of guilt and shame. Some women spoke of confronting the self-blame that they had felt by forgiving themself for experiencing BAR to overcome feelings of guilt: *"I can feel guilty at the time, but I learned to forgive myself for feeling like that" (Jem).*

Overall breastfeeding was still worth it

Many of the breastfeeding women in this study shared a high regard for their breastfeeding journey describing it as a valuable and positive experience. They explained that they did not regret breastfeeding and that they viewed the experience of BAR as one part of an overall important breastfeeding relationship. Many women spoke of weighing up the benefits of breastfeeding against the experience of BAR, then deciding that breastfeeding was still worth it;

"So, you know, it's like you can separate that experience from the whole of what breastfeeding can be and what it means. So that like it becomes, it's worth still breastfeeding through it. Yeah. There's so many more reasons that it's beneficial than of that feeling of, yes, you don't want to do it" (Jem).

Some participants retrospectively described being content with the breastfeeding relationship despite experiencing BAR, and commented that although the bond with the affected child had been strained at the time of experiencing BAR, their long-term bond with the BAR-affected child had not been affected negatively;

"At the time, in the moment when I would be feeding and feeling it, it was detracting from the relationship. But now that it's more or less over, I look back and I don't regret it at all and it hasn't taken away from all the positives or from the bond" (Blair).

The long- and short-term benefits of breastfeeding were important to many of those included in this study and for that reason they were able to continue to breastfeed despite experiencing BAR. May reported enjoying breastfeeding overall, *"I would still say that I love breastfeeding, even though probably half of it has not been pleasant" (Jem).* All of the participants in this study, except one, breastfed their children for over one year and were overall happy that they had been able to continue with their breastfeeding journey, *"I think she's of an age where she will remember. So I'm glad that I was able to push through it" (Blair).*

Discussion

This is the first study to purposely explore the lived experience of BAR, which is characterised by involuntary, overwhelming feelings of aversion that occur during the entire time that the infant is nursing at the breast. BAR can happen at any point in the breastfeeding journey, and notably can occur suddenly for mother-child dyads with previously positive breastfeeding experiences, and when tandem nursing with only the oldest breastfeeding child. In contrast, other types of negative breastfeeding sensations, such as the experience of D-MER and those sensations associated with a history of abuse (CSA), are less likely to occur after previous breastfeeding success and more likely to occur with all nurslings (Coles, 2009; Heise & Wiessinger, 2011; Ureño et al., 2019). This paper describes the phenomena of BAR as problematic for some who breastfeed with potential negative effects on their family relationships. However, the stories from women in this study highlighted that when given the right support some were able to manage and adapt to BAR and described resilient coping strategies during this complex breastfeeding difficulty.

BAR and the breastfeeding relationship

This study has revealed that the experience of BAR is overwhelming and unexpected for women who desire to breastfeed. This research has demonstrated that those with a previously uncomplicated breastfeeding relationship who then experience BAR, find this experience overwhelming and confusing, and causes internal conflict for those who aim to breastfeed. These findings support previous research documenting the complexity of the breastfeeding relationship, and the significant impact breastfeeding has on mother-infant bonds (Johnson, 2013). Moreover, this research confirms that effective breastfeeding is a shared experience of connection and nurturing between woman and child (Peñacoba & Catala, 2019), and also enhances maternal satisfaction (Awaliyah et al., 2019).

Breastfeeding boundaries

Our study found that some women who experience BAR with older nurslings are unable to continue breastfeeding; however, many who experienced this phenomenon wished to continue breastfeeding and persevere. This study demonstrated that women who experience BAR have chosen to breastfeed but feel that BAR negatively impacts their breastfeeding relationship. These findings are consistent with previous anecdotal commentary in lay literature stating that breastfeeding boundaries can be important for women who experience difficulties such as BAR to regain a sense of bodily autonomy and confidence for breastfeeding (Flower, 2019). To achieve their breastfeeding goals with older nurslings some women who experienced BAR implemented breastfeeding limits such as reducing the number or length of feeds. Previous research has shown that setting breastfeeding limits with older nurslings such

as reducing length and duration of feeds, or night weaning can have a positive effect on breastfeeding duration and outcomes when "continued breastfeeding without restrictions became tiring and impractical" (Thompson et al., 2020). Some of the breastfeeding boundaries described by Thompson and colleagues may be worth considering for women experiencing BAR, however it is important to recognise that the experience of BAR is more complex than that of demand feeding older nurslings.

BAR and possible mental health outcomes

Previous research has found that breastfeeding can positively or negatively impact maternal mental health and this is also reflected in the experiences of the women in this study, however this relationship needs to be further explored in additional research. (Shepherd et al., 2017). The way that the breastfeeding relationship concludes is important for the psychological wellbeing of both the breastfeeding women and her infant (Krol & Grossmann, 2018). Women need to be supported to find solutions to breastfeeding problems such as BAR that are acceptable for them, and that they perceive as satisfactory for their child to mitigate possible negative psychological outcomes (Gregory et al., 2015). Some women who experience BAR will not be able to continue breastfeeding because of detrimental effects on their mental health. In such cases it is important that women are supported to end the breastfeeding relationship in a way that does not cause guilt and shame (Brown, 2018). Guilt and shame associated with breastfeeding cessation have been shown to affect maternal identity and mental wellbeing (Jackson et al., 2021). Similarly, stopping breastfeeding due to physical difficulty (e.g. pain, infection) was predictive of depression (Brown et al., 2016). The weaning process is an important part of the breastfeeding journey and has the potential to cause long-term detrimental effects on the women's sense of self and her the relationship with the affected child (Brown, 2018; Gregory et al., 2015). Breastfeeding can have positive psychological effects on maternal identity when women can overcome breastfeeding difficulties such as BAR and achieve personal breastfeeding goals or are able to retrospectively feel confident about their breastfeeding outcomes (Brown, 2018; Morns et al., 2021).

BAR and the need for breastfeeding support

The study participants reported that the practical support they received from those around them when experiencing BAR can be a key factor in creating better breastfeeding outcomes. These findings support previous research reporting that practical support from partners, other family members or friends is important for women to achieve their own breastfeeding goals (Burns et al., 2020; Davidson & Ollerton, 2020). Partners can provide vital support for those who experience BAR, and partners of those who experience this phenomenon have an influential role to play in supporting women to achieve their personal breastfeeding goals

(Davidson & Ollerton, 2020; Srisopa & Lucas, 2021). Women also want non-judgmental breastfeeding support with a focus on maternal mental health rather than the mechanistic functions of breastfeeding (Burns et al., 2012a). This study has shown that those who experience BAR demonstrated that they wanted answers and support to help them overcome and understand this phenomenon. Participants described two key psychological barriers to seeking support: the experience of BAR is unknown by those who choose to breastfeed, and a perceived social stigma associated with disclosing negative sentiments about breastfeeding. The lack of literature and knowledge around BAR means that breastfeeding women are unable to find the words to share this experience when seeking support, and are having to navigate their way through this experience in isolation. Research has shown that support from community breastfeeding associations can be vital in helping women to manage breastfeeding challenges and achieve positive outcomes (Burns et al., 2020); however, it may be difficult for those who experience BAR to access this kind of support due to the self-perceived stigma associated with this phenomena. Greater levels of breastfeeding support are associated with more breast milk feeding at six months (Cramer et al., 2021) and this research has shown that timely and helpful support for BAR may result in a better overall breastfeeding experience, which may allow for continued breastfeeding until the age of two years or beyond as recommended by the WHO (Vieira et al., 2021).

Limitations

The first author experienced BAR and used bracketing as the methodological approach to minimise negative effects of personal bias (Smith et al., 2009); however, this limitation also has benefits in that insider research can more easily gain trust, co-operation with participants and provide a greater understanding of cultural sensitivity (Burns et al., 2012b). This study explored women's lived experience of this phenomenon, but this should not be seen as generalisable to all women who experience BAR; further research is needed to confirm the representativeness and incidence of this experience in the wider community of women who experience BAR. In addition, the findings relied on self-identification of this phenomena which may have limited the data.

Implications for practice

Breastfeeding healthcare focuses on the benefits of breastfeeding for mother and child with limited knowledge of complex breastfeeding difficulties such as BAR (Peñacoba & Catala, 2019). This focus on breastfeeding benefits can be experienced as ‘othering’—of being fundamentally different, lesser, or separate from the wider breastfeeding community (e.g., us and them)—by those who have complex emotional difficulties associated with breastfeeding such as BAR (Morns et al., 2021). Breastfeeding support is currently targeted at functional

aspects of providing breastmilk and health practitioners such as general practitioners, paediatricians and child health services may not be providing adequate support for complex breastfeeding difficulties such as BAR (Burns et al., 2020; Morns et al., 2021). Health professionals can offer psychological and emotional support to women who experience difficulties like BAR by encouraging them to implement some breastfeeding boundaries with older nurslings and use personal distraction or calming techniques while breastfeeding (Thompson et al., 2020). Health practitioners can also help by normalising this experience and support women to continue to breastfeed with BAR, if that is their goal, or gradually wean older nurslings if necessary for maternal mental health. Moreover, maternity continuity of care has been shown to improve breastfeeding outcomes (Tracy et al., 2013) and may be of benefit to those who experience BAR with onset during pregnancy or in the early neonatal period. For women who's onset of BAR is at another time during their breastfeeding journey primary care practitioners may have an important role to play (Morns, Bowman, & Steel, 2019). Routine breastfeeding education must include a focus on mental health and wellbeing and the maternal psychological aspects of breastfeeding (Zhao, Lin, Zhu, & Wang, 2021). Better understanding of the complexity of breastfeeding difficulties will benefit health professionals who work with women who want to breastfeed and experience BAR; consequently, more research investigating the cause, treatment, prevalence, and experience of BAR is urgently needed. Knowledge of BAR is vital to inform interventions targeted at enabling women to achieve their personal breastfeeding goals.

Conclusions

This is the first study to deliberately explore the experience of BAR. This study demonstrates that some women who choose to breastfeed can experience an unexpected and involuntary aversion reaction while breastfeeding, which is described as a skin crawling feeling and an overwhelming urge to remove the child from the breast while the nursling is latched. Those who experienced BAR felt confused and had internal conflict about wanting to continue breastfeeding. Participants in this study described wanting a greater level of support to achieve their personal breastfeeding goals.

Chapter conclusion

This chapter described the experience of BAR using the words of participants with qualitative methodology. Participant descriptions of BAR then formed the foundation for the next phase of this research. The following chapter 5 describes Phase 3 quantitative survey data collection, analysis and results which further investigated the findings from Phase 2 with a larger population.

Chapter 5. Breastfeeding Aversion Response (BAR): A Descriptive Study

Context

Evidence presented in the previous chapter (Phase 2) identified the experience of BAR using a qualitative methodology. This chapter is Phase 3 of this research and explored the experience of BAR with 210 women using a quantitative survey. This phase purposefully targeted women who self-identified as experiencing BAR to identify if the findings from the previous phase were applicable to larger group of women who claimed to have feelings of aversion while breastfeeding. This phase found that those who answered this survey agreed with the descriptions of BAR from the previous phase. This survey also identified demographics, health-related characteristics, and what women had found helped them to overcome this breastfeeding challenge.

This study is Phase 3 of this research and relates to the following four objectives:

1. Describe the lived experience of breastfeeding aversion for women who self-identify as experiencing breastfeeding aversion.
2. Identify the main features of breastfeeding aversion described by women.
3. Explore the predisposing, precipitating and perpetuating factors of the experience of breastfeeding aversion as described by women.
4. Explore the self-perceived factors that reduce or stop feelings of aversion while breastfeeding.

Publication details

This paper was published by the Journal of Midwifery and Women's Health in March 2023.

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Precis: This study provides the first preliminary data about breastfeeding aversion response (BAR); demographics, risk factors, self-care and treatment options, and the level of support received.

Abstract

Introduction

For many women, breastfeeding their infant is an enjoyable experience. Some, however, have reported negative sensations such as an overwhelming need to unlatch while breastfeeding. This phenomenon is known as breastfeeding aversion response (BAR). The incidence of BAR is unknown and literature on this experience is limited. This study therefore aimed to expand the

understanding of BAR using an online survey targeting those who have experienced feelings of aversion while breastfeeding.

Methods

An online survey was distributed within Australia using purposive sampling to those who self-identified as experiencing BAR. This survey contained five sections: (1) demographics and health-related characteristics, (2) breastfeeding difficulties and onset of BAR, (3) the experience of BAR, (4) birth and breastfeeding experience, and (5) coping with BAR and support. Questions were included to test the generalizability of previous qualitative findings on BAR.

Results

Participants (N = 210) were predominantly aged between 25-35 years (69.2%), in a relationship (96.2%) and had one child (80%). BAR was more commonly experienced when feeding the first-born child (44.8%), breastfeeding while pregnant (31%), or tandem feeding (10%). The feelings of aversion were experienced by most respondents throughout the feed while the child was latched (76.7%). More than half (52.4%) of participants reported that BAR had caused them to end breastfeeding sessions before their child was ready to stop feeding. Almost half of the participants (48.6%) reported receiving no support from a health care provider for BAR.

Discussion

This study contributes new information about the experience of BAR, including when it commonly happens and who may be at greater risk. More support is needed for women who want to breastfeed while experiencing BAR. New public health policies which promote breastfeeding are needed to help women achieve satisfying breastfeeding experiences and meet their own breastfeeding goals.

Keywords

Breastfeeding; Breastfeeding Experience; Mother-child relations; Maternal Health; Breastfeeding Aversion Response; Nursing Aversion; Chest-feeding; Tandem breastfeeding.

Quick Points

- Breastfeeding aversion response is an overwhelming urge to unlatch in response to feelings of repulsion while breastfeeding, which occur while the child is latched.
- Breastfeeding the first child, tandem breastfeeding, menstruation, and breastfeeding while pregnant can trigger breastfeeding aversion response.
- Breastfeeding aversion response can have a negative effect on maternal mental health such as higher levels of anxiety.

- Most women who experience this complex breastfeeding challenge want to continue breastfeeding and need support from knowledgeable health care professionals and peers.

Introduction

The World Health Organization (WHO) recommends that infants are breastfeed a minimum of 12 months and children up to 2 years and beyond (WHO, 2018, 2020). Breastfeeding has proven short and long-term physical and mental health benefits for women, infants, children and families (Krol & Grossmann, 2018), and offers protection against child infections, obesity and diabetes (Stuebe, 2022). However, less than half of women globally continue to breastfeed exclusively after 6 months (North et al., 2022; Victora et al., 2016). Global rates of infants fed with any breastmilk at age 6 months have only increased slightly in recent years (Neves et al., 2021; North et al., 2022), as many women who intend to breastfeed report a lack of adequate support to achieve their breastfeeding goals (Beggs et al., 2021; Grubesic & Durbin, 2020). It is therefore vital to better understand breastfeeding complexities from the perspective of breastfeeding women (Leeming et al., 2022). Strategies and policies are needed to support women in achieving their personal breastfeeding goals (Smith et al., 2018) and enable national health services to achieve the WHO targets (Zong et al., 2021).

Postpartum mental health difficulties have become more prevalent in recent years. Evidence has cited activating factors such as traumatic birth experiences (Priddis et al., 2018) lack of postpartum support (Jackson et al., 2021) and complex breastfeeding issues (Morns et al., 2022). Previous research has also identified that postpartum infant feeding complications can trigger feelings of guilt and shame (Russell et al., 2021), which can be associated with an increased risk of postpartum depression (Jackson et al., 2022). Breastfeeding can generate positive and negative experiences for women that range from feelings of connectedness and pride to negative emotions such as frustration and disappointment (Morns et al., 2021). Common breastfeeding challenges such as inadequate milk supply, poor latch, nipple trauma, and mastitis can cause physical and mental distress (Jackson et al., 2021). Less commonly, some women have described feelings of aversion while breastfeeding with the overwhelming urge to unlatch their infant (Morns et al., 2021). This negative phenomenon is referred to as breastfeeding aversion response.

Breastfeeding Aversion Response

Breastfeeding aversion response (BAR) is a complex breastfeeding experience that is poorly understood and there is limited literature to guide diagnosis and management. BAR has been defined as a compulsion to unlatch in reaction to negative physical sensations while breastfeeding (Morns et al., 2022). This reaction can last throughout the entire feeding session

and ranges from mild to repellent, conflicting with the desire to continue breastfeeding (Morns et al., 2022). BAR was first reported in non-academic breastfeeding literature in 2003 (Flower, 2003), which led to the creation of online support groups for BAR. Anecdotal findings from these online communities were then added to later editions of international breastfeeding resources (Flower, 2019). Social media discourse and lay literature around breastfeeding aversion has further increased in recent years with several blogs, books and websites supporting this issue (Kusi, 2018; Yate, 2020). To date however, empirical research on this phenomenon remains sparce.

The experience of BAR differs from documented characteristics and sensations of other negative embodied experiences while breastfeeding such as D-MER. D-MER is defined as negative sensations that occur during the letdown reflex while breastfeeding or pumping breastmilk and was first described in a case report in 2011 (Heise & Wiessinger, 2011). Recent research on D-MER hypothesised that this experience may be associated with a disruption in neurotransmitter and hormone activity of prolactin and dopamine, however more research is needed to confirm this (Deif et al., 2021). Previous research has also explored the breastfeeding challenges of those with a history of childhood sexual assault such as increased risk of emotional distress and complications with breastfeeding (Elfgen et al., 2017; Kendall-Tackett, 1998). Similarly, a history of assault can activate negative feelings while breastfeeding described as flashback traumatic memories and feelings of dissociation (Elfgen et al., 2017).

In 2016 the earliest known empirical research to identify feelings of aversion while breastfeeding found that this experience can have a negative impact on maternal identity (Watkinson et al., 2016). Likewise, a meta-ethnographic synthesis of the literature on BAR found that this experience may cause internal conflict and affect the mother-infant relationship, however, some of those who were able to continue breastfeeding had positive outcomes (Morns et al., 2021). Morns et al., (2022) conducted a focused qualitative investigation of BAR and found that empathy and practical support from others enabled some women to continue breastfeeding with BAR and to ultimately achieve their personal breastfeeding goals. These results showed that BAR can be deleterious to maternal wellbeing for others without support and informed the survey development for this descriptive study. Thus, the aim of this study was to explore the experience of BAR by further describing this experience, demographics, and health characteristics of this population.

Methods

An anonymous online cross-sectional survey was used to describe features of BAR from those who self-identified as experiencing this phenomenon. The survey focused on the experience of BAR, and the demographics and health characteristics of this population. This study also

investigated coping strategies used by women who experienced BAR, and which types of healthcare and community support facilitated their ability to continue to breastfeed. Ethics approval was obtained through the researcher's host institution ethics committee (University of Technology Sydney Human Research Ethics Committee no. ETH20-5341).

Participants and Data Collection

Individuals who were 18 years of age and older, were living in Australia, and self-identified as experiencing BAR at the time of completing the survey were invited to take part in the study. Participants were recruited using purposive and snowball sampling from already established online support group communities for breastfeeding, and a Facebook support group for breastfeeding aversion with a membership of approximately 6300 members. The first author was an insider and may have been known to participants, so an arm's length approach was used to distribute the survey whereby another member of the research team approached group facilitators to distribute the survey anonymously. The Australian Breastfeeding Association (ABA) approved and distributed the survey within their online social media networks. The survey was administered via Qualtrics and was available online for 4 months from mid-November 2020 until mid-March 2021. Participant information was provided prior to consent. There were no incentives offered to participants. Support contacts were provided on every page of the survey for participants to seek help if the survey triggered any negative emotions or previous trauma.

The term *child* is used throughout this paper to encompass the feeding experience with newborns, infants, and children without age limits. The researchers also acknowledge that some who feed their infant human milk do not identify as female and will use the term chest-feeding rather than breastfeeding to describe the feeding experience. This study did not ask participants to provide their gender or pronouns, so for consistency the words *breastfeed*, and *women*, are used throughout this paper.

Survey Development

The survey was developed by the researchers for the purposes of this study. Items were informed by previous qualitative research describing the experience of women who had feelings of aversion while breastfeeding (Morns et al., 2021). These items used Likert-type scale responses and were reviewed by one independent certified nurse-midwife, and two expert midwifery faculty researchers for construct validity. Five pre-validated scales were built-in; (1) The Depression, Anxiety and Stress Scale short form (DASS-21), (2) The EQ-5D-3L to measure health-related quality of life, (3) the Dimensions of Anger Scale (DAR-5), (4) the Brief Resilience Scale (BRS), and (5) the Short Form McGill Pain Questionnaire (SFMPQ). An adaptive flow strategy was utilized to present follow-up questions to participants based on previous

answers. Participants with at least one newborn or infant were presented with up to 87 questions, participants with a second infant or child were presented with up to 116 questions. The final version of the survey was separated into five key sections that integrated items developed by the researchers and the previously validated scales.

Demographics and Health-Related Characteristics

This section collected information about participants, age, education, health history, current medications, general wellbeing and current levels of stress, anxiety, and depression. Common neuroendocrinological conditions that could have an impact on maternal wellbeing were also included (Bardi et al., 2004; Bridges, 2015). The DASS-21 has been validated previously to assess depression, anxiety, and stress among Australian and New Zealand mothers with excellent internal consistency (Cronbach's alpha = .93)(Lovell et al., 2015). For this study the DASS-21 internal consistency was excellent (Cronbach's α = .93). The DASS-21 was scored by adding the items of each subscale for depression (D), anxiety (A), and stress (S) which were multiplied by 2 (for this short form scale 21 items, which is half the length of the full scale 42 items), and then measured using the DASS severity ratings of normal, mild, moderate, severe, and very severe. The EQ-5D-3L was used to test the general wellbeing of this population by measuring self-reported difficulty with mobility, self-care, usual activities, pain/discomfort and anxiety/depression on a three point Likert scale from none or no problems (1), some problems (2), or extreme problems (3) (Zakershahrak et al., 2022). The EQ-5D-3L internal consistency in this study was acceptable (McDonalds ω = .57), and test-retest intraclass correlation coefficient (ICC) was 0.54 (95% CI, 0.44-0.63, $p < .0001$).

Describing the Experience of BAR

This section invited participants to describe their 'in-the-moment' experience of BAR and their thoughts about having had this experience. Participants were asked to rate statements describing thoughts and feelings associated with BAR (Morns et al., 2022) on a 5-point Likert scale rating from agree (1) to disagree (5). Respondents were also asked to score their pain associated with BAR on a 10-point scale (0 = no pain to 10 = the worst pain possible) and to rate their experience of pain associated with BAR on a 6-point Likert-type scale (1 = no pain to 6 = excruciating). Validated scales were included in this section to measure pain descriptors and participants general levels of anger. The SFMPQ (Melzack, 1987) was presented to respondents to determine if validated pain descriptors appropriately described their experience of BAR. The SFMPQ items are measured on an 11-point numeric rating scale (0-1 = none/very mild, 2-5 = mild, 6-8 = moderate, 9-10 = worst). Participants were asked to rate whether any of 22 pain words described their feelings of BAR (e.g., throbbing, stabbing, pain caused by light touch, itching, sickening). SFMPQ internal consistency in this study sample was

very good, Cronbach's α = .87. This section included the DAR-5, which measures anger frequency, intensity, duration, antagonism, social relations interference, and the impact on functioning over the previous four weeks. The DAR-5 has been validated in Australian populations to measure problematic anger (Kannis-Dymand et al., 2019). DAR items are scored on a 5-point Likert scale (1 = none of the time to 5 = all the time); scores for all items are summed (total range = 5-25) with scores above 12 indicative of psychological distress and functional impairment because of anger. DAR internal consistency in this study was very good, Cronbach's α = .84.

Onset of BAR and Breastfeeding Difficulties with Each Child

This section included multiple-choice questions with an open text option about when participants first experienced BAR and if respondents had also experienced other breastfeeding difficulties such as nipple pain. Multiple-choice items with an open text response option also inquired about the birth and individual breastfeeding experience for each infant that the participant had breastfed.

Coping With BAR and Support from Others

Questions investigated participants' resilience, and their experiences of receiving support from others (peers, family, and health care providers). This included multiple-choice questions and Likert-type items about coping strategies used when experiencing BAR. The BRS is a validated scale used to measure personal resilience and the ability to adapt and bounce back from stress and adversity (Sánchez, Estrada-Hernández, Booth, & Pan, 2021). Scoring categories for this scale are 1.00 to 2.99 = low resilience, 3.00 to 4.30 = normal resilience, and 4.31 to 5.00 = high resilience.

Data Analysis

Data was cleaned and analysed using SPSS statistical analysis software. Frequency tables were exported from SPSS to Excel to investigate the data. Variables were analysed using descriptive frequencies, means, and standard deviation. All participants in this study self-identified as currently experiencing BAR at the time of completing the survey so there was a pre-confirmed correlation between respondent's experience of BAR and survey variables.

Results

In total, 533 participants clicked on the survey link. Participants who did not give consent were removed during data cleaning (n = 42). Screening questions removed an additional 108 responses from those who were not within Australia and 173 responses were removed due to missing values and zero progress. This left a final sample of 210 with a response rate of 39.4%.

Descriptive Demographics

Most respondents were aged between 25 and 40 years old (89.9%), had education beyond high school (66.4%), were married or in a de facto relationship (96.2%), and had one child (80%). No participants reported having more than two children. The place of birth was most frequently reported as a public hospital (69%) and least frequently at home or other location (5.2%). (Table 5.1).

Table 5.1. Demographic characteristics of study participants

Demographics	**Distribution of responses n (%)**
Age range (n=208)	
18 – 24 years	11 (5.3)
25 – 30 years	68 (32.7)
31 – 35 years	76 (36.5)
36 – 40 years	43 (20.7)
41 – 50 years	10 (4.8)
Relationship status (n=209)	
Single	7 (3.3)
De facto	46 (22.0)
Married	155 (74.2)
Other	1 (0.5)
Level of education (n=208)	
High school	24 (11.5)
Trade certificate	17 (8.2)
Diploma or Advanced diploma	29 (13.9)
Bachelor's degree	75 (36.1)
Postgraduate qualification	63 (30.3)
Number of children (n=210)	
1 child	168 (80)
2 children	42 (20)
3 or more children	0 (0)
Place of birth for first child (n=210)	
Public Hospital	145 (69.0)
Private Hospital	37 (17.6)
Home or another community location	11 (5.2)
Birth centre	17 (8.1)

Health-Related Characteristics

Table 5.2 details the health-related characteristics of respondents. The DASS-21 mean scores from this study showed that those most who experienced BAR had normal levels of anxiety, depression, and stress, however a small proportion had slightly elevated levels of mild to very severe anxiety, mild and moderate depression, and moderate to severe stress. These results are similar to previous DASS-21 findings for Australian and New Zealand mothers (N=3601) who predominately scored in the normal range for levels of anxiety (80.8%), depression (71.1%), and stress (72.1%). Respondents' mean scores for the EQ-5D-3L were similar to previous validation research Australian age and sex population norms for mobility, self-care, pain and discomfort (Zakershahrak et al., 2022). Respondents mean scores for the EQ-5D-3L were similar to Australian age and sex population norms for mobility, self-care, pain and discomfort (Zakershahrak et al., 2022). This BAR population scored predominantly level 1 (no problems) for all EQ-5D-3L categories (Table 5.3 and 5.4).

Table 5.2. Health-related characteristics of participants currently experiencing BAR (N=208)

Medical history and sleep (n=208)	Value n(%)
Current Medications	
Oral contraceptive	25 (12.0)
Anxiety medication	8 (3.8)
Anti-psychotic	2 (1.0)
Antidepressant or SSRI	15 (7.2)
Thyroid medication	17 (8.2)
Regular pain medication	5 (2.4)
Medication to increase milk supply	3 (1.4)
CBD oil	1 (0.5)
Blood pressure medication	3 (1.4)
No medication	131 (63.0)
Neurologic conditions	
Sensory processing disorder	3 (1.4)
Autism or Asperger's	2 (1.0)
Anxiety disorder	58 (27.9)
Postnatal anxiety	3 (1.4)
Depression	3 (1.4)
Postnatal depression	37 (17.8)
Post-traumatic stress disorder	15 (7.2)
Bipolar disorder	2 (1.0)
Dissociative disorder	1 (0.5)
None of the above	123 (59.1)
Endocrine conditions	
Cushing's syndrome	2 (1.0)
Addison's disease	2 (1.0)
Hyperthyroidism	3 (1.4)
Hypothyroidism	18 (8.6)
Hypopituitarism	2 (1.0)
Lupus	1 (0.5)

None of the above	185 (88.1)
Menstrual conditions	
Premenstrual dysphoric disorder (PMDD)	6 (2.9)
Amenorrhea	5 (2.4)
Dysmenorrhea	12 (5.8)
Polycystic ovary syndrome	18 (8.7)
Menorrhagia	13 (6.3)
Endometriosis	14 (6.7)
Irregular periods	29 (13.9)
Premenstrual Tension Syndrome (PMTS)	10 (4.8)
"I have not had any menstrual problems"	79 (38.0)
None of the above	53 (25.5)
Average hours of sleep per night	
Less than 5 hours	23 (11.1)
Between 5 - 7 hours	141 (67.8)
Between 7 - 9 hours	43 (20.7)
More than 9 hours	1 (0.5)[1]

Table 5.3. DASS-21 results

DASS-21 (n=186)	Depression n (%)	Anxiety n (%)	Stress n (%)
Normal	125 (67.2)	126 (67.7)	113 (60.1)
Mild	25 (13.4)	18 (9.7)	19 (10.1)
Moderate	26 (14.0)	22 (11.8)	28 (14.9)
Severe	2 (1.1)	11 (5.9)	22 (11.7)
Very severe	8 (4.3)	9 (4.8)	6 (3.2)
Total	186 (100)	186 (100)	188 (100)

[1] (Some percentages total greater than 100 because respondents could choose multiple answers)

Table 5.4. EQ-5D-3L results

EQ-5D-3L	Mobility n (%)	Self-care n (%)	Usual activities n (%)	Pain/ Discomfort n (%)	Anxiety/ depression n (%)
Level 1 **No problems**	192 (93.2)	202 (98.5)	161 (78.5)	148 (72.2)	111 (54.4)
Level 2 **Some problems**	14 (6.8)	3 (1.5)	42 (20.5)	54 (26.3)	82 (40.2)
Level 3 **Extreme problems**	-	-	2 (1.0)	3 (1.5)	11 (5.4)
Total	206 (100)	205 (100)	205 (100)	205 (100)	204 (100)

Breastfeeding difficulties and onset of BAR

Complications with breastfeeding were commonly reported by respondents. The most frequent breastfeeding difficulty with the first child was “feelings of aversion while breastfeeding” (80.7%), followed by “nipple pain” (69.6%), “engorgement” (49.7%), and “mastitis” (34.8%). The most reported breastfeeding difficulties for the second child were “too much milk” or “engorged breasts” (48.7%), followed by “tongue-tie” (35.9%).

Respondents most often reported the onset of BAR when breastfeeding their first child (44.8%) or when pregnant and breastfeeding a toddler (31%). For those who experienced BAR while breastfeeding during pregnancy, most reported that BAR began in the first two trimesters (41.5% and 47.7% respectively) and that the feeling of BAR lasted throughout the entire breastfeeding session while the child was latched. Some respondents experienced BAR during and around the time of menstruation with most reporting that BAR felt the strongest in the days leading up to their period (53.3%). Respondents who reported tandem breastfeeding, predominately experienced BAR only with their oldest child (95.2%). (Table 5.5)

Table 5.5. Breastfeeding difficulties with each child and onset and duration of BAR

When does BAR happen?	Distribution of responses	
Have you had any of the following problems when breastfeeding this child? (Choose all that apply)	**Eldest Child 1 n=161 n (%)**	**Child 2 n=39 n (%)**
I had sore nipple pain	112 (69.6)	11 (28.2)
Felt embarrassed around others	49 (30.4)	1 (2.6)
I experienced mastitis/infection	56 (34.8)	11 (28.2)
Too much milk/engorged breasts	80 (49.7)	19 (48.7)
Baby had colic/irritable/crying	52 (32.3)	5 (12.8)
Not enough milk	25 (15.5)	3 (7.7)
Baby had lactose intolerance	11 (6.8)	2 (5.1)
Baby had tongue-tie	42 (26.1)	14 (35.9)
Feelings of aversion (BAR)	130 (80.7)	8 (20.5)
None of the above	1 (1.9)	1 (2.6)
When did the BAR feelings first start? (n=210)	**n (%)**	
When I was breastfeeding my first child	94 (44.8)	
When I was pregnant and breastfeeding my toddler	65 (31.0)	
When my period returned	15 (7.1)	
When tandem breastfeeding both my toddler and newborn	21 (10.0)	
Other	15 (7.1)	
When during the breastfeeding session? (n=210)	**n (%)**	
Throughout the entire breastfeeding session while latched	161 (76.7)	
Only the first few minutes of the breastfeeding session	28 (13.3)	
Only during the letdown reflex or when latching	11 (5.2)	
None of these describe my experience	7 (3.3)	
Other, please describe	3 (1.4)	
When during the menstrual cycle? (n=15)	**n (%)**	
It feels strongest in the days before my period	8 (53.3)	
It feels strongest during my period	2 (13.3)	
It feels strongest when I'm ovulating	2 (13.3)	
I'm not sure	3 (20.0)	
With which child when tandem feeding? (n=21)	**n (%)**	
Both tandem feeding children	1 (4.8)	
Only the oldest child	20 (95.2)	
When during pregnancy did BAR begin? (n=65)	**n (%)**	
In the first trimester (first 12 weeks)	27 (41.5)	
In the second trimester (13 - 26 weeks)	31 (47.7)	
End of the pregnancy in the third trimester (27 - 40 weeks)	7 (10.8)	
Milk supply decreased during pregnancy when BAR increased	42 (64.6)	

Describing the Experience of BAR

Participants responding to items describing the experience of BAR largely agreed with each statement, most strongly agreeing with "I feel guilty for feeling like that" (84.2%). When describing the in-the-moment feelings of BAR, respondents most often agreed with the statement "as soon as I stop breastfeeding that feeling stops" (87%). Statements women identified that were specifically assessing emotional aspects of BAR were sadness (81.3%), anger (79%), worry (71.6%), and anxiety (63.7%). (Table 5.6)

Table 5.6. Describing the experience of BAR

When you think about your experience of feelings of aversion while breastfeeding, do you agree or disagree with the following statements?	**Agree** **n (%)**	**Neither agree nor disagree** **n (%)**	**Disagree** **n (%)**
As soon as I stop breastfeeding, that feeling stops (n=209)	181 (87)	8 (3.8)	19 (9.2)
I feel touched out (n=174)	143 (82.1)	15 (8.6)	16 (9.2)
It is as if my body is telling me that I've got to stop (n=169)	103 (60.9)	28 (16.6)	38 (22.4)
It almost feels like I am being violated (n=167)	106 (63.4)	15 (9)	46 (27.6)
I just start feeling angry (n=167)	132 (79)	13 (7.8)	22 (13.2)
When my child twiddles the other nipple, it gives me BAR (n=167)	120 (71.9)	35 (21)	12 (7.2)
It's a sudden homesick feeling of dread and despair (n=168)	80 (47.6)	21 (12.5)	67 (39.9)
It gives me a sense of anxiety about breast feeding (n=209)	133 (63.7)	27 (12.9)	49 (23.5)
I feel guilty for feeling like that (n=190)	165 (84.2)	8 (4.1)	23 (11.7)
It makes me feel sad (n=190)	154 (81.3)	16 (8.4)	20 (10.5)
I don't feel ready for breastfeeding to end (n=190)	152 (80)	13 (6.8)	25 (13.2)
I'm worried that I will have to wean before my child is ready (n=190)	136 (71.6)	23 (12.1)	31 (16.3)
I enjoyed breastfeeding up until I was pregnant/tandem (n=187)	85 (45.5)	73 (39)	29 (15.5)
People talk about enjoying breastfeeding, I never understood what they meant (n=189)	42 (22.3)	14 (7.4)	133 (70.3)
It's a disconnect between wanting to breastfeed but having negative feelings (n=188)	153 (81.4)	23 (12.2)	12 (6.4)
Does BAR affect your time spent breastfeeding? (n=210)	**Most of the time**	**About half of the time**	**Rarely** **n (%)**

		n (%)	n (%)	
Do you end breastfeeding session early because of BAR		110 (52.4)	61 (29)	39 (18.6)
Do you need to take breaks during breastfeeding because of BAR		114 (54.5)	60 (28.7)	35 (16.7)
To what degree would you describe BAR as physically painful? (n=210)	**No pain/mild Rating 0-2 n (%)**	**Discomforting Rating 3-5 n (%)**	**Distressing Rating 6-8 n (%)**	**Excruciating Rating 9-10 n (%)**
	84 (40)	69 (32.9)	36 (17.1)	21 (10)
The worst time of the day for BAR (n=210) n(%)	**Morning and daytime**	**Evening and night-time**	**All day**	**Unsure**
	21 (10)	122 (58.1)	51 (24.3)	16 (7.6)

*Some percentages total greater than 100 because respondents could choose multiple answers.

BAR and Types of Pain

Most respondents described mild discomfort (44.8%) when experiencing BAR. The mean (SD) score participants attributed to their pain during BAR was 3.6 out of 10 (2.69) (Table 5.6). The majority (18/22) of pain descriptors in the SFMPQ were rated with mean scores under 0.2 (no pain to very mild). Those who experienced BAR did not rate most pain descriptors in the SFMPQ as suitable for describing their experience, only “tiring” and “sickening” rated as somewhat explanatory of the sensation of BAR. The mean (SD) BRS for this population was 2.91 (1.03), consistent with lower resilience group (<2.99). Likewise, the mean (SD) score on the DAR was 9.55 (3.49), indicating participants did not experience problematic levels of anger (<12).

BAR Personal Management and Support from Others

Respondents were asked about practices they used to manage BAR in the moment while breastfeeding. “Distracting self” was the most common personal technique used to continue breastfeeding (83.8%). Other self-identified strategies were, stopping the child from “twiddling” the other nipple while feeding (59.5%), breathing techniques (55.8%), reducing the length of each feeding session (53.3%), and reducing the number of feeds per day (45.2%). The strategies that users reported as most helpful to manage BAR was distracting self (53.8%), followed by taking or using magnesium (36.7%) and helpful company (36.4%) (Table 5.7).

Table 5.7. Descriptive statistics for the personal management of BAR and self-identified coping strategies

Personal approaches used to manage BAR (n=210)			**Frequency**	
			n (%)	
Distracting self, thinking about something else			176 (83.8)	
Self-harming - biting, pinching, scratching self			5 (2.5)	
Using phone to distract self			23 (11.5)	
Reducing the length of each feeding session			112 (53.3)	
Reducing the number of feeds per day			95 (45.2)	
Night weaning			57 (27.1)	
Stopping child 'twiddling' other nipple while feeding			125 (59.5)	
Not feeding two infants at once			34 (16.2)	
Breathing technique			116 (55.8)	
Meditation technique			28 (13.5)	
Other relaxation technique			22 (10.6)	
Eating or drinking			49 (23.6)	
Taking or using a form of magnesium			49 (23.6)	
Taking another nutritional supplement			18 (8.7)	
Having another person with you, company			44 (21.2)	
"I didn't use anything to manage my feelings of BAR"			12 (5.7)	
Please rate how helpful the following measures were in managing BAR	**Not helpful n (%)**	**Somewhat helpful n (%)**	**Very helpful n (%)**	**Unsure n (%)**
Breathing (n=116)	7 (6.0)	89 (76.7)	18 (15.5)	2 (1.7)
Mediation (n=27)	5 (18.5)	18 (66.7)	4 (14.8)	-
Relaxation method (n=22)	8 (36.4)	13 (59.1)	-	1 (4.5)
Eating or drinking (n=48)	6 (12.5)	38 (79.2)	3 (6.3)	1 (2.1)
Magnesium (n=49)	6 (12.2)	16 (32.7)	18 (36.7)	9 (18.4)
Other nutritional (n=18)	4 (22.2)	11 (61.1)	1 (5.6)	2 (11.1)
Helpful company (n=44)	4 (9.1)	24 (54.5)	16 (36.4)	-
Distracting self (39)	1 (2.6)	16 (41.0)	21 (53.8)	1 (2.6)

Some percentages total greater than 100 because respondents could choose multiple answers.

Support From Others for the Experience of BAR

Most participants reported receiving some support from friends, family, or people in the community, with only 13.9% indicating they received no support from others. Respondents' partners were most frequently reported (61%) to provide specific support for BAR. Online, phone and group support services were commonly used by participants including online breastfeeding support groups (43.8%), ABA phone counselling (21.2%), and in person ABA or in

person breastfeeding support group (13%). Some respondents reported that family members had discouraged them from breastfeeding (11.6%), while online peer/community support were considered the most encouraging (69.7%). Midwives (25.5%) and certified lactation consultants (24.5%) had the highest reported frequency of providing support for BAR. Many respondents however reported they received no support from health care providers (46%) when experiencing BAR (Table 5.8).

Table 5.8. Support from others

Please choose any of the following people who have helped or supported you specifically with your experience of BAR? (n=187)	**Frequency n (%)**
Partner	114 (61.0)
Parent	43 (23.0)
Other family members	28 (15)
Friend	69 (36.9)
Neighbour	2 (1.1)
People in your community, group, or club	22 (11.8)
Online friends or online community	74 (39.6)
None of the above	26 (13.9)
Health care providers (n=208)	**n (%)**
Midwife	53 (25.5)
Certified lactation consultant	51 (24.5)
Counsellor or other mental health care worker	17 (8.2)
Doula	5 (2.4)
Acupuncturist	1 (0.5)
General practitioner (GP)	25 (12.0)
Maternal and child health nurse	36 (17.3)
Naturopath or herbalist	1 (0.5)
Obstetrician	3 (1.4)
None of the above	101 (48.6)
Phone, online or group support (n=208)	**n (%)**
Australian Breastfeeding Association (ABA) phone support	44 (21.2)
13 Health phone support	2 (1.0)
In person ABA, or in person breastfeeding support group	27 (13.0)
Online breastfeeding support group	91 (43.8)
Phone counselling - Lifeline, Beyond Blue or other	1 (0.5)
Online counselling - Lifeline, Beyond Blue or other	1 (0.5)
None of these	11 (5.3)

Did the following people encourage or discourage you with breastfeeding?	**N/A n (%)**	**Encouraged n (%)**	**Neither n (%)**	**Discouraged n (%)**
Online peer support/online community (n=208)	27 (13.0)	145 (69.7)	31 (14.9)	5 (2.4)
Partner (n=207)	5 (2.4)	160 (77.3)	38 (18.4)	4 (1.9)
Parent (n=208)	11 (5.30)	110 (52.9)	71 (34.1)	16 (7.7)
Other family members (n=207)	15 (7.2)	86 (41.5)	82 (39.6)	24 (11.6)
Friend/s (n=208)	4 (1.9)	100 (48.1)	94 (45.2)	10 (4.8)
Neighbour (n=207)	124 (59.9)	19 (9.2)	60 (29.0)	4 (1.9)
In person community, group, or club (n=206)	72 (35.0)	63 (30.6)	63 (30.6)	8 (3.9)

Discussion

This is the first study to specifically explore predisposing, precipitating and perpetuating factors of BAR, and the demographics and health characteristics of those who have had this experience. This paper describes the onset of BAR and investigates this phenomenon within the context of other breastfeeding challenges that may be experienced concomitantly. This research uncovered participants' personal management strategies for BAR and examined support systems women had in place that were helpful. The findings highlight that BAR is a complex phenomenon and these results contribute to a greater understanding of describing the feelings and physical sensations of BAR, how BAR differs from other negative breastfeeding sensations such as D-MER; what is BAR and how it is different from D-MER; when BAR happens and why; who is more likely to experience BAR; and what support can be helpful.

Describing the Feeling of BAR

This study identified new language to describe the experience of BAR. Previously available research on BAR has found that those who experienced this challenge had difficulty finding the right words to describe their experience (Morns et al., 2022). To support women who experience BAR midwives and maternal health care providers need appropriate communication strategies to ask about complex breastfeeding challenges including BAR. Pain descriptors identified in this study included affective pain words, such as "tiring", "exhausting", and "sickening". Sensations of BAR were described as "touched out", "feeling violated", feeling angry, sad, dread, anxiety, guilt, or worry; and feeling a disconnect between wanting to breastfeed and having negative feelings. These findings are consistent with previous studies that have described similar participant sensations such as feeling violated (Morns et al., 2022), touched out, and exhausted (Grant et al., 2022; Morns et al., 2022). This study validates that these descriptors accurately describe the experience of BAR.

Pain and BAR

Many women in this study who experience BAR also experienced other breastfeeding difficulties such as nipple trauma and tongue-tie in their newborn. These are common breastfeeding complications related to latch difficulties with are associated with nociceptive breastfeeding pain (Jackson et al., 2019). Previous research (Jackson et al., 2019) exploring pain and breastfeeding with the SFMPQ found that most pain was experienced with initial breastfeeding associated nipple trauma and was described using different pain descriptions than those used to describe BAR. When specifically asked to rate the experience of physical pain with BAR, participants reported that BAR was associated with low levels of physical pain. Also, participants did not choose nociceptive descriptors when describing BAR and instead chose affective pain descriptors, which refer to the suffering quality of pain and feelings of

being unpleasant or aversive. The affective descriptor “tiring” was shared by those who experience BAR or early breastfeeding pain. However, unlike BAR, breastfeeding pain associated with nipple trauma and tongue-tie was predominantly described using continuous and intermittent pain descriptor words such as “sharp”, “stabbing”, “burning”, and “shooting”. This study has shown that the experience of BAR is not one predominantly of nociceptive pain and is instead an experience arising from feelings and emotions of affective sensations of aversion.

Comparison of BAR and D-MER

Women in this study experienced BAR throughout the feeding session while their child was latched, which contrasts with the experience of D-MER. Previous descriptive research on D-MER found that participants were more likely to experience D-MER during the letdown reflex within the first one to 5 minutes of the feeding session (Ureño et al., 2019). However, if there are multiple letdown reflexes during a feeding session the feeling of D-MER may occur on and off throughout the feed (Deif et al., 2021). When describing the sensation of BAR in this study participants least agreed with the descriptors “dread” and “despair”, which were taken from previous research describing the feelings of D-MER (Ureño et al., 2019). Although BAR and D-MER are both negative embodied sensations that are felt while breastfeeding, this study has identified that they are distinct breastfeeding difficulties.

When Does BAR Happen and Why?

Most participants in this study who experienced BAR had this response to breastfeeding throughout the entire feeding session while the child was latched. This research has validated findings from previous qualitative research on BAR (Morns et al., 2022), which identified that as soon as the breastfeeding session ends the negative sensations of BAR may cease. Some participants who were menstruating reported that breastfeeding in the days leading up to their period was a trigger for BAR, which may imply neuroendocrinal contributing factors (Gust et al., 2020).

Who Is More Likely to Experience BAR?

Almost all participants in this study had also experienced other breastfeeding challenges when breastfeeding their first child. However recent research suggests that breastfeeding challenges (i.e., painful latch) may be ubiquitously common among breastfeeding women (Davie et al., 2021). This study revealed that almost half of those who experienced BAR, had this experience when breastfeeding their first child, and a further 41% of participants experienced BAR when breastfeeding while pregnant, or tandem breastfeeding. These findings coupled with previous research on BAR may indicate that those who breastfeed while pregnant or tandem breastfeeding may have a heightened risk for experiencing BAR (Morns et al., 2022).

At the time of this survey those who experienced BAR were in otherwise good health and did not frequently take any medication. This population scored low resilience (<2.99) on the resilience scale included in this survey (Smith et al., 2013) which may indicate that those who experience BAR may be less able to "bounce back" from hardship (Windle et al.,, 2011). However, it is unclear if this outcome indicates an independent (cause) or dependent (effect) result. Previous research has shown that a sample of women with constant pain scored lower resilience than those who were not suffering with constant pain (Smith et al., 2013) and that BRS can be affected by lack of social support and feelings of loneliness (Southwick et al., 2016). This population scored low to average mean scores of anger on the DAR-5, indicating that although participants described feeling angry while breastfeeding with BAR, they did not have ongoing functionally problematic anger (Forbes et al., 2014). This population did not have any notable or defining demographic or health-related characteristics other than almost half were breastfeeding while pregnant or tandem breastfeeding.

Strategies for Maintaining the Breastfeeding Relationship

This study found that one of the main ways women coped with BAR was by seeking support from others, primarily their partner and online peer support groups. Women used self-care strategies to minimise the feelings of BAR such as taking supplements (e.g., magnesium), staying well hydrated, and using breathing or meditation techniques to calm themselves during difficult feeding sessions. Some women set gentle breastfeeding boundaries with older children and used personal distraction as a coping tool when breastfeeding with BAR, however the clinical effect of these strategies has not yet been tested. These recommendations must be considered in alignment with the individual needs, culture, and goals of those who breastfeed with BAR before being suggested for implementation.

Maternal Mental Health and BAR

This study substantiates findings from previous research that found those who experienced BAR felt guilty, sad, and worried about their breastfeeding relationship (Morns et al., 2021). Our study found that participants who experienced BAR claimed to have a sense of anxiety about breastfeeding; however, most of this population did not show levels of functional anxiety higher than population normal levels (Lovell et al., 2015). This result may indicate that although those who experience BAR have higher levels of 'in-the-moment' anxiety while breastfeeding, they did not have higher levels of ongoing anxiety throughout the day. For anxiety, depression and stress this population scored close to Australian normative data for age and sex (Zakershahrak et al., 2022). Previous research on Australian mothers experiencing adversity scored higher than this cohort for depression, anxiety and stress (Bryson et al., 2021). These findings show that previous research on anxiety and breastfeeding which reports

breastfeeding mothers are less anxious may not reflect the full scope of the breastfeeding experience (Hoff et al., 2019).

Support for Women Who Experience BAR

Women in this study confirmed previous findings on BAR reporting that those who experience this phenomena found it comforting to share their difficult breastfeeding journey with others, and that being heard without judgment had encouraged participants to continue breastfeeding (Morns et al., 2021; Morns et al., 2022). This research supports previous research findings that women who are able to talk through difficult issues associated with shame, and find empathic connection with others, were more likely to have a more positive experience (Brown, 2006). Many in this study reported receiving the most useful support from their partners. It is unclear however, if this finding was because those with supportive partners are more likely to breastfeed for longer (Srisopa & Lucas, 2021). Those who experience BAR need more support from health professionals and friends and family to continue breastfeeding, if that is their goal. Women experiencing BAR may want to continue to breastfeed, and many in this study felt worried that they may need to wean their child earlier than planned and did not feel ready for breastfeeding to end. Previous research identified that health care providers must approach breastfeeding support from a holistic perspective considering not just the physical aspects of breastfeeding but also the psychological and sociocultural processes involved (Watkinson et al., 2016).

Limitations

This sample may not be representative of all who experience BAR, and it is unknown if BAR is experienced in other geographic areas. This breastfeeding difficulty is likely underreported in some populations, such as those experiencing sensory processing disorder. Some item responses may have been affected by self-reporting or recall bias, however the instruments used in this study were validated for self-reporting and study items were aimed to specifically capture participant experience. Therefore, self-report was appropriate. The first author had a personal experience with BAR and was known to social media groups approached to participate in this study. This could represent insider bias, however this limitation also has benefits in that as an insider the first author had greater knowledge of the target population (Collins & McNulty, 2020), and the first author recused herself from distribution of the study.

Implications for practice and further research

Midwives and other health care professionals working to support breastfeeding should be mindful that those who are breastfeeding while pregnant or tandem breastfeeding may have an increased risk for experiencing BAR. Women who experience negative sensations while breastfeeding without an obvious cause, such as trauma to the nipples, should be assessed for

the symptoms and feelings described in this study and provided with additional support. Further research on the triggers for BAR could allow those working in lactation to consider preventative measures for this breastfeeding difficulty which may inform possible treatment options. Prevalence data on this phenomenon would be useful to target public health breastfeeding strategies aimed at increasing breastfeeding rates. Further research on the experience of BAR would be of benefit for this population and all stakeholders supporting positive breastfeeding outcomes.

Conclusion

This is the first descriptive study to investigate the unique experience of breastfeeding aversion response (BAR). This phenomenon is likely underreported, and these results add to the literature to provide evidence for midwives to help raise awareness and offer helpful support. This study explored the experience, health characteristics and risk factors of those who experience BAR and found that women who experienced BAR had slightly higher levels of anxiety. This study found that those who were able to breastfeed while experiencing BAR used strategies such as distracting self while feeding, taking a magnesium supplement, and helpful company. Participants also reported a lack of adequate support from health care professionals. More support and understanding for BAR is therefore needed in order to support women who have this experience to meet their own personal breastfeeding goals.

Chapter conclusion

This chapter detailed the results of Phase 3, first survey which explored the characteristics of BAR with women who were currently experiencing this phenomenon. The next chapter presents the findings and results from the Phase 4 second survey, which identified the prevalence of BAR in Australian breastfeeding women and is the final publication in this thesis.

Chapter 6. The prevalence of breastfeeding aversion response in Australia: a national cross-sectional survey.

Context

This paper is Phase 4 of this research and the second national survey in this thesis. This survey explored the prevalence of BAR in Australia in the context of other common breastfeeding challenges. This study revealed that around 1 in 5 of those surveyed reported they had experienced BAR at some point in their breastfeeding journey. This survey also further identified the demographics of those who experience BAR and what women who have this experience find helpful to continue breastfeeding.

This paper related to all five of the research objectives for this thesis:

1. Describe the lived experience of breastfeeding aversion for women who self-identify as experiencing breastfeeding aversion.
2. Identify the main features of breastfeeding aversion described by women.
3. Explore the predisposing, precipitating and perpetuating factors of the experience of breastfeeding aversion as described by women.
4. Explore the self-perceived factors that reduce or stop feelings of aversion while breastfeeding.
5. Explore how many women describe breastfeeding aversion and if there are commonalities in their experience.

Publication details

This paper has been published in Maternal and Child Nutrition.

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Abstract

Some women who breastfeed will experience complex ongoing difficulties, such as breastfeeding aversion response. This recently named breastfeeding challenge is defined as feelings of aversion while breastfeeding which can last for the time that the child is latched. This study provides the first prevalence data for the experience of breastfeeding aversion response in Australian breastfeeding women. A national online survey investigated the breastfeeding experience of Australian women including data on: (1) participant demographics, (2) breastfeeding experience with up to four children, (3) breastfeeding challenges and prevalence of breastfeeding aversion response, and (4) the value of available breastfeeding support. This study found that of the Australian breastfeeding women who

participated (n = 5511), just over one in five self-identified as having experienced breastfeeding aversion response (n = 1227, 22.6%). Most reported experiencing some breastfeeding challenges, with only 4.5% (n = 247) having had no breastfeeding complications. Importantly, despite these difficulties, 86.9% of the total women in this study rated their overall breastfeeding experience as good (n = 2052, 37.6%), or very good (n = 2690, 49.3%), and 82.5% of those who experienced BAR as good (n = 471, 38.7%) or very good (n = 533, 43.8%). Breastfeeding aversion response reporting was decreased in higher education and income groups. Women who are breastfeeding for the first time are more likely to encounter difficulties with breastfeeding such as breastfeeding aversion response. Complications with breastfeeding are pervasive, but women who can overcome breastfeeding issues often report a positive overall breastfeeding experience.

Key words

Breastfeeding, prevalence, lactation, emotions, postnatal care, family support, maternal health.

Key messages

- This national survey of 5511 breastfeeding women in Australia found that one in five reported having experienced breastfeeding aversion response.
- There is limited evidence to guide stakeholders in supporting women who experience complex breastfeeding challenges such as breastfeeding aversion response.
- Breastfeeding challenges are common for those who breastfeed however women who are supported to manage breastfeeding aversion response report a positive overall breastfeeding experience.

Introduction

Public health organisations highlight breastfeeding as a key goal for the long-term wellbeing of infants, families, and the community (Victora et al., 2016; WHO, 2020). However, less than half of all breastfeeding women globally are exclusively breastfeeding for longer than 6 months (North et al., 2022; Victora et al., 2016). Although breastfeeding initiation rates in Australia are high (95.9%), numbers decline in the first 2 months at which stage 74.8% of infants are exclusively breastfed, and around two in three (66.0%) were exclusively breastfeeding their infant at 4 months of age (ABoS, 2022). Breastfeeding is a complex practice that requires skill and confidence and a lack of support to develop these skills may impact the steady decline in exclusive breastfeeding (Chipojola et al., 2020; Hinic, 2016). Many new parents begin the breastfeeding journey unaware that they may encounter barriers that require breastfeeding knowledge and perseverance to overcome (Wagi, 2019). Women can discontinue

breastfeeding as a consequence of limited support, and numerous socio-ecological obstacles including: individual (e.g., exhaustion and isolation), interpersonal (e.g., lack of partner support), community (e.g., breastfeeding in public stigma), organisational (e.g., lack of health personnel with beneficial breastfeeding knowledge), and political (e.g., as a result of poor breastfeeding policies)(Snyder et al., 2021).

Previous research has identified a link between breastfeeding cessation and inadequate support for maternal breastfeeding complications (Beggs et al., 2021). Support is sometimes not easily accessible for women who experience breastfeeding issues, and some health professionals lack in-depth knowledge about providing breastfeeding care and support (Burns et al., 2012a; McFadden et al., 2017). Maternal breastfeeding complications such as breast pain are common; yet, with good quality support women can find strategies to overcome challenges and continue to breastfeed (Lucas et al., 2019). Women who experience more complex breastfeeding obstacles may feel reluctant about sharing negative breastfeeding experiences as a result of social stigma around sharing negative breastfeeding sentiments (Morns et al., 2022), which can hinder seeking support (Morns et al., 2021).

Complex breastfeeding difficulties such as breastfeeding aversion response (BAR) are not well researched or understood. BAR has been defined as an urge to unlatch in reaction to negative sensations while breastfeeding, which can last throughout the feeding session and range from mild to repellent. These feelings also conflict with the desire to continue breastfeeding (Morns et al., 2022). Previous research on BAR has identified that breastfeeding with BAR feels tiring, exhausting, and sickening (Morns et al., 2023). The in-the-moment sensations of BAR were described by those experiencing it as, "*touched out, feeling violated, feeling angry, sad, dread, anxiety, guilty, worry, and feeling a disconnect between wanting to breastfeed and having negative feelings*" (Morns et al., 2023 p.436). BAR can also have a negative effect on maternal mental health and maternal identity (Morns et al., 2022), and can trigger feelings of guilt, sadness and anger (Morns et al., 2023). Those with BAR have higher than normal levels of stress and anxiety (Morns et al., 2023). Another complex breastfeeding problem is dysphoric milk ejection reflex (D-MER)(Deif et al., 2021), which presents as overwhelming feelings of sadness during the letdown reflex (Heise & Wiessinger, 2011; Uvnas-Moberg & Kendall-Tackett, 2018). Prevalence data for complex breastfeeding issues such as BAR and D-MER are scant. One known study of a small sample of women (N = 164) reports an estimated 9.1% (n = 15) of breastfeeding women experience D-MER (Ureño et al., 2019). To date there have been no previous prevalence studies for BAR. This paper aims to provide the first prevalence data for BAR within the context of other common breastfeeding difficulties. This study also explores

breastfeeding experiences with multiple nurslings and the demographics of women who are breastfeeding in Australia.

Methods

The survey aimed to assess the prevalence of BAR in the Australian breastfeeding population, without purposefully targeting those who may be experiencing BAR. Therefore, this survey was named the *Experience of Breastfeeding Survey* and participants were informed that they would be asked about their overall experience of breastfeeding and not solely about their experience of BAR. Ethics approval was obtained through the researcher's host institution the University of Technology Sydney ethics committee (UTS HREC REF NO. ETH21-6211). This online anonymous survey was approved for recruitment and advertising by the Australian Breastfeeding Association (ABA).

Participants and data collection

The survey was offered to participants using Qualtrics™ (Qualtrics, 2020) and was available online from August 6th 2021 until September 5th 2021. Using snowball sampling, participants were included in this study if they lived in Australia, were 18 years of age and over, and had breastfed. The survey link and QR code was anonymously posted to a purpose-built Facebook page named 'Breastfeeding Research', and then shared in several Australian breastfeeding social media support groups. Recruitment for this survey was also facilitated by the ABA who distributed the survey through their online Facebook and Instagram communities.

Survey instrument

This survey had four sections: (1) participant demographics, (2) breastfeeding experience with up to four children, (3) breastfeeding challenges and prevalence of BAR, and (4) the value of availability of breastfeeding support. Participants were presented with 25 survey items of which seven were repeated for each child.

Demographics

This section included multiple-choice and open response questions that asked about participants current age, family income, place of residence and level of education.

Breastfeeding experience with each child

Participants were asked about their breastfeeding experience with each nursling, including how long they breastfed each child and how each breastfeeding relationship had ended. Items included Likert-type responses, multiple-choice responses, and short answer text response options.

BAR prevalence and onset

The prevalence of BAR was investigated in the context of other common breastfeeding difficulties, such as mastitis. Participants who answered that they had experienced BAR on a multiple-choice question (MCQ) were asked follow-up MCQ and open text questions.

Breastfeeding support from others and self-care strategies and treatments that helped

Women were asked if a health professional, or those they lived with, had provided useful breastfeeding support. Participants were also asked questions which were informed by previous research by the authors (Morns et al., 2022) regarding whether they had used self-care treatments to ease feelings of BAR, or if they found any strategies that had helped them to continue breastfeeding with BAR. For those who reported that they had found that a treatment or strategy that had helped, a follow-on question asking how much it helped, and an open text response option was provided to capture more detail.

Data analysis

Of those who clicked on the survey link (N = 5936), a small number did not proceed to complete the survey. Those who did not consent (n = 221) were removed and duplicate responses were removed (n = 204), leaving n = 5511 responses. Survey response rate was 74.4% of those who clicked the survey link, and survey completion rate, after data cleaning, was 80.1% (n = 4491). Data analysis of closed response survey questions were completed using Statistical Package for Social Sciences (SPSS) software. Chi-square test for association was used to analyse if urban or remote living had an association with BAR. One-way Welch ANOVA was conducted to determine whether there were statistically significant differences between socioeconomic indicators and the prevalence of BAR, post hoc mean differences were compared using Games-Howell analysis. One sample binomial test was used to calculate a sample proportion estimate of BAR. Frequencies were analysed using SPSS. Breastfeeding experience variables were analysed using descriptive frequencies, means and standard deviation. Content analysis (Prior, 2014) was used to analyse text responses, with categories informed by previous research (Morns et al., 2022).

Results

The findings of this survey describe the breastfeeding experience of 5511 Australian women. Respondents mean age was 35.5 years old (*SD* = 7.57). Most participants in this study had a Bachelor (38%), or postgraduate degree (30.6%). Almost all participants felt that they were economically secure (87.1%). Participants predominantly lived in urban locations (73.0%). Breastfeeding was more difficult and less enjoyable for first time mothers and the breastfeeding experience was better with subsequent nurslings (see Table 6.3). The prevalence

of BAR was consistently just over 1 in 5 for participants living in urban (n = 899, 22.5%), rural (n = 312, 22.5%), or remote areas (n = 20, 23.2%); see Table 6.1.

Table 6.1. Participant demographics

Demographics	With BAR	Without BAR	Total sample
Level of education (n = 5499)	**n (%)**	**n (%)**	**n (%)**
High school	135 (10.9)	331 (7.8)	466 (8.5)
Certificate or diploma	328 (26.5)	917 (21.5)	1245 (22.6)
Degree	443 (35.8)	1644 (38.6)	2087 (38.0)
Post graduate degree	329 (26.6)	1355 (31.8)	1684 (30.6)
Economic manageability (n = 5511)	**n (%)**	**n (%)**	**n (%)**
Living comfortably	496 (40.0)	2064 (48.4)	2560 (46.5)
Doing alright	519 (41.8)	1721 (40.3)	2240 (40.6)
Just about getting by	179 (14.4)	425 (10.0)	604 (11.0)
Finding it quite difficult	39 (3.1)	51 (1.2)	90 (1.6)
Finding it very difficult	8 (0.6)	9 (0.2)	17 (0.3)
Location (n = 5484)	**n (%)**	**n (%)**	**n (%)**
Urban	899 (22.5)	3098 (77.5)	3997 (73.0)
Rural	312 (22.3)	1088 (77.7)	1400 (25.4)
Remote	20 (23.2)	67 (76.8)	87 (1.6)

A one-way Welch ANOVA was conducted to determine if the reporting of BAR was different among those with different levels of income and education. Participants were categorised into five income groups: living comfortably (n = 2560), doing alright (n = 2240), just about getting by (n = 604), and finding it quite difficult (n = 90). These differing groups experienced BAR at varying levels and the differences were statistically significant between the levels of income groupings, (Welch's $F(4, 106.849) = 12.360$, $p < .0005$). BAR reporting increased from the living comfortably group ($M = 0.19$, SD = 0.39), to the doing alright group ($M = 0.23$, SD = 0.42), just about getting by ($M = 0.30$, SD = 0.45), and finding it quite difficult ($M = 0.43$, SD = 0.49) income group in that order. Games-Howell post hoc analysis revealed that the mean increase from living comfortably to doing alright (0.038, 95% CI [0.01,0.07]), was statistically significant ($p = .012$), as well as the increase from living comfortably to just about getting by (0.103, 95% CI [0.09,0.39], $p = .000$), and the increase from living comfortably to finding it quite difficult (0.240, 95% CI [0.09,0.39], $p = .000$). BAR reporting was also statistically different among education groups, Welch's $F(4, 123.623) = 7.830$, $p < .0005$. BAR reporting increased from the post graduate degree group ($M = 0.20$, SD = 0.39), to the degree group ($M = 0.21$, SD = 0.40), then the certificate or diploma group ($M = 0.26$, SD = 0.44), and finally the high school group ($M = 0.29$, SD = 0.45). Games-Howell *post hoc* analysis revealed that the mean difference from degree to high school (0.07, 95% CI [0.01,0.14], was statically significant (p = .007), as was the increase from degree to certificate (0.05, 95% CI [0.01, 0.09], p = .008).

Prevalence and onset of BAR and other breastfeeding difficulties

Most participants reported that they had experienced some breastfeeding difficulties with only 4.5% (n = 247) having had no breastfeeding issues (see Table 6.2). The most common problem that women reported was sore nipples and/or breast pain (n = 4512, 81.9%), followed by oversupply and engorgement (n = 2658, 48.2%). The prevalence of D-MER in Australia was found to be 6.1% (n = 337). As reported earlier just over one in five participants experienced BAR (n = 1227, 22.6%), with a population proportion estimate of 22.5% (95% CI, 21.4 to 23.6). The most common onset for BAR reporting included: breastfeeding while pregnant (n= 341, 27.8%); primiparous first-time breastfeeding (n = 239, 19.5%); and around the time of menstruation or ovulation (n = 233, 18.9%).

Table 6.2. Prevalence and onset of BAR and other breastfeeding difficulties

Did you experience any of the following when breastfeeding? (n = 5551)			**Distribution of responses n (%)**
Sore nipples and/or breast pain			4512 (81.9)
Over supply, engorgement			2658 (48.2)
Mastitis			2173 (39.4)
Issues with tongue-tie or poor latch			2153 (39.1)
Low milk supply			1489 (27.0)
Feelings of aversion (an overwhelming urge to unlatch) throughout the entire feed i.e.: BAR			1227 (22.6)
Overwhelming sad feelings during the letdown reflex but not at other times i.e.: D-MER			337 (6.1)
I did not experience any breastfeeding difficulties			247 (4.5)
When did BAR first start? (n = 1227)			**n (%)**
When breastfeeding while pregnant			341 (27.8)
From the first time I breastfed			239 (19.5)
Around the time of my period or ovulation			233 (18.9)
When I felt overwhelmed, touched out or exhausted			168 (13.4)
When nursling a toddler			91 (7.4)
When breast feeding two infants (tandem feeding)			56 (4.5)
It felt random / not sure			34 (2.7)
Which child did you most have BAR with? (n = 55)			**n (%)**
Every child that I breastfed			9 (16.3)
The oldest of my children			33 (60.0)
My middle child			7 (12.7)
My youngest child			6 (10.9)
Rate your overall experience of breastfeeding (n = 5451)	**With BAR (n = 1218)**	**Without BAR (n = 4233)**	**Total sample (n = 5451)**
Very bad	38 (3.1)	75 (1.8)	113 (2.1)
Bad	66 (5.4)	169 (4.0)	235 (4.3)
Not good or bad	110 (9.0)	251 (5.9)	361 (6.6)

Good	471 (38.7)	1581 (37.3)	2052 (37.6)
Very good	533 (43.8)	2157 (51.0)	2690 (49.3)

*Percentages may equal greater than one hundred because participants could choose multiple answers.

Most participants rated their breastfeeding experience with each breastfed infant, as 'good' or 'extremely good'. The experience breastfeeding first children rated lower on the overall breastfeeding satisfaction item. Many women reported that breastfeeding their first child had been difficult in the beginning but had later become easier, with the most common response being 'bad at first but later good' (n = 2105, 39.3%; see Table 6.3). The most common weaning age was 13 – 24 months across subsequent nurslings (42.6% - 45.9%), and youngest nurslings were most likely to be breastfed for longer than 25 months (n = 73, 35.8%). For the first child cessation of breastfeeding was parent and child led, (n = 1337, 35.5%), and with later children there was more tendency toward child led weaning with each subsequent child from child one (n = 854, 22.7%) to child four (n = 65, 31.9%). Some participants had ceased breastfeeding because a health professional had told them to stop (n = 300, 4.6%). For those who were breastfeeding their first child while pregnant with their second (n = 1259, 23.6%), feelings of aversion occurred for 34.86% (n = 439); however, the percentage of those who experienced BAR while pregnant was less for subsequent children, child two 15.2% (n = 114), child three 15.1% (n = 37), and child four 17.0% (n = 7). See Table 6.3.

Table 6.3. Breastfeeding experience with each child.

Breastfeeding experience with each child (n = 5511)	Child 1 (eldest) n = 5363 (%)	Child 2 n = 3190 (%)	Child 3 n = 1077 (%)	Child 4 n = 327 (%)
Currently breastfeeding	1559 (29.8)	1244 (39.0)	390 (36.20)	123 (37.7)
Experience of breastfeeding	**n (%)**	**n (%)**	**n (%)**	**n (%)**
Extremely good	1623 (30.3)	1630 (51.1)	634 (58.9)	208 (63.6)
Moderately good	652 (12.2)	621 (19.5)	176 (16.3)	44 (13.5)
Bad at first but later good	2105 (39.3)	500 (15.7)	145 (13.5)	30 (9.2)
Neither good nor bad	71 (1.3)	55 (1.7)	21 (1.9)	4 (1.2)
Good at first but later bad	124 (2.3)	84 (2.6)	21 (1.9)	7 (2.1)
Slightly bad	258 (4.8)	99 (3.1)	16 (1.5)	13 (4.0)
Extremely bad	300 (5.6)	88 (2.8)	17 (1.6)	3 (0.9)
Other	230 (4.3)	113 (3.5)	47 (4.4)	18 (5.5)
Age of weaning	**n (%)**	**n (%)**	**n (%)**	**n (%)**
0 - 3 months	285 (7.6)	111 (5.7)	32 (4.7)	8 (3.9)
4 - 6 months	254 (6.7)	117 (6.0)	36 (5.2)	8 (3.9)
7 - 12 months	636 (16.9)	364 (18.7)	99 (14.4)	28 (13.7)
13 months - 24 months	1694 (45.0)	851 (43.7)	316 (45.9)	87 (42.6)
Older than 25 months	895 (23.8)	503 (25.8)	205 (29.8)	73 (35.8)
How did breastfeeding end?	**n = 3764 (%)**	**n = 1946 (%)**	**n = 688 (%)**	**n = 204 (%)**
Both parent and child led	1337 (35.5)	590 (30.3)	222 (32.3)	58 (28.4)
Parent led weaning	1134 (30.1)	733 (37.7)	170 (24.7)	69 (33.8)
Child led weaning	854 (22.7)	466 (23.9)	247 (35.9)	65 (31.9)
Other	554 (14.7)	191 (9.8)	36 (5.2)	11 (5.4)
Healthcare advice to stop	178 (4.7)	81 (4.2)	35 (5.1)	6 (2.9)
Breastfeeding and pregnant	**n = 1259 (%)**	**n = 349 (%)**	**n = 125 (%)**	**n = 41 (%)**
Pregnant BAR	439 (36.4)	114 (15.2)	37 (15.1)	7 (17.0)

Breastfeeding support and what eased feelings of BAR

Most women reported that they had received adequate support for breastfeeding from those they lived with (n = 4469, 81.1%). Almost half of those surveyed felt that they had received good support for breastfeeding from health care providers (n = 2461, 44.7%). Those who experienced BAR were unsure if there was any way to help or reduce the negative feelings (n = 688, 55.8%). Some women (n = 68, 18.2%) used breathing, meditation, and positive self-talk to continue feeding. In open text responses women described positive self-talk as reminding oneself of the benefits of breastfeeding and reassuring themselves that they were doing a great job. Those who did find a way to reduce or relieve BAR stated the factors or treatments that helped were: distracting self while breastfeeding (n = 88, 23.6%), having breastfeeding boundaries with an older nursling (n = 86, 23.1%), getting past the first few months of

breastfeeding (n = 74, 19.8%), breathing, meditation, and positive self-talk (n = 68, 18.2%), and taking a magnesium supplement (n = 27, 7.2%). See Table 6.4.

Table 6.4. Breastfeeding support from others, and self-help strategies used to reduce feelings of BAR

Did you receive support to breastfeed from:	**n (%)**
Health care providers? (n = 5509)	
Yes	2461 (44.7)
No	1425 (25.9)
Unsure	1230 (22.3)
Those you live with? (n = 5509)	
Yes	4469 (81.1)
No	439 (8.0)
Unsure	490 (8.9)
Did anything lessen feelings of BAR? (n = 1233)	
Yes	372 (30.2)
No	173 (14.0)
Unsure	688 (55.8)
What helped to reduce feelings of BAR? (n = 372)	
Distracting self while breastfeeding	88 (23.6)
Gentle breastfeeding boundaries with older nursling	86 (23.1)
BAR stopped after the first 1 - 3 months	74 (19.8)
Breathing, meditation, and positive self-talk.	68 (18.2)
Magnesium supplement	27 (7.2)
Support from partner or family member	25 (6.7)
Support from midwife or lactation consultant	21 (5.6)
Later in pregnancy/after giving birth (while pregnant)	13 (3.5)
Supplementing with formula	4 (1.1)
Eating or drinking while breastfeeding	2 (0.5)
Self-harming (scratching or biting self while breastfeeding)	1 (0.2)

Discussion

This is the first study to report the prevalence of BAR in Australia. This survey also revealed the Australian prevalence for common breastfeeding issues such as nipple pain, and less frequent breastfeeding challenges such as D-MER. BAR prevalence was associated with demographic factors such as lower income and level of education. Participants used several self-help strategies to continue to breastfeed with BAR such as personal distraction while breastfeeding. This research has shown that most first time mothers who breastfeed will experience breastfeeding challenges, and a significant proportion of those who breastfeed will experience BAR. Confronting breastfeeding challenges may be part of the normal scope of the breastfeeding experience, and women may need to develop an ability to successfully navigate breastfeeding complications to successfully meet their personal breastfeeding goals. This study

showed that women have a better breastfeeding experience with subsequent children, which may be due to gaining more confidence with breastfeeding. Previous research has shown that some who experience complex breastfeeding challenges will not receive adequate support; however, those who do receive good support are more likely to overcome breastfeeding issues and continue to breastfeed (Morns et al., 2022). This discussion will focus on the prevalence of BAR, presentation and onset of BAR, and the strategies that participants have used to overcome BAR.

Prevalence of BAR

Information about BAR has previously been scant in part because women did not seek support as they had difficulty finding the words to explain the feelings of BAR (Morns et al., 2022). Women experiencing BAR also did not feel that they were able to speak about unpleasant breastfeeding sensations as a result of social stigma around sharing negative breastfeeding sentiments (Morns et al., 2022). Consequently, many women with this breastfeeding challenge suffer alone and in isolation (Morns et al., 2021). This study found that just over one in five women (22.6%) who breastfeed will experience BAR; however many of those who overcome communication barriers to seek help may not receive effective support from health care providers (Morns et al., 2023).

Presentation and onset of BAR

This study reveals that those who breastfeed while pregnant or are breastfeeding two infants at once (tandem breastfeeding), may have an increased prevalence of BAR. Many participants who experienced BAR when endeavouring to tandem breastfeed reported also having had this experience while breastfeeding when pregnant. Previous research has found that those who experience pregnant BAR report that these feelings were strongest in the first and second trimester (Morns et al., 2023). This survey found that one third of those who breastfeed a toddler while pregnant will experience BAR which is consistent with earlier research (Morns et al., 2023). For some, however, the feelings of aversion continue when tandem breastfeeding two infants at once, and this experience is almost always felt toward the older nursling only (Morns et al., 2023). Previous research has found that the intensity of tandem breastfeeding aversion with an older nursling can also lessen as time passes (Morns et al., 2022).

For women whose menstrual cycle returns while they are breastfeeding, feeding around the time of menstruation may also be a trigger for BAR, and women reported stronger feelings of BAR at that time (O'rourke & Spatz, 2019). Earlier research has found that for those who experience BAR around their menstrual cycle, it felt worse in the days leading up to their period. Feeling touched out, overwhelmed, and exhausted also exacerbated feelings of BAR (Morns et al., 2023).

For those who experienced early onset BAR with their first child, in the first 1-3 months of breastfeeding, the feelings of BAR subsided as the infant became older. First children rated lower on overall maternal breastfeeding satisfaction with the most common response being "bad at first but later good", and breastfeeding was perceived as easier with subsequent children. Previous literature has also found that multiparous women who have breastfed have higher levels of confidence, which may improve breastfeeding outcomes (Awaliyah et al., 2019; Kronborg & Væth, 2004). Some who experienced early onset BAR said that they had experienced pain which made them reluctant to breastfeed but that this was not an aversion to breastfeeding (BAR) but rather a feeling related to the pain felt while breastfeeding. Negative breastfeeding sensations that subside after the first few months may be related to early breastfeeding pain, associated with early nipple damage, poor latch, and mastitis. Many who experienced BAR also reported pain, but it may have been at different times in their breastfeeding journey. BAR has previously been described using affective descriptions of negative sensations such as sickening, tiring and exhausting (Morns et al., 2023) rather than feelings of nociceptive pain which is caused by tissue damage (Armstrong & Herr, 2022). Early onset postnatal feelings of reluctance to breastfeed caused by nociceptive breastfeeding pain may not be BAR, but more a feeling of aversion to pain commonly associated with early breastfeeding (Gianni et al., 2019).

Strategies, treatments and supports perceived to help BAR

Most of the respondents in this study reported that they were unsure if anything had helped or eased their feelings of BAR. The most common coping strategy, reported by participants with BAR, was personal distraction. Some participants who were able to continue breastfeeding reported that positive self-talk while breastfeeding had allowed them to continue to feed while experiencing BAR. These findings support previous research on BAR, which also found that positive self-talk, and distracting self was a useful way to shift the women's focus, away from the negative sensations, and continue to breastfeed (Morns et al., 2023). However, using self-distraction to cope with BAR may have a negative effect on maternal-infant bonding (Morns et al., 2022). This study validates previous research which found that setting breastfeeding boundaries, and treatments such as an oral magnesium supplement, helped to relieve or reduce negative feelings, and this allowed some dyads to delay weaning older nurslings (Morns et al., 2022).

Women who can work through breastfeeding challenges, such as pain and BAR, and continue to breastfeed may come away from their breastfeeding experience with an overall sense of achievement and success at having surmounted difficulties (Morns et al., 2022; Whipps et al., 2021). Importantly, this study has found that BAR is like other common breastfeeding

difficulties in that if women are able to overcome BAR and continue to breastfeed, they report an overall positive experience.

Implications for practice and further research

Further research is needed to explore if there is an association between women experiencing BAR and choosing to formula feed. More research is necessary on other possible causes of early onset (first 1 - 3 months) BAR such as sensory issues (Grant et al., 2022). It is also currently unknown whether maternal mental health issues such as postnatal depression, suicidal ideation, or postnatal psychosis are exacerbated by complex breastfeeding difficulties such as BAR. Possible treatments options and self-care strategies for BAR which have been found in previous research (Morns et al., 2023), and also observed in this study merit further investigation.

Public health strategies and maternal health interventions are needed to support and encourage breastfeeding for those who experience complex breastfeeding difficulties such as BAR. To improve breastfeeding rates, public health interventions must address the wellbeing of women, and each woman's capacity to breastfeed, as a key driver of breastfeeding success. Health care providers require a better understanding of the scale and nature of maternal breastfeeding issues, to provide adequate and tailored support. Future breastfeeding research and promotion policies need a greater focus on the lived experience of women who breastfeed.

Possible conditions which may be considered for differential diagnosis when assessing if a women is experiencing BAR are: D-MER, body dysphoria, sensory processing disorder, nipple or breast discomfort from another cause, postnatal mental health conditions such as postnatal anxiety, a childhood history of sexual assault, and maternal fatigue and exhaustion.

Strengths

This study had a large sample size and reported the prevalence of BAR in Australia. This study also is the first to report the prevalence of D-MER in Australian women who breastfeed, and the prevalence of common breastfeeding issues such as breast pain and perceived low milk supply. This study has provided new findings about the way Australian women feel about breastfeeding subsequent children, and if women felt that they had received support to breastfeed.

Limitations

This survey targeted those who had breastfed and was distributed through breastfeeding support groups and communities; therefore, only those who had breastfed completed this survey. Consequently, this study did not include those who were unable to continue breastfeeding due to early onset BAR and those who formula fed. The prevalence of Australian

women who attempt to breastfeed and experience BAR may be higher than what is currently reflected in this study because this research targeted those who self-identified as having breastfed and did not include those who self-identified as having predominantly formula fed their infant. The numbers of parents who experience BAR and discontinue breastfeeding may result in the prevalence of BAR being greater than what was identified through this study. Content analysis of open text responses is limited, and additional thematic analysis may produce further results. This study also did not include those who may have exclusively formula fed because they experienced negative breastfeeding sensations.

Conclusion

This study was the first to report the prevalence of BAR in a population of Australian women, currently one in five of those who had breastfed. This research reports on self-care treatments and strategies participants had used to reduce feelings of aversion while breastfeeding that warrant further research. Breastfeeding support from partner and health care professionals did improve the experience of BAR. Most women rated their overall breastfeeding experience as positive and reported that breastfeeding got easier with subsequent nurslings. This survey showed that BAR is a common experience for those who breastfeed; however, with helpful support some women can overcome this breastfeeding challenge and meet their personal breastfeeding goals.

Chapter conclusion

This chapter identified the prevalence of BAR and other common breastfeeding challenges in Australian breastfeeding women. The next chapter describes the integrated results and discusses the definition of BAR, how BAR affects women and their relationships, and self-care treatments. This last chapter also posits further research hypothesis and suggests public health recommendations.

Chapter 7. Discussion

This research used a mixed method design to reveal that when women are breastfeeding BAR is a complex embodied experience, and not merely that there are women who are reluctant to breastfeed. The experience of BAR is often spontaneous and involuntary. The pragmatic, mixed methods employed in this research collected and analysed both qualitative and quantitative data to explore this breastfeeding challenge (Creswell & Clark, 2017). Using this method to investigate BAR combined the strengths of both qualitative and quantitative methodologies, thus increasing the validity and comprehensiveness of findings, creating new integrated results, and suggesting a range of hypotheses for further research (Creswell, 2017; Tashakkori & Teddlie, 2021). The exploratory sequential order of mixed methods integration used means that the first qualitative phases comprehensively informed the subsequent quantitative phases.

This discussion chapter utilises and combines these insights to integrate the findings (Creswell, 2017). Three aspects of this research results integration are discussed:

(1) the rationale behind the findings integration process, and how it unfolded.

(2) the four key findings and suggested hypotheses for future research.

(3) the interpretation of the integrated results (Creswell & Clark, 2017).

Reflexivity

Reflexivity was used to acknowledge my personal experience of BAR and how this experience influenced the research process. Using reflexivity techniques such as bracketing and keeping a research diary for personal reflection and transparency, I was conscious of locating my own personal experience as both separate to and part of the research methodology and analysis (Smith et al., 2009). In this section, I will reflect on my personal breastfeeding experience, its impact on this research, and the effect that this project has had on my understanding of my own experience of having feelings of aversion while breastfeeding.

I have four children and breastfeed all of them. I fell pregnant with my third child while still breastfeeding my toddler who wanted to continue breastfeeding. So, I breastfed through my pregnancy, and then tandem breastfed. Breastfeeding while pregnant was OK for me, but feelings of aversion while breastfeeding started when I tandem fed after our newborn arrived. The experience of aversion while breastfeeding was very confusing, and it was a difficult time. I searched for information about what was happening to me and found very little. To find support, I started a Facebook support group for women who were experiencing feelings of aversion while breastfeeding. At the time weaning my toddler seemed like the only option. The

following excerpt is one of my comments from that support group, a Facebook Aversion support group post from 2013:

> *I've never felt so confused in my life than I have over this whole aversion thing. Should I be setting limits? How will that affect my toddler? Is mother-led weaning OK/natural? What is normal? Why do I feel like this? This experience has shaken me to the core and has been very humbling.*

For the purposes of researcher reflexivity, I kept a research diary throughout the research process. At each phase of the research, I have reflected on my own thoughts and feelings about the process and kept an account of these thoughts and feelings as a way to self-reflect and be mindful of researcher bias, and to be reflective about any personal distress caused by engaging with the stories.

Research diary extract:

> *When reading through the studies for inclusion in the meta-ethnographic review there were several times when I had to take a break because the information that I was reading was upsetting. Sometimes I need to take a break because I had experienced something similar myself, and sometimes it was because it was an upsetting story that would be difficult for anyone to read like stories of women with history of childhood sexual assault.*

When writing the review and coding qualitative findings I concluded by rereading each part asking the question; am I seeing these things in the data because they are things that I experienced? Some themes needed to be questioned again after rereading them with that lens. I found that one theme had been removed under the premise that it was coming from my experience, but it was in fact coming from the data. My supervisory panel supported me to realise that the theme was in the data and not reflecting my bias and helped me to understand that I had been too critical of my own possible bias when that had been excluded.

Another personal challenge arose because many women that I interviewed were able to continue breastfeeding with aversion, which was something that I felt that I had failed at. I had to work through feelings of inadequacy about my own experience of breastfeeding aversion and arrive at a place where I consciously accepted that my feelings of failure around that experience should not negatively affect my identity. I came to understand that this research could also be an opportunity for personal growth.

Diary Entry 18/04/2020:

Transcribing the interviews has been personally quite a healing experience for me. I have seen women talking about it in the aversion Facebook group for years, but hearing each participant speak about their whole story in detail for an hour was different. I really felt like I could identify with much of what they were saying and the way that they had processed having aversion. The way that the participants made sense of their aversion and had got through it was encouraging to me personally.

Conceptually I initially found bracketing my breastfeeding experience a difficult concept to understand because there was no previous literature about feelings of aversion while breastfeeding. So then how did I know about it? I knew about it because I experienced it. However, I needed to bracket that experience, which sometimes seemed like a philosophical dichotomy.

Bracketing

I experienced the phenomena of BAR and therefore needed to be mindful of effective bracketing when conducting data collection. Philosophically there has been much discussion about the complexity of bracketing and philosophers such as Heidegger posit that bracketing is something that can only ever be partially achieved (Heidegger, 1962). Using the method of interpretative phenomenological analysis (IPA) assisted me to use bracketing whereby I put aside my own understanding of my personal experience of this phenomenon to enter into the world of the participants when conducting interviews.

Integration plan and sequencing of the research phases

This research addressed and answered the following overarching question in relation to BAR: what is the experience of women who self-identify as having feelings of aversion while breastfeeding? The research design occurred over four phases: Phase 1 meta-ethnography, Phase 2 qualitative interpretive phenomenological analysis, and Phase 3 and 4 quantitative surveys using a mixed methods approach to integrate the findings. This mixed methods integration, connection, and embedding of the qualitative and quantitative data was completed in the following ways.

Phase 1 investigated and synthesised what was previously known about those who had experienced feelings of aversion while breastfeeding (see Chapter 2). This phase focused on two of the research aims: (1) describe the lived experience of women who have feelings of aversion while breastfeeding, and (2) investigate the predisposing, precipitating and perpetuating factors of women who have negative sensations while breastfeeding. This phase examined what was formerly understood about the experience of BAR and used a meta-ethnographic method to synthesise the various themes in descriptions of this experience. The

conclusion was that previous research on BAR was limited. The themes uncovered revealed that women had negative sensations while breastfeeding and those women felt that this experience was confusing and overwhelming. This first phase also revealed that these negative breastfeeding experiences can also affect a woman's breastfeeding ability. Findings from this qualitative phase were used to inform the construction of the Phase 2 interview questions and analysis.

Phase 2 used the interpretative phenomenological analysis (IPA) method of in-depth interviews to explore participants' experiences of feelings of aversion. This phase uncovered participants' understandings of the experience of BAR, and how women had made sense of this breastfeeding challenge. This phase qualitatively addressed four of the research aims: (1) Identify the features of BAR, (2) investigate the predisposing, precipitating and perpetuating factors of BAR, (3) explore factors that reduce BAR, and (4) describe the lived experience of BAR. The qualitative phases of this research found that there were experiential commonalities shared by participants such as describing the in-the-moment feelings of BAR, when BAR was more likely to happen, and what they found helped them get through it. These Phase 2 qualitative results were integrated into the Phase 3 quantitative survey components (see Chapter 5).

Phase 3 used a purposive sampling method to investigate the experience of BAR. This took the form of a national survey targeted at those who were currently experiencing BAR. This phase quantitatively answered four of the research aims: (1) the features of BAR, (2) the predisposing, precipitating and perpetuating factors, (3) what reduces BAR, and (4) describing the experience of BAR. This quantitative survey aimed to test the generalisability of the findings from the previous qualitative phases by using the qualitative findings to inform the selection of survey items, and by taking direct participant quotes and embedding them into the survey with Likert-style questions. This survey also tested the previous qualitative study findings for further validity by taking key descriptions of the experience of BAR and exploring whether these descriptions were shared by a larger population. Validated instruments that were informed by the qualitative descriptions of BAR were also used in the survey to investigate if key features of BAR, such as anger, were present in a larger sample, and if these features were presenting in an atypical manner. The findings from this third phase added further context and descriptions of BAR. These included some differences between the presentation of BAR and D-MER, some possible common triggers for BAR, who might be at higher risk of experiencing BAR, participant self-perceived strategies that helped, and some mental health impacts of BAR (see Chapter 4). The combined mixed methods findings from Phase 2 and Phase 3 provided variables which were then used in the Phase 4 survey to

quantitatively investigate the prevalence of BAR (see Chapter 6) (Fetters et al., 2013; Zhang & Creswell, 2013).

Phase 4 addressed all five research objectives and investigated the prevalence of BAR in the Australian breastfeeding community via a national survey (see Table 7.1). This survey was not targeted at those who were currently experiencing BAR but was circulated among those who had breastfed or were currently breastfeeding. It showed that BAR had a higher prevalence than researchers had previously anticipated and showed that one in five of those surveyed (22.6%) reported having experienced BAR at some point in their breastfeeding journey. It also investigated the prevalence of BAR, and its presentation. This survey added validity to the integrated mixed method finding that there are different sub-types of BAR which can happen for women such as: BAR while pregnant, BAR around the time of menstruation, and BAR when tandem breastfeeding. This phase also established self-care treatments that women found had helped them to continue breastfeeding, and strategies that participants used to cope with BAR. Finally, all findings from previous phases were compared retrospectively to evaluate and confirm the findings to assess validity, and produce new integrated results (see Table 7.1) (Noble & Heale, 2019).

Table 7.1. Research objectives and phases with integration points.

Phases of research → / *↓Objectives Achieved*	*Qualitative Meta-ethnography*	*Integration point* ⇒	*Qualitative IPA interviews*	*Integration point* ⇒	*Quantitative Survey 1: Experience of BAR*	*Integration point* ⇒	*Quantitative Survey 2: Prevalence of BAR*	*All phases Integrated into discussion*
1. Describe the lived experience of BAR.	√		√		√		√	
2. Identify the main features of BAR.			√		√		√	
3. Explore the predisposing, precipitating, and perpetuating factors.	√		√		√		√	
4. Explore factors that reduce feelings of BAR.			√		√		√	
5. Explore the prevalence of BAR.							√	

The integrated findings defining BAR

The use qualitative and quantitative methods to address the same overarching question over the entire research project throughout the research phases produced results which have been repeated, synthesised, integrated, and validated. The mixed methods results (Turner, Cardinal, & Burton, 2015) confirmed the findings about the lived experience of BAR, and allowed for new mixed methods conclusions about this phenomenon. The integrated results produced the following four confirmed mixed method findings that will be discussed in this chapter:

1. Defined the experience of BAR.
2. Identified the burden of BAR on maternal wellbeing.
3. Identified the effect of BAR on relationships with children and partners.
4. Identified self-care treatment strategies for BAR.

The integrated findings also produced new hypotheses for future research, implications for public health and for practice, and public health education recommendations. These are discussed later in this chapter.

Defining the experience of breastfeeding aversion response

This research found that BAR is a shared experience for some women who breastfeed, and participants described commonalities in their experiences. These findings were confirmed and evident across multiple phases of this research project. Confirmed findings regarding BAR from all phases have revealed that the experience of BAR has commonalities and differences in presentation that are dependent on predisposing, precipitating, and perpetuating maternal and infant factors (see Table 7.2). These factors revealed findings about the experience of BAR that were repeated in different phases and showed that the presentation of BAR has subtypes. This research has also identified a clear description of the in-the-moment feeling of BAR and provided words to describe this phenomenon for women who have this experience and health professionals who support breastfeeding.

Table 7.2. Research phases defining BAR with integration points.

Qualitative Phase 1 Meta ethnography theme		Qualitative Phase 2 Theme and participant quote	Qualitative findings integrated into quantitative phases	Quantitative Phase 3 Survey 1 Experience of BAR		Quantitative Phase 4 Survey 2 Prevalence of BAR	Mixed method Integrated discussion
The in-the-moment feelings of BAR *It's such a strong feeling of get away from me.*	**Phase 1 findings informed Phase 2 questions.**	1. Involuntary, strong sensations of aversion in response to breastfeeding: "It was intense, and both a mental and physical feeling like you want to throw your child off. Like you've got something crawling underneath your skin"	Phase 2 findings integrated into items and scales of phase 3 surveys: - SFMPQ scale to test the sensations. - DAR used to test anger at other times. - Quotes describing the experience used as Likert items. Items about the onset and Prevalence of BAR informed by interviews.	Defining BAR: • Affective aversion • Anger • Sadness • Anxiety • Tiring • Sickening Onset of BAR: - When tandem breastfeeding. - When breastfeeding while pregnant. - Menstruation.	**Phase 3 data informed Phase 4 survey items.**	Prevalence of BAR in a sample of Australian breastfeeding women (n=5511) one in five, (22.6%, n=1227). Onset of BAR: Breastfeeding - while pregnant. - tandem feeding - around the time of menstruation.	**Confirmed:** The description of the experience of BAR, and definition. **New mixed methods findings:** Subtypes of BAR: ▪ Pregnant BAR ▪ Tandem BAR ▪ Menstrual BAR BAR can affect breastfeeding duration.

Different types of negative sensations while breastfeeding

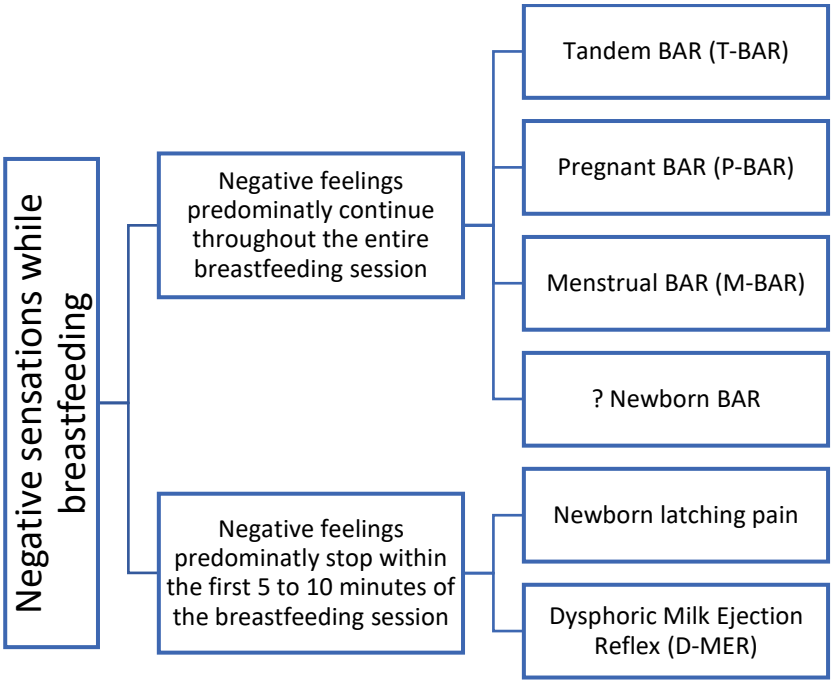
The four phases of this research have shown a difference between earlier researched types of negative sensations while breastfeeding, such as D-MER and newborn breastfeeding nipple pain, and the experience of BAR. The primary difference between the former types of negative breastfeeding sensations and the BAR described in this thesis are the predisposing, precipitating and perpetuating factors, and the timing of negative sensations when breastfeeding. Predisposing factors such as being pregnant while breastfeeding may be a common trigger for BAR. Previously identified negative sensations such as feelings of D-MER and latching pain have been shown to occur during the letdown reflex or first part of the feeding session, whereas BAR is described by women as continuing throughout the breastfeeding session (see Figure 7.1).

Subtypes of breastfeeding aversion response

In terms of identified subtypes of BAR, the combined phases of this research show that although there are commonalities in the experience of BAR such as the negative sensation described by women while breastfeeding, there are also some distinct groups within this experience. It is clear from the combined results of the qualitative and quantitative Phases 1 to 4 that BAR has some sub-types including: pregnant breastfeeding aversion response (P-BAR), tandem breastfeeding aversion response (T-BAR), menstrual breastfeeding aversion response (M-BAR). This research also found that some women experience newborn BAR and have negative sensations from the start of their breastfeeding journey. This finding was uncovered during Phase 4 of this thesis and clearly requires further investigation (see Chapter 6).

Figure 7.1 below presents the subtypes of BAR, separated by the duration of negative sensations felt during each breastfeeding session. Each these sub-types will be discussed in turn.

Figure 7.1. Subtypes of BAR separated by the duration of negative sensations felt during each breastfeeding session



Pregnant breastfeeding aversion response

This subtype of BAR is experienced by those who breastfeed an older nursling while pregnant with their next child. Those who experience P-BAR report feeling negative sensations, predominantly in the first and second trimester, and BAR feelings increased as milk supply decreased (see Chapters 5 and 6). This reduction in breastmilk occurs in the period when breastmilk changes to colostrum during pregnancy (Lawrence & Lawrence, 2022). The feelings of P-BAR are similar to the other types of BAR with women reporting that the feeling is overwhelming, sudden, and causes them to want to immediately stop the nursing session (see Chapter 4).

Limited literature has previously described women with a difficult experience while breastfeeding when pregnant, such as a study by Newton and Theotokatos (1979) of 503 pregnant and breastfeeding women, which found that those who fell pregnant were more likely to wean. Their study found that early weaning while pregnant was due to difficulties that arose as a result of breastfeeding challenges during pregnancy which included emotional discomfort (57%), breast or nipple pain (74%), and low milk supply (65%) (Newton & Theotokatos, 1979). Another study by Moscone and Moore (1993) surveyed 57 pregnant and breastfeeding mothers and found that more than half weaned while pregnant, often describing experiencing feelings of irritability and annoyance, with some mothers theorising that the feelings had a biological cause in that it is “nature’s way of making us wean”. Research about breastfeeding challenges while pregnant is limited, however this research demonstrates that women have previously reported difficulties when breastfeeding while pregnant.

This thesis found that for some women the feelings of P-BAR decrease after giving birth (see Chapter 6), however for others the feelings of BAR continue or get stronger after the new baby arrives and they begin to tandem breastfeed (see Chapters 4 and 5). These women experience the next subtype of BAR described in this chapter — tandem breastfeeding aversion response (T-BAR).

Tandem breastfeeding aversion response

Those who experience T-BAR are women who breastfeed two infants of different ages at the same time. This occurs when a woman becomes pregnant while she is still breastfeeding her previous child and continues to breastfeed this child after the newborn arrives. Many women choose to continue breastfeeding throughout their pregnancy with the aim to tandem breastfeed. Women choose to keep breastfeeding because they believe that breastfeeding still holds benefits for the older nursing infant, or the nursing infant is not ready to stop (Flower, 2019).

The feelings of T-BAR are described in a similar way to other types of BAR and women often describe a visceral whole body feeling of wanting to "throw" the nursling off the breast. The combined phases of this research have shown that women who have this experience are predominantly having the negative sensations toward their older nursling only, meaning that women can breastfeed their toddler and feel intense T-BAR, and then breastfeed their newborn and not feel T-BAR at all. A common finding across multiple phases was that T-BAR is felt more intensely if both infants are latched at the same time.

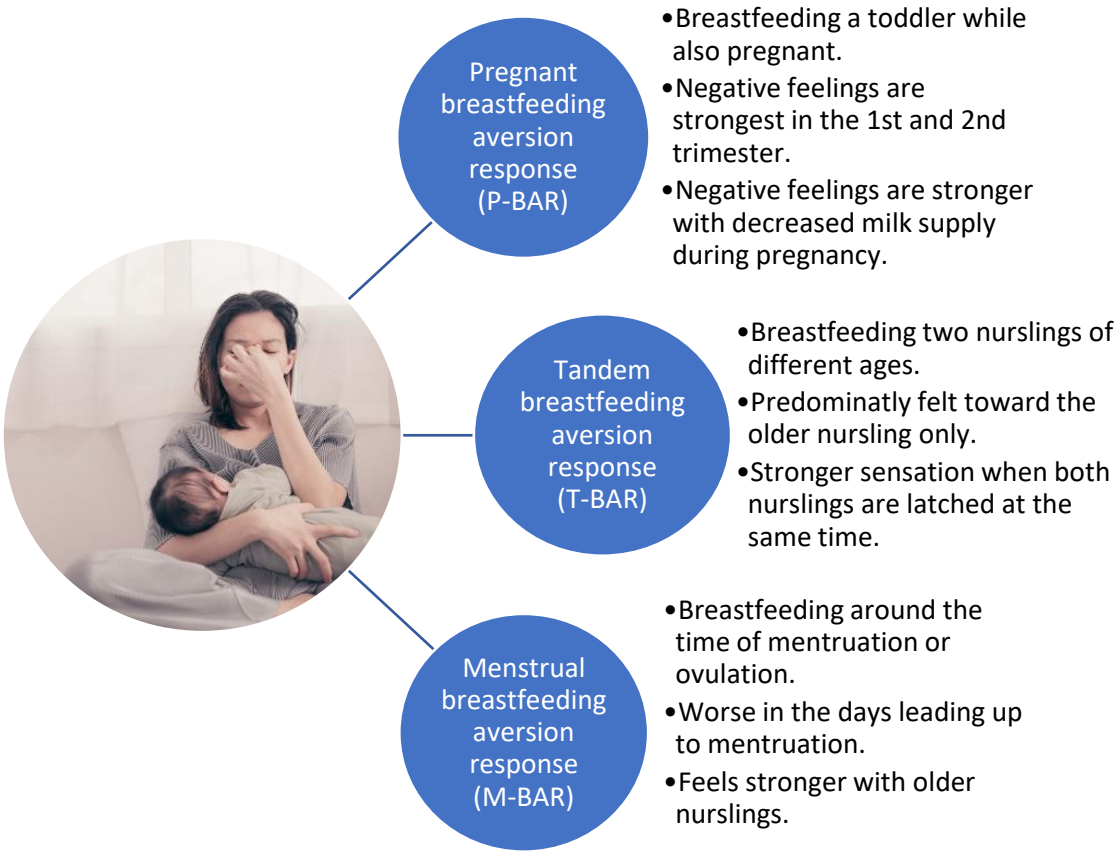
Importantly, many women in multiple phases of this research who experienced T-BAR were able to continue to tandem breastfeed both infants by using self-care strategies (covered later in this chapter) and setting gentle nursing boundaries with older siblings (see Chapters 4 and 5). Also, most who had this experience claimed to not regret breastfeeding and instead reported their overall breastfeeding experience as good (see Chapter 6).

Menstrual breastfeeding aversion response

This subtype of BAR is experienced by some women who breastfeed when they have started menstruating again and occurs around the time of ovulation or menstruation. This negative breastfeeding experience can happen for women who are tandem breastfeeding or breastfeeding a single nursling. The feeling of menstrual breastfeeding aversion response (M-BAR) is defined by participants using comparable descriptions of BAR. Women describe M-BAR as an overwhelming urge to unlatch their infant while breastfeeding (see Chapter 4). The combined results of the four phases of this research have shown that for those who experience M-BAR around the time of their period the feeling is the strongest in the days just

before and leading up to menstruation (see Chapter 5). The nature of this breastfeeding challenge when the women have started menstruating again means that those who have this experience are often breastfeeding an older nursling over the age of 6 months (see Figure 7.2). For some women who breastfeed for longer than 12 months, M-BAR may not occur until later in their breastfeeding journey. This can come as a shock for those who have breastfed their infant for some time and had a previously uncomplicated breastfeeding experience (see Chapter 4). Some participants reported having M-BAR around the time of their cycle every month (see Chapter 5), however further research is needed to understand if this type of BAR can stop for some women, or if those who experience M-BAR will continue to have this experience for every menstrual cycle once it has begun.

Figure 7.2. Summary of key characteristics of P-BAR, T-BAR and M-BAR



This research has identified some subtypes of BAR; however, there may be further subtypes which have not been uncovered with this research (see hypothesises later in this chapter). These newly identified subtypes require further research to better understand the features of each, so women who have these experiences and want to continue breastfeeding can have access to breastfeeding support.

All subtypes of BAR have been described as difficult for women and cause internal conflict and feelings of self-doubt. Women who have these experiences are often caring for one or more

nursling infants, and may be sleep deprived (see Chapter 5), and can also be managing family complications caused by BAR (see Chapter 4), so this negative experience can be a burden for maternal wellbeing.

The burden of BAR on maternal wellbeing

This thesis has reported that maternal wellbeing can be negatively affected by BAR, with many women claiming BAR had caused them to doubt themselves as mothers and that this experience had triggered feelings of guilt and shame (see Chapters 4 and 5). The concept of breastfeeding being the optimal feeding choice for infants is widely promoted, and for many women their perception of breastfeeding is embedded in their understanding of maternal identity (Brown, 2018). Research has shown that women who positively associate breastfeeding with mothering and maternal identity may achieve better breastfeeding outcomes (Kuswara et al., 2021). However, maternal identity can be negatively affected for those who associate breastfeeding with maternal identity and cannot meet their personal breastfeeding goals (Cooke et al., 2007). Current breastfeeding literature reports that breastfeeding is often associated with lower levels of anxiety and better mental health outcomes for women who breastfeed (Fallon, Halford, Bennett, & Harrold, 2018; Mikšić et al., 2020). However, the findings of this thesis show that levels of anxiety may increase while breastfeeding for women who experience BAR (see Chapters 4 and 5). This finding contradicts current breastfeeding literature and requires further research.

BAR can negatively affect a woman's ability to meet her personal breastfeeding goals and may affect breastfeeding duration (see Chapters 4 and 5). Previous research has found that stopping breastfeeding because of a physical difficulty was predictive of depression (Brown et al., 2016), and that women who experience guilt and shame with breastfeeding can associate breastfeeding challenges with being a "bad mother" (Jackson et al., 2021). For those who are not able to meet their personal breastfeeding goals and feel that they must cease breastfeeding earlier than anticipated, BAR may have short- and long-term negative effects on maternal identity. Previous research has shown that the way that the breastfeeding journey ends is important for the long-term wellbeing of both the breastfeeding woman and her infant (Brown, 2018). Women need to be supported to find a solution to the problem of BAR that they perceive as healthy for them and their child in the long-term. For those who were able to meet their personal breastfeeding goals and overcome negative sensations while breastfeeding, their overall experience of breastfeeding was reported as positive with many participants claiming that they did not regret having breastfed despite encountering such difficult challenges (see Chapters 4 and 6).

Throughout this research the theme of BAR affecting maternal mental health was repeated and confirmed, producing findings that strengthen the hypothesis that BAR may cause ongoing negative consequences for maternal wellbeing (see Table 7.3 below). This research has found that those who experience BAR may have higher levels of stress and anxiety and describe the experience of BAR as psychologically challenging. Women described struggling to overcome difficult feelings and negative thoughts about themselves. Participants reported having a limited understanding of their own personal experience of BAR and that this lack of understanding and feelings of confusion had a negative effect on their mental health (see Chapters 4 and 5). Some participants disclosed that they had felt damaged or broken providing this as a personal explanation for why they had this breastfeeding experience.

Some participants found that feelings of shame had inhibited them from seeking help from others. However, some women were able to find useful support which had helped them to manage breastfeeding with BAR (see Chapter 4). BAR can negatively affect a woman's perception of herself and maternal identity, and affect mother-infant bonds, and the relationships with her partner and other children (see Chapters 4 and 5).

Table 7.3. Research phases of BAR and maternal wellbeing with integration points.

Qualitative Phase 1 Meta ethnography theme	⟹ Phase 1 findings informed Phase 2 questions.	Qualitative Phase 2 Theme and example quote	Qualitative findings integrated into quantitative Phases ⟹	Quantitative Phase 3 Survey 1: Experience of BAR	⟹ Phase 3 data informed Phase 4 survey items.	Quantitative Phase 4 Survey 2: Prevalence of BAR	Mixed method Integrated discussion
Effects on maternal mental health: "I can't control those feelings".		Internal conflict and effects on maternal identity: "It felt like it was something that I was doing wrong, like that it was something that was wrong with me".	Scales included: DASS21: stress, anxiety, and depression. EQ5D3L: quality of life. Items: birth and breastfeeding history with each child. Mothers' medical history: mental health, endocrine, menstrual conditions	Women with BAR had higher levels of anxiety and stress than population means. Most women with BAR were in otherwise general good health and were not taking regular medication.		Higher association with BAR and lower income and education groups. Half of those who experienced BAR were unsure if there was any way to help or reduce the negative feelings (n=688, 55.8%).	**Confirmed findings:** BAR affects maternal wellbeing and mental health. BAR can have a direct negative impact on maternal identity. **Theory for future research**: Does BAR have long-term negative effects on maternal wellbeing?

Table 7.4. Research phases of BAR effects relationships with integration points.

Qualitative Phase 1 Meta ethnography theme		Qualitative Phase 2 Theme and example quote	Qualitative findings integrated into quantitative Phases	Quantitative Phase 3 Survey 1: Experience of BAR		Quantitative Phase 4 Survey 2: Prevalence of BAR	Mixed method Integrated discussion
Effects of BAR on relationship with child and others: " I do it because I feel it is best for my baby" .	**Phase 1 findings informed Phase 2**	Relationships with others. Partner support "[husband] would take [child 1] away and distract him". Bonding with child negatively affected: "It made it very difficult to enjoy that whole bonding experience"	Qualitative findings embedded in survey 3.1 and 3.2 to measure support from others: ▪ Partners ▪ Healthcare ▪ Peer support ▪ Friends and other family Items to measure breastfeeding experience with up to four children.	Items measured support from others: - Partners - Health - Professionals Breastfeeding experience with each child - more difficult with first child. BAR negatively affects mother-infant bonding.	**Phase 3 data informed Phase 4**	Most felt supported to breastfeed by family members and health care workers. First children rated lower on the overall breastfeeding satisfaction item. BAR experienced more with first child.	**Confirmed findings:** BAR can have a negative impact on maternal-infant bonding. BAR can have a negative impact on family relationships. **Mixed methods finding:** Support from partners and others is key to overcome BAR.

BAR effects relationships with children and partners

Breastfeeding experiences are affected by relationships which are conducive to breastfeeding, not only between the women and infant, but also with partners and those in the community (Debevec & Evanson, 2016). Relationships with others can have positive and negative influences on a woman's ability to breastfeed, and likewise the breastfeeding challenges that women may experience can cause them to have difficulties in these same relationships (Powell, Davis, & Anderson, 2014). This research has found that BAR can put a strain on immediate family relationships and can have a negative effect on maternal-infant bonding (see Chapters 4 and 5). The integrated findings of this research have shown that BAR can have negative effects on maternal relationships, and women want more support from others to overcome this breastfeeding challenge (see Table 7.4, previous page).

Effect on mother-child bond

This research has revealed that women are concerned about possible negative effects that BAR may have for their infants, and expressed worry about the potential harm that this experience may cause to mother-child bonds (see Chapters 4 and 5). Those who experience feelings of aversion while breastfeeding often limit feeding sessions to cope with feelings of BAR, meaning that women needed to end breastfeeding sessions earlier to avoid having this experience. Findings from all stages of this research also confirm that some women who experienced BAR limited breastfeeding before they felt that their infant was ready to stop. Many women with BAR continued to breastfeed by distracting themselves from their nursling while feeding (see Chapters 4 and 5), which may have a negative impact on feelings of breastfeeding bonding that can occur for women who breastfeed without BAR. This research has shown that many who have this experience report that with the right support breastfeeding had been a good experience, including those with complex breastfeeding difficulties such as BAR. However, possible short- and long-term effects of BAR on maternal-infant bonding requires further investigation.

Partners

The partners of those who experience BAR have a vital role to play in supporting women to achieve their personal breastfeeding goals. The support that breastfeeding women receive from partners when experiencing BAR can be key to creating positive outcomes. This research has shown that women with BAR had higher levels of anxiety and stress, and that it was difficult for them to find the words to describe this experience to partners (see Chapter 4). Those who did not feel supported by their partners reported that this further compounded their feelings of distress (see Chapter 4). Many participants who reported a resilient experience of BAR claimed that positive support from those who they lived with, and often

partners, had provided a significant encouraging impact which affected their ability to continue breastfeeding. Women in this research reported that their partner had provided the most breastfeeding support, and that partner support to overcome BAR had allowed them to achieve a positive breastfeeding outcome (see Chapters 4 and 5). This research has shown that women have better breastfeeding outcomes when partner support is given for BAR, and partner relationships can be strengthened, not only with the breastfeeding woman but also with the nursing infant (see Chapter 4).

Self-care treatment strategies for breastfeeding aversion response.

Women in all phases of this research found ways of coping with BAR by using techniques that they claimed had helped them to continue breastfeeding, which have been reported throughout this thesis (see Chapters 4, 5 and 6). Self-help strategies were reported in Phases 2, 3 and 4 of this research and confirmation of these findings have produced a stronger understanding of what may benefit those who experience BAR to continue breastfeeding (see Chapters 4, 5 and 6). Some of these self-help strategies are simple things that women can do while breastfeeding to help them achieve their personal breastfeeding goals and possibly delay weaning. To continue breastfeeding, the most reported strategy used by women while experiencing BAR was personal distraction. Women distracting themselves while breastfeeding using methods such as a breathing technique, meditation, positive self-talk, or looking at their phone. Participants also described using a magnesium supplement to reduce feelings of BAR, and that helpful supportive company assisted some women to overcome BAR in-the-moment and continue breastfeeding (see Chapters 4, 5 and 6).

Table 7.5. Research phases for self-treatments for BAR with integration points.

Qualitative Phase 1 Meta ethnography theme	⟹	**Qualitative Phase 2 Theme and example quote**	**Qualitative findings integrated into quantitative Phases**	**Quantitative Phase 3 Survey 1: Experience of BAR**	⟹	**Quantitative Phase 4 Survey 2: Prevalence of BAR**	**Mixed method Integrated discussion**
Effects of BAR on relationship with child and others: " I am glad I did it "	**Phase 1 findings informed Phase 2**	Reflections on coping with BAR and building resilience. "Relaxation script which is like a guided meditation … It talks you through all the parts of your body and moving down, like all the way to your toes. I find that helpful".	Qualitative findings about how women were coping with the experience of BAR informed survey items. Qualitative findings about strategies participants used to continue breastfeeding, and to ask about overall breastfeeding enjoyment were informed by the qualitative findings.	Management of BAR. What helped in the moment to reduce feelings of BAR: - Distracting self. - Magnesium supplement. - Reducing the length of feeds. - Helpful company.	**Phase 3 data informed Phase 4**	Coping self-strategies: Self-distraction. Positive self-talk. Breastfeeding boundaries. Breastfeeding experience improved with subsequent nurslings. Most reported breastfeeding experience: Described as 'good' or 'extremely good'.	**Confirmed findings:** Coping strategies; distraction, magnesium, self-care, support. **Mixed methods:** Higher levels of wellbeing were found for those who could continue to breastfeed. **New hypothesis:** Increased breastfeeding confidence may equate to a greater ability to overcome BAR.

Distraction

Women in all phases of this research described using personal distraction as a self-coping tool to continue breastfeeding while experiencing BAR. The most reported method for personal distraction while breastfeeding was to remove the focus from the breastfeeding infant by focusing on something else such as a smartphone. Some women reported using a breathing or meditation technique to distract themselves from the negative sensations while breastfeeding. These findings have been confirmed over all phases of this research which has strengthened the validity of these results (see Chapters 4, 5 and 6).

Magnesium

It has been reported throughout this thesis that magnesium supplementation may reduce the negative feelings of BAR. Some women in this research consumed a magnesium supplement to reduce feelings of BAR and to support their breastfeeding journey. Many who tried taking a magnesium supplement said that they could continue breastfeeding with BAR and claimed that it was very helpful or somewhat helpful (see Chapters 5 and 6). There is no other empirical literature on this finding other than the manuscripts which are published as part of this thesis. This result requires further investigation.

Support

Previous research has found that women benefit from sensitive and individualised breastfeeding support to help them achieve their personal breastfeeding goals and have positive breastfeeding experiences (Blixt, Johansson, Hildingsson, Papoutsi, & Rubertsson, 2019). The integrated findings of this thesis reveal that practical support and encouragement from others was helpful for women who experienced BAR to achieve their personal breastfeeding goals (see Chapters 4 and 5). This research has shown that timely and individualised support can lead to a more resilient experience of BAR and better breastfeeding outcomes. Support from partners was described as the most effective type of support, and many participants in this research reported that their partners had supported them to continue breastfeeding (see Chapters 4, 5 and 6).

Strengths and limitations

This research is the first to explore the experience of women who have feelings of aversion while breastfeeding and has identified and characterised the phenomenon of BAR. This is also the first research to find the prevalence of BAR, and D-MER in Australia. In each of the results chapters of this thesis the strengths and limitations are present and therefore will not be repeated here. This is also the first research to identify the fact that some women who breastfeed and take magnesium claim to have better breastfeeding outcomes.

This research does have limitations as it was exploratory and has only begun to map the landscape of this breastfeeding difficulty, and in doing so has created more questions about the experience of BAR and treatments that may be effective. Another limitation of this research is that it purposefully targeted women who had experienced feelings of aversion while breastfeeding or were currently breastfeeding. Women who may have already ceased breastfeeding because they experienced BAR were not included in this research, therefore the prevalence of those who experience BAR may be underrepresented. Also, due to the exploratory nature of the surveys tools and the use of non-parametric items, the external validity of results and generalizability of findings cannot be guaranteed.

Further, this research did not attempt to engage with multicultural groups and invitations to participant in this research were only presented in English. Although English is the most common language spoken in Australia this did mean that those who did not speak English were excluded from this research and so results may not represent Australia's cultural diversity.

Further research and hypotheses

The thesis has defined BAR and what this experience means for women, their maternal wellbeing, the mother-infant bonds, and family relations. The studies within this thesis all provide a new perspective of breastfeeding which includes the experience of BAR. Previous knowledge of breastfeeding was missing information about this complex breastfeeding challenge. Past views of the experience of breastfeeding, which often focus on the health benefits for mother and child, did not include an understanding of these complex emotional breastfeeding experiences. Breastfeeding issues in the past which have received research attention predominantly focused on common physical problems such as milk supply, tongue-tie, mastitis, and poor latch, without consideration for more complex problems such as BAR, which can also affect maternal mental health. This research has shown that the experience of breastfeeding is more complicated than formerly thought and further research about how to support women emotionally and how to protect maternal mental health while breastfeeding would be useful for women who breastfeed.

This thesis has begun to map the landscape of the experience of BAR, however these new findings have highlighted that BAR needs to be investigated further. The following hypotheses are questions prompted by the mixed method findings and integrated phases of this research.

Are negative sensations a common experience while breastfeeding?

The broad spectrum of negative sensation that women might experience while breastfeeding range from common touched out feelings of tiredness and exhaustion, to less common

descriptions of BAR which are visceral and overwhelming. Women commonly also describe feeling pain caused by early feeding nipple wear-and-tear, and mastitis. Given that such a large percentage of participants in all phases of this research reported experiencing BAR or some other less complex level of discomfort while breastfeeding, the following hypothesis is advanced:

> Negative sensations may be a common part of the breastfeeding experience. Furthermore, is overcoming difficult feelings while breastfeeding something that women frequently do to achieve their breastfeeding goals?

If it is found that negative sensations at some point during the breastfeeding journey may be part of the normal scope of the breastfeeding experience, then public health interventions aimed at supporting women to breastfeed can include education for women about how to deal with these challenges before they arise, and in that way help women to be psychologically prepared to meet possible challenges and overcome negative sensations while breastfeeding. Then they can achieve their personal breastfeeding goals. To explore this hypothesis further the prevalence of BAR and BAR sub-types ought to be retested in Australia with another follow-up survey, and the prevalence of BAR tested in other countries.

Are there more subtypes of BAR?

This thesis has presented some sub-types of BAR. Recent research about the experience of autistic women who breastfeed may reveal that women who have sensory processing issues which can affect their breastfeeding experience might also experience a sensory type of BAR (Grant et al., 2022). Research about the experience of chest-feeding for transmasculine parents has also raised the question of whether or not feelings of body dysphoria could cause another subtype of BAR (MacDonald et al., 2016). Another possible sub-type of BAR which requires further research is BAR that is triggered by maternal mental health conditions such as postnatal psychosis, as was reported by Watkinson and colleagues as negative embodied sensations while breastfeeding, when studying this mental health condition (Watkinson et al., 2016). Further research is needed to identify more possible causes of women experiencing negative sensation while breastfeeding and if there are more sub-types.

Does taking a magnesium supplement reduce BAR?

Magnesium functions as a nutritional co-factor in the serotonergic system (Vink & Nechifor, 2011), and is a co-factor for the function of oxytocin receptors (Bharadwaj et al., 2022) which is involved in the breastfeeding milk ejection reflex (Hurlemann & Grinevich, 2018). It is therefore hypothesised that the essential biological functions of magnesium may explain why some women report that taking this mineral as an oral supplement helps to reduce their

feelings of aversion while breastfeeding. Investigating the form of magnesium and dose taken by participants was not within the scope of this research. To explore this hypothesis, it would be useful to run a double-blind randomised controlled trial testing the effect of oral magnesium supplementation on the breastfeeding experience for those with self-identified BAR. Further research is also needed to explore the best forms of magnesium to prescribe to assist breastfeeding, and the optimal dosage.

Is T-BAR a previously unidentified human weaning instinct and evolutionary adaptation?

There may be negative breastfeeding sensations which are caused by an evolutionary adaptation, which may present as tandem breastfeeding aversion response (T-BAR). T-BAR occurs when women breastfeed two infants of different ages at the same time and only experience negative sensations while breastfeeding the older nursling and not the newborn. There may be evolutionary biological factors influencing some breastfeeding difficulties experienced by women, however there is very little research on this as it relates to human lactation (Schlomer et al., 2011).

Despite the limited research in this area animal research by evolutionary biologists have defined parent offspring conflict (POC) theory and observed POC in many mammal species around weaning, noting that the cost of parental investment is measured in terms of decreased parental resources (namely the ability to produce future offspring) (Trivers, 1974). POC theory states that the essence of this conflict is caused by a struggle between the optimal parental energy investment from the parent's perspective and the optimal parental investment from the perspective of the offspring (Schlomer et al., 2011). Previous research by evolutionary psychologists found that human mothers who exclusively breastfed their infants had in general higher levels of maternal protective aggression than formula-feeding mothers and nulliparous women when faced with a perceived threat (Hahn-Holbrook et al., 2011). Higher levels of aggression have also been observed in many mammal species when lactating, including hamsters (Giordano et al., 1984), rats and mice (Lonstein & Gammie, 2002), lions (Grinnell & McComb, 1996), and macaques (Schino et al., 2004). Further research on biological factors that influence breastfeeding may be of benefit to understanding complex breastfeeding difficulties in humans such as feelings of aversion while breastfeeding. As previously researched in primates as parent offspring conflict found to occur around the time of nursling young (Maestripieri, 2002; Trivers, 1974) BAR may be a weaning adaptation toward older nurslings to protect maternal investment of herself or her newborn, however this hypothesis requires further research.

Implication and recommendations

Past public health breastfeeding interventions have centred around educating the public about the benefits of breastfeeding and have not targeted maternal breastfeeding challenges, in part because there was insufficient research investigating complex problems such as BAR within the scope of the normal breastfeeding experience. This research has shown that complex breastfeeding difficulties such as BAR are common and may even be within the scope of the normal breastfeeding experience, however more research is needed to investigate how common these breastfeeding challenges are.

Health promotion

Breastfeeding has been proven to have long-term benefit for communities, the economy, and the environment (Victora et al., 2016). Many women who aim to breastfeed however will experience challenges and barriers to achieving their personal breastfeeding goals. These challenges can be complex and involve not just the women and child but also other family members, and those within their community. Breastfeeding issues need to be addressed from a public health perspective to support women to overcome breastfeeding challenges. A public health perspective of breastfeeding support would include actively recruiting and educating the community around breastfeeding woman to support breastfeeding. This approach could aim educate those within the community about how to support breastfeeding, and teach health professionals to find ways to encourage breastfeeding when women experience challenges (Brown & Jones, 2019).

Breastfeeding challenges such as negative sensations while breastfeeding may be more commonplace than has previously been reported in the literature. If this is the case, then educating women about how to overcome negative sensations such as BAR, or pain while breastfeeding may be necessary to encourage more women to breastfeeding for longer. Public health strategies aimed at dissemination of candid depictions of the possible challenges women might encounter when breastfeeding alongside the current ubiquitous positive benefits of breastfeeding literature may benefit women to psychologically navigate breastfeeding challenges better as they arise.

Health Services

Some women who have complex breastfeeding challenges such as BAR require more support to continue to breastfeed from health professionals and those within their community. Many of those who experience BAR will be able to continue to breastfeed, however some may feel that they need to limit or cease breastfeeding (see Chapters 4 and 5). For those who limit or cease breastfeeding as a consequence of experiencing BAR, it is important that they continue to receive mental health support. Health professionals must also be aware of not

compounding feelings of guilt and shame. Useful public health interventions which aim to assist women to find strategies and support to continue breastfeeding with BAR and other complex breastfeeding challenges would also be useful.

Health professionals may also benefit from the knowledge that if a woman is perceiving negative sensations while breastfeeding that this may not mean that the women is feeding incorrectly, or that there is anything wrong with her, or her infant. This difficult stage may be a common part of the breastfeeding journey, and women require support to manage and overcome difficult phases of breastfeeding in order to meet their personal breastfeeding goals. Medical professionals such as general practitioners would benefit from greater education about how to support women to overcome complex breastfeeding challenges. GPs also need to understand the personal mental health cost to women who stop breastfeeding after receiving advice to stop from a medical professional when they experience difficulties. The advice from medical professionals should aim to support women to overcome complex breastfeeding challenges because that strategy is better for maternal wellbeing (Brown & Jones, 2019).

Public health policy

Many public health breastfeeding policies centre around educating women and the public about the benefits of breastfeeding and have not yet targeted how communities can support maternal breastfeeding challenges. This is in part because of scarce research investigating complex breastfeeding problems such as BAR. This research has shown that complex breastfeeding difficulties such as BAR, and negative sensations while breastfeeding may be more common than previously known. Support for breastfeeding and overcoming complex breastfeeding challenges is not a burden that should be placed on the shoulders of single women. It should instead be a public health concern with interventions that target health professionals, communities, and partners (Brown & Jones, 2019). For those who do not receive support when experiencing BAR, this experience can have negative effects on maternal identity, mother-infant bonding, and breastfeeding duration. New public health policies are needed which target and support women to overcome difficult challenges when breastfeeding.

Conclusion

This chapter presented the integrated discussion and findings of this research, where the integration took place, and how these findings answered the research objectives. The primary research question was answered by all four phases of this research, and all five research objectives were answered in the final Phase 4. The integrated findings defined the experience of BAR, which was described as overwhelming feelings of aversion in response to

breastfeeding, and that lasted throughout the entire feeding session. The burden of BAR on maternal wellbeing was explored and the integrated findings described, in addition to the findings that BAR can be problematic for maternal identity and can negatively affect maternal relationships with children and partners. Self-care treatment strategies for BAR and what participants had found helped them when having this experience were also discussed. Finally, this chapter suggested further research and hypotheses to facilitate a better understanding of how to support women with BAR. Public health recommendations to assist with the complex challenges that BAR present were also suggested.

Conclusion

This is the first empirical research to specifically explore the phenomena of women who experience breastfeeding aversion response (BAR). This research answered the question: What is the experience of women who self-identify as having feelings of aversion while breastfeeding? This research accomplished the research aims of exploring the lived experience of BAR, and identifying the main features of BAR, including the prevalence of this phenomena in Australia. To describe the feeling of BAR women used words such as sickening, exhausting, and skin crawling, and described these feelings as lasting throughout the entire breastfeeding session. This experience may be somewhat common for women who breastfeed, with the research findings here showing that as many as 1 in 5 breastfeeding women surveyed in Australia reporting to have had this experience. This research also met the objectives of revealing some self-perceived factors that reduce or stop BAR. Some women who were experiencing BAR found self-care and breastfeeding strategies that assisted them in continuing to breastfeed, such as distracting themselves while breastfeeding, taking a magnesium supplement, or setting gentle breastfeeding boundaries with older nurslings.

BAR is a complex phenomenon which can have negative effects on maternal identity and can affect a woman's ability to breastfeed. BAR can also affect the mother-child relationship, maternal wellbeing, and family relationships. The integrated findings of this research have shown that this experience is more likely to occur for those who breastfeed while pregnant, tandem breastfeed, or breastfeed a toddler around the time of ovulation and menstruation. For some this experience can happen when breastfeeding for the first-time. This experience with BAR is difficult for women to overcome without support from others, and partner support is seen to be useful for women to continue breastfeeding and to achieve their personal breastfeeding goals.

This thesis also explored the types of support received and how health professionals can improve the quality of support given to women who have this BAR experience. Women who experience this complex breastfeeding difficulty may have increased levels of stress and anxiety and require additional support to meet their personal breastfeeding goals, however with the right support most of those who were able to continue breastfeeding reported an overall positive experience. Women who experience BAR want and need more support from health care professionals and those around them, but at present they do not feel that they receive enough or adequate levels of support to manage their challenges. This thesis has highlighted a range of areas of need for more research, and a need for a greater public health focus on supporting women who experience the complex breastfeeding challenges brought about by BAR.

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Appendices

Appendix 1. Phase 2 Distress protocol, and researcher mental health first aid certificate.

The Experience of Women Who Self-identify as Perceiving Feelings of Aversion While Breastfeeding

The following protocol will be put in place should a participant become distressed and require either additional or on-going assistance. A range of services could be offered depending on her circumstances. Prior to the commencement of any interview, information regarding the counselling available should it be required will be provided to all prospective and actual study participants. The researcher will provide sufficient information regarding the risks and benefits of the research so that individuals may freely accept or decline participation. This information will be made available to the participant prior to the interview commencing. An additional notification of this information will also be given to those participants should they become distressed during the interviews.

Strategies to assist those distressed during an interview

1. Should a participant become uncomfortable while discussing any topic during the interview, the following actions will be taken by the interviewer: Participant will be informed that we can stop the interview and restart after a short break if needed.
2. Researcher will change the topic being discussed.

If the participant is exhibiting a high level of stress or emotional distress, begins to cry uncontrollably or starts shaking then the interviewer will take the following actions in accordance with the step-by-step protocol supplied below (Figure 1.):

1. The researcher will suggest that it is appropriate that the interview be terminated.

2. If the participant wishes this to happen, the interview will be ceased.

3. In the case where a counsellor or GP is not readily accessible a member of the research team who is a health professional will spend time with the participant and provide assistance, within the scope of their abilities, to discuss their concerns and support them.

4. After seeking advice from the Chief investigator (Dr Amie Steel), a recommendation will be made that the participant speak to a counselling professional to discuss their concerns and referred if they agree. Referrals for interviewee participants that may have a need for further counselling:

- Australian Breastfeeding Association 24-hour free phone counselling service – 1800 686 268.
- Lifeline counselling (anyone having a personal crisis) – call 13 11 14 or chat online at https://www.lifeline.org.au/Get-Help/I-Need-Help-Now

- Beyond Blue counselling - 1300 22 4636 or online chat at https://www.beyondblue.org.au

If the **woman** has a general practitioner (GP) involved in her care it may be more appropriate to refer her to her GP who is already familiar with their history and would provide continuity of care. In this case the options of a counsellor or clinician would be provided to the **women** as well. (Medicare will cover 10 sessions of counselling per annum). The intended outcome of the activation of this protocol will be a comprehensive assessment and the presentation of options regarding ongoing counselling or other management as appropriate.

6. A follow-up phone call will be made by the interviewer the following day to ensure that the participant is well and to determine feasibility of a follow up interview.

Distress and safety Protocol: Researcher (PhD student)

The following protocol will be put in place should a researcher become distressed or be at risk during field work and require emergency, additional or on-going assistance. A range of services could be offered depending on their circumstances.

Strategies to assist during interviews

1. Should the researcher feel distressed during an interview the researcher will contact a supervisor to discuss. The researcher will continue to have regular meetings with their supervisors.

2. The researcher will be referred to a counselling professional to discuss their concerns or a referral made to their Employee Assistance Program.

3. The researcher will always carry a mobile phone if working in the field and will share the contact details, location, and time of the interviews with the research team.

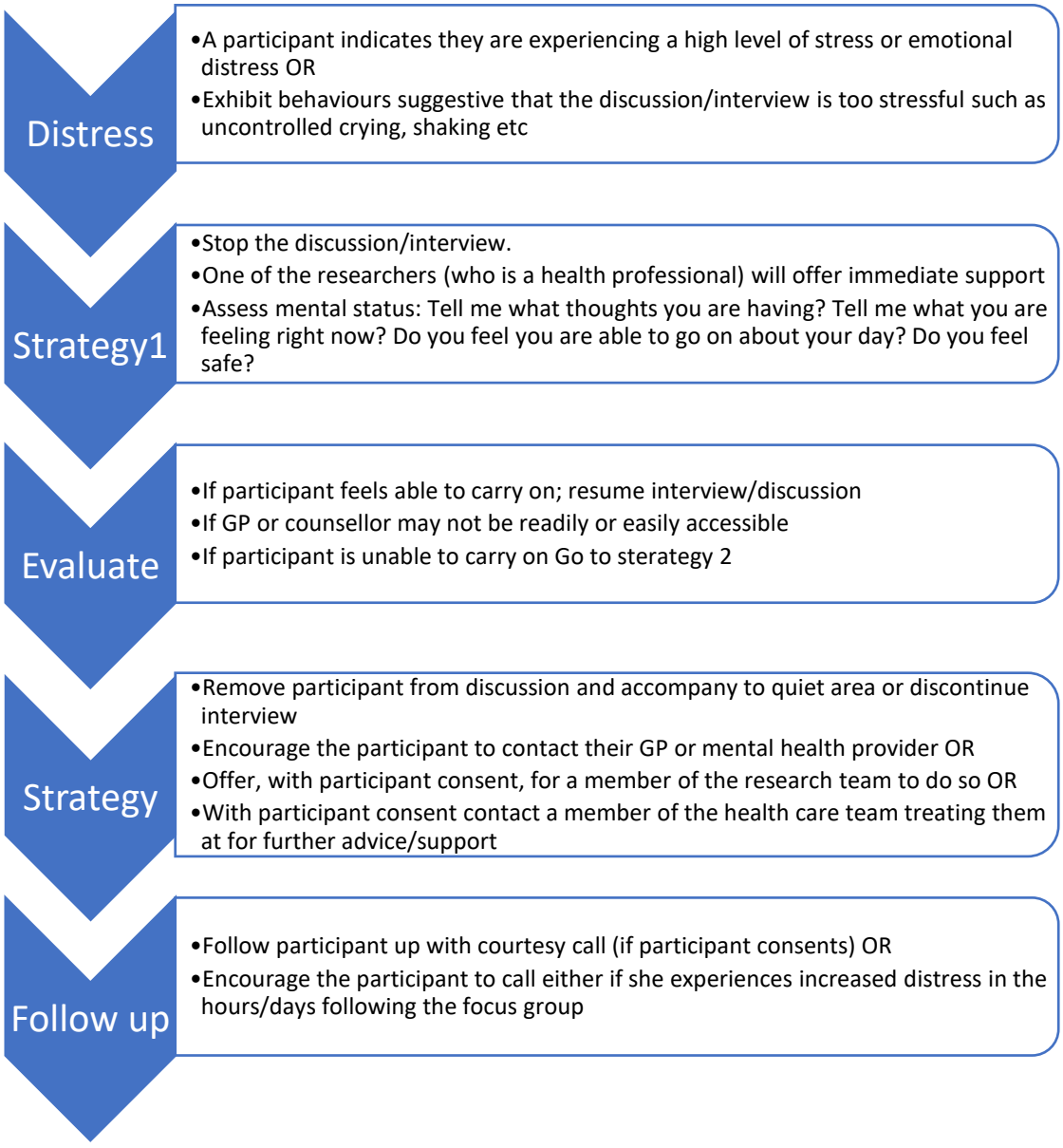
Conclusion

It is the researcher's duty of care to ensure that there is a balance consideration of the benefits against the risks. The researcher will ensure these strategies are put in place prior to commencing the interviews or discussions.

The researcher undertook an accredited 2-day course in Mental Health First Aid training with Mental Health First Australia (https://mhfa.com.au), see certificate of completion below.

Following is the step-by-step guided protocol adapted from Draucker C B, Martsolf D S and Poole C.(2009) Developing Distress Protocols for research on Sensitive Topics. *Archives of Psychiatric Nursing* 23 (5) pp 343-350).

Figure 1. Participant distress protocol for interviews.



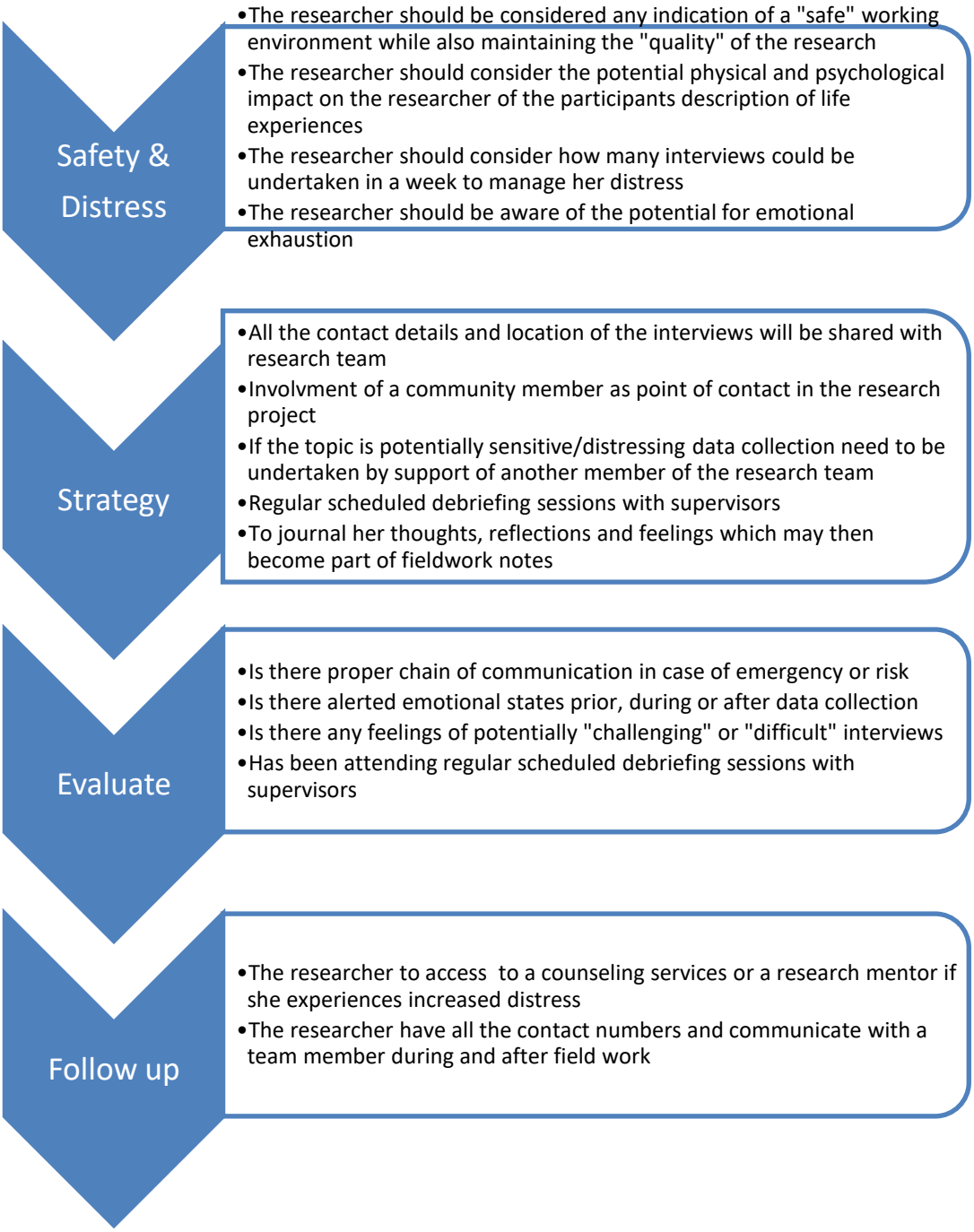


Figure 2. Researcher's Safety and Distress Protocol:

Researcher safety training for Phase 2 interviews: Mental Health First Aid Certificate

MENTAL HEALTH FIRST AID Australia

CERTIFICATE OF ACCREDITATION

MENTAL HEALTH FIRST AID AUSTRALIA

accredits

Melissa Morns

as a **Standard Mental Health First Aider**
after successful completion of the course and assessment.

This 12-hour course teaches skills for providing initial help to a person who is developing a mental health problem or experiencing a mental health crisis.

Leigh Fraser-Gray

MHFA INSTRUCTOR(S)

19/01/2020

ACCREDITATION DATE

19/01/2023

ACCREDITATION EXPIRY DATE

Appendix 2. Phase 2 interview Facebook administrator invitation letter

INVITATION LETTER

Facebook Breastfeeding Support Groups

Project Name: The Experience of Women Who Self-identify as Perceiving Feelings of Aversion While Breastfeeding

Dear Facebook Group Administrator,

My name is Amie Steel and I am an academic at the University of Technology Sydney. I am contacting you on behalf of Melissa Morns who is a student at the University of Technology, Sydney. I am contacting you in place of Melissa Morns because Melissa Morns may be known to you and/or the members of your group and ethically it is better if you are invited to participate by an independent person that is not known to you.

Melissa Morns is conducting research into the experience of women in Australia who self-identify as perceiving feelings of aversion while breastfeeding and we would welcome your assistance. The research will involve consenting participants taking part in one in-depth interview via Skype or Zoom with Melissa Morns at a time of their convenience that should take no more than 1 hour. I am contacting you because your Facebook Support Groups may have members that have experienced this phenomenon who are interested in participating in this research.

This research has been funded by an Australian Government Research Training Program (RTP) Scholarship.

If you think that any of your group members would be interested in participating, I would be glad if you would share the participant information form in your group.

You are under no obligation to participate in this research.

Yours sincerely,

Dr Amie Steel

Senior Research Fellow

School of Public Health

University of Technology Sydney

e: amie.steel@uts.edu.au

p: +61 [redacted]

NOTE:

This study has been approved by the University of Technology, Sydney Human Research Ethics Committee. If you have any complaints or reservations about any aspect of your participation in this research which you cannot resolve with the researcher, you may contact the Ethics Committee through the Research Ethics Officer (ph: +61 2 9514 2478 Research.Ethics@uts.edu.au), and quote the UTS HREC reference number. Any complaint you make will be treated in confidence and investigated fully and you will be informed of the outcome.

Appendix 3: Phase 2 Interview availability and consent form

I _____ agree to participate in the research project *The experience of women who self-identify as perceiving feelings of aversion while breastfeeding* ETH19-4161 being conducted by Melissa Morns Health Research Office, Faculty of Health, University of Technology Sydney, Jones St, Ultimo 2007 (PO Box 222)
T +61 [redacted] E Melissa.a.morns@student.uts.edu.au.

I understand that funding for this research has been provided by an Australian Government Research Training Program (RTP) Scholarship.

I have read the Participant Information Sheet or someone has read it to me in a language that I understand.

I understand the purposes, procedures and risks of the research as described in the Participant Information Sheet.

I have had an opportunity to ask questions and I am satisfied with the answers I have received.

I freely agree to participate in this research project as described and understand that I am free to withdraw at any time without affecting my relationship with the researchers or the University of Technology Sydney.

I understand that I will be given a signed copy of this document to keep.

I agree to be:
☐ Audio recorded
☐ Video recorded

I agree that the research data gathered from this project may be published in a form that:
☐ Does not identify me in any way
☐ May be used for future research purposes

I am aware that I can contact Melissa Morns if I have any concerns about the research.

_____ ____/____/____
Name and Signature [participant] Date

_____ ____/____/____
Name and Signature [researcher or delegate] Date

Appendix 4. Phase 2 Participant information sheet - interviews

The Experience of Women Who Self-identify as Perceiving Feelings of Aversion While Breastfeeding

WHO IS DOING THE RESEARCH?

My name is Melissa Morns and I am a PhD student in the faculty of Health at the University of Technology Sydney. My primary supervisor is Dr Amie Steel, Faculty of Health University of Technology Sydney; Email: amie.steel@uts.edu.au, Phone: +61 .

WHAT IS THIS RESEARCH ABOUT?

This research aims to enhance understanding of the experience and characteristics of women who perceive feelings of aversion while breastfeeding, and in that way be of benefit to women who experience this phenomenon.

FUNDING

This research is supported by an Australian Government Research Training Program (RTP) Scholarship.

WHY HAVE I BEEN ASKED?

You have been invited to participate in this study because you are/or have breastfed an infant and self-identify as having experienced feelings of aversion while breastfeeding.

IF I SAY YES, WHAT WILL IT INVOLVE?

If you decide to participate, I will invite you to participate in a 1-hour in depth interview via zoom or skype at a time of your convenience. The interview will be audio and video recorded and then transcribed. After the interviews are transcribed, the audio/video version will be deleted. The transcribed interviews will then be de-identified. If you are unable to participate in this research but would like to assist in another way you are welcome to invite others for whom the research may have implications.

ARE THERE ANY RISKS/INCONVENIENCE?

Yes, there are some risks/inconvenience. We will be talking about sensitive personal information and your feelings about breastfeeding, which may at times be uncomfortable. You will also need to allow an hour of your time for the interview, which may be difficult.

If you feel distressed or upset we can take a break or end the interview. If you feel distressed after the interview, please contact the following services:

- Australian Breastfeeding Association 24-hour free phone counselling service – 1800 686 268.

- A doctor/general practitioner (GP) involved in your care, or local doctor (GP).
- Lifeline counselling (anyone having a personal crisis) – call 13 11 14 or chat online at https://www.lifeline.org.au/Get-Help/I-Need-Help-Now
- Beyond Blue counselling - 1300 22 4636 or online chat at https://www.beyondblue.org.au

DO I HAVE TO SAY YES?

Participation in this study is voluntary. It is completely up to you whether or not you decide to take part.

WHAT WILL HAPPEN IF I SAY NO?

If you decide not to participate, it will not affect your relationship with the researchers or the University of Technology Sydney or Facebook group. If you wish to withdraw from the study once it has started, you can do so at any time without having to give a reason, by contacting Melissa Morns at Melissa.a.morns@student.uts.edu.au or +61 [redacted]. If you withdraw from the study, all information pertaining to your participation will be deleted and erased. However, it may not be possible to withdraw your data from the study results if these have already had your identifying details removed.

CONFIDENTIALITY

By signing the consent form you consent to the research team collecting and using personal information about you for the research project. All this information will be treated confidentially. Interviews will be transcribed, and then transcribed information will be de-identified. All information used for analysis and publication will be de-identified. We would like to store your de-identified data for future use in research projects that are an extension of this research project. In all instances your information will be treated confidentially. We plan to publish the results of this research within a thesis for the University of Technology Sydney and in Scientific Journals to expand understanding of these phenomena. In any publication, information will be provided in such a way that you cannot be identified.

You will be notified of all publications that pertain to this research by email.

WHAT IF I HAVE CONCERNS OR A COMPLAINT?

If you have concerns about the research that you think I, Melissa Morns Melissa.a.morns@student.uts.edu.au or my supervisor, Dr Amie Steel amie.steel@uts.edu.au can help you with, please feel free to contact us. You will be given a copy of this form to keep.

Thank you for agreeing to participate in this research. Please provide us with some information to ensure that you are appropriately included in the study. This information will be held confidentially by the research team and will not be shared.

Please provide the research team with the following information:

Full Name:

Country of residence:

Email Address:

Phone Number:

Mobile Phone Number:

Are you now breastfeeding or have you in the past breastfed an infant?

What is your availability to participate in an interview? Please also indicate in the 'comments' section any additional information regarding your availability.

	Morning	**Afternoon**	**Evening**
Monday	○	○	○
Tuesday	○	○	○
Wednesday	○	○	○
Thursday	○	○	○
Friday	○	○	○
Saturday	○	○	○
Sunday	○	○	○

Appendix 5: Phase 2, Transcribed interview example.

Participant 6_6th interview (9).mp3

Speaker: Hello

Researcher: Okay. So the purpose of this interview is to have a conversation that will facilitate you telling your own story in your own words. So for the most part, you will be speaking and I will be listening. I'm not able within the context of this interview to provide counselling for you. However, if you feel that you would like counselling for anything that we speak about here today, you will be provided with information for free counselling services. If I may ask for clarification on points that you make. Not because you're being unclear, but because you need to explain the meanings in your own words. I'm recording this interview, but only audio will be retained for transcribing and will be identified. So I can assure you that your name will not be associated with this research. Please take your time to answer questions at any time if you would like to take a break. We can stop the interview and restart after a short time. Once again, you are free to withdraw at any time from this research without giving a reason. Are you ready to begin?

Participant 6: Yep.

Researcher: OK. So can we just start with having you explain who is in your family

Participant 6: We've got, my husband and I have a three-year-old son [child 1] and little four-month-old [child 2].

Researcher: And just going back to before [child 1] and [child 2] were born, can you tell me about how you felt about breastfeeding?

Participant 6: I was super keen to breastfeed. So, yeah. Yeah. I didn't I didn't I didn't really know what to expect either. I didn't do many classes. I just kind of I'm a bit of a go with the flow person. So I just thought, yeah, I'd love to breastfeed. And I was just really positive about it. Just thought it would all work out, work itself out.

Researcher: And can you talk me through the breastfeeding story with your kids, please?

Participant 6: So I found it quite easy with [child 1] because I have I have quite a lot of milk. Actually had a have had an oversupply with both of them. But at the start, it was a bit tricky with [child 1] because he had tongue and lip tie. So that was even though I had lots of milk. He wasn't sort of he wasn't able to. He was gaining weight and everything fine. But he wasn't able to feed for as long and maybe could get really tired because of the tongue and the lip tie. And it was sort of hurting a little bit on the nipples. So we got we had those corrected at about two weeks and it helped a bit. But I had to sort of relearned how to latch him.

Participant 6: So it wasn't, I guess, as easy as I thought it was going to be, but I still loved being able to do it. But then not long after that, he and I both had thrush. And because I found one side was particularly painful, I sort of preferred the other side. And so the more painful side started getting a bit blocked up. And then I got mastitis on that side. So it was a painful experience to start with. And also found out that I have had I had nipple vessels spasm at the same time. So that combined with the thrush and the mastitis all at the same time at one point was I almost I could understand why people end up stopping because it was really, really painful.

Participant 6: But after a while that that settled down. And when it did, it was amazing. I loved breastfeeding him and he loved it, too. In fact, he's still breastfeeds. So it was once that all settled down and I learnt how to make sure that I was draining the breasts like enough to so that they didn't get blocked up. It was it was all smooth sailing.

Researcher: And what about with [child 2]?

Participant 6: It's been a lot easier. She hasn't had she's got a very mild lip tie, which we've left because it hasn't caused us any issues. But the experience with her, I was a lot more confidence knowing the things to look out for and knowing how my breasts kind of work a little bit more. I found it really easy. And if there are times where I've felt early on with my oversupply, I was getting engorged then I just let my three-year-old on the boob and he would drain them for me. So I found the whole process with her a lot easier and she fed more easily and it was felt a lot more natural just falling into breastfeeding with her.

Researcher: Have you experienced feelings of aversion while you've been breastfeeding?

Participant 6: Yeah. Not when my son was younger, I didn't. But as he got a bit older, I started to feel a little bit like, oh, come on, like you to do. We have to do this 15 times a day. Like, I would sort of get frustrated a little bit at having to like him being so demanding, still like an older age and that would come and go.

Participant 6: When I found out I was pregnant with [child 2] I was quite keen to continue feeding him if I could, because we'd dropped it. We had sort of figured out a good balance for him and he doesn't sleep like I still feed him to sleep. So I find that really useful for him, but it helps him settle. So I was still doing that.

Participant 6: But then during the pregnancy, I found that's when the aversions really kicked in, when my milk dried up and it became a bit more painful and that kind of skin crawling feeling. And so I he he fed a lot less. We'd sort of put him in the car to help him sleep if he needed to. That kind of thing. But I still sort of stuck at it. I found that later on after 20 weeks, it wasn't so bad and I could kind of breathe through it a little bit. And then once she was born, the aversions just sort of went away.

Participant 6: And I still occasionally it comes back. If I'm feeling anxious or frustrated, I find that feeling comes back. But it's not anything like it was when I was pregnant. So it's nice that I've been able to I feel good that I've been able to get through that little stage of it

Researcher: Can we go back to something you just said when you say skin crawling feeling? Can you tell me more about that?

Participant 6: It's a little bit like, come, I get restless leg syndrome sometimes. And it felt it feels a little bit like that. Like, oh, I just can't lie still. And I just want him like sort of like, oh, I just want some space. And I can't. I can't lie still with this. It just doesn't feel comfortable. Kind of like, yeah, I just want to just sort of what he want him off me kind of thing.

Researcher: Can you tell me about the emotions that you feel that you were feeling in that moment, or at that time?

Participant 6: Yeah. Some it would be a bit frustrating because I didn't want to feel like that because I for a long time, I really, really loved feeding him up until I was pregnant. I loved it. So I kind of knew it was a combination of the hormones and, you know, maybe nutrients or whatever in the body. I don't know how it works, but I knew that up until that point, I'd really loved it. So I felt a bit frustrated and a bit disappointed and sad because I didn't want it. I wasn't ready for it emotionally I wasn't ready for it to end. But physically, my body could I couldn't sort of stand the feeling sometimes. So and he was very into it as well and very sad. So I sort of had sort of it made me feel a little bit guilty, too. Sometimes I know that it shouldn't really, but it did. And so, yeah, it was sort of a mixture of feeling frustrated, but then feeling sad about it as well. And so it's quite emotional.

Researcher: So can you tell me a bit more about the emotions associated in the moment with the skin crawling feeling?

Participant 6: I think sometimes sometimes I would get quite anxious and frustrated. It's sometimes I would get like almost angry at him. Like at him, which was really kind of, I know it's not his fault. But I would just that's where my anger was directed. Like. Like, why do we have to do this now? And, you know. Most of the time it was just kind of it was it's just kind of like kind of, I can't explain it, like it in the moment. It's just it was a very anxious feeling because I didn't want to feel that way. I felt bad about it. But I didn't want to be feeding him, but I wanted to be feeding him. So it was just sort of anxiety because I couldn't work it out.

Researcher: He tell me why you think it might be a difficult thing to describe?

Participant 6: I think it's a very it was more it was a very physical feeling, I think, and not something that I've ever felt before. And I just didn't understand it. I think I just wasn't prepared to feel like that because for so long I wanted to breastfeed. And I was so keen on it, He was very keen to keep breastfeeding. And we both really loved it. And it was like how little downtime together. And then all of a sudden it just felt wrong.

Participant 6: And I couldn't understand it. And I didn't wasn't expecting it and I didn't really know what was going on.

Researcher: When you use the word wrong, when to describe it, can you just explain a little bit more about the emotions around that?

Participant 6: When it felt wrong? Did you say?

Researcher: Yeah

Participant 6: Yeah, I think it's a little bit like I felt like my boundaries were being crossed. So I wanted in that moment, I didn't want to be touched or didn't want anyone close to me. But there's this little person who's really needing it. So there was I felt torn. I felt very torn. And it felt like it wasn't working. So I could. It felt a little bit like when you having a relationship with someone and you wanting to break it up, break up with them. But you kind of you don't want to do it, but you kind of know it needs to happen. It felt like that like breaking up with someone.

Researcher: Okay. So you were having were you having feelings that were conflicting.

Participant 6: Very much. Yeah. Yes, it was very confusing

Researcher: OK, so now you think about an analogy that you might be able to use to another analogy that you might be able to use to describe that that wrong feeling, that skin crawling feeling?

Participant 6: It was almost like, it's sort of like someone, because it's like being touched when you don't want to be touched, I guess. If if he wasn't little and 3, it would almost be like. You know, maybe a relative at a gathering touching you inappropriately or, you know, in a way that you don't really want. It's really hard to describe. It was almost like suddenly it was. It was a very foreign kind of almost like an invasion. A little bit like an invasion of space and an invasion of my body. When I didn't yeah.

Participant 6: And then so it felt it sort of felt wrong to be touched, but then wrong. Then I felt like it was wrong to feel like that. So it was confusing

Researcher: Yep.

Researcher: So just coming back to something you said a minute ago. You said you were thinking about hormones and nutrients at that time. Can you talk to me a bit more about that?

Participant 6: Well, I felt like because it was such a sudden change and you get all those hormones in early pregnancy, I wondered if that had something to do with it. And I did notice that if I take magnesium, because I get restless legs. If I'd given myself some magnesium while on the legs that the aversions weren't as strong.

Participant 6: So I used to try to keep up with that a little bit, but also doing some relaxation techniques like some deep breathing and yoga and stuff like that helped a little bit as well. So yeah, they they were there things that I thought, you know, maybe it's a bit related to hormones or, you know, a bit like magnesium definitely helps help them feel better. That was something that I'd read online, but also tried out and experienced and felt that it works. So, yeah

Researcher: OK. When you say feel good that I was able to get through it. Can you talk to me a bit more about that?

Participant 6: There were some days where I felt like I could put up with it because I wanted to I didn't want to end that breastfeeding relationship for us because he loved it so much. And it's such a great way to get him to bed at night. So I would just

kind of. There were nights where I felt like, yes, I can I can stick with it. I can be okay with it. And I just had hopes that after the baby was born, it might settle down a little bit. So I just looked forward to that

Participant 6: And and I did notice it getting better later on in the pregnancy and using breathing and or distracting myself while I was feeding him would would help a bit as well. So I really wanted to. I didn't want to necessarily end it without, seeing if it would get better after the baby was born

Participant 6: So I'm glad that in my case, it did it did get a lot better.

Researcher: When you say you use breathing, can you tell me more about that?

Participant 6: I use you use a type of breathing exercise called I think it's called a four-point breaths where you breathe in to the count of four and then you hold for the count of four, then out for the count of four and then hold it. And you just kind of keep, I sort of visualize a square as I'm going around. And I just find that that keeps my mind something else to focus on, but it physically calms me. And I found that when I was a bit more physically calm, when I was a bit more calm in myself, that the aversions would settle a little bit.

Researcher: And when you said distracting yourself, can you tell me more about that?

Participant 6: Oh just with a book or be on my phone or something like that

Researcher: So you said that you experienced that while you were pregnant with [child 2]. Yeah. And after [child 2] was born. What about before [child 2] was born?

Participant 6: Not it definitely didn't get as intense. But there were days where I would feel like, oh, I just need a break. I need some space. But it definitely wasn't sort of like the pain or the aversion that I had during pregnancy, except at the very start when I was having the thrush and the vasospasm and that mastitis and all of that painful stuff. I had a lot of fear with feeding him because it was so painful. So that was the only other time where I felt like the aversion was probably as strong just because it was. It was very painful fearing that pain.

Participant 6: (participant 6 speaking to child 1) I really need to talk to this lady, can you please go and watch for us. So please go and sit down. Sorry

Researcher: We can take a little break if you need to, it's totally okay.

Participant 6: He's all right. So mainly the only other time was that early on when when I was having struggling a little bit with the with the painful with the painful things.

Researcher: OK. And so can you talk to me about the pain and the aversion as they relate to each other?

Participant 6: Yes. Because I found that breastfeeding was a lot more painful during pregnancy as well. So I found that that tricky, that that pain was very similar to the pain that I felt when I had mastitis.

Participant 6: That pain was that I had during pregnancy was a bit similar to the pain that I had when I had thrush and mastitis. So maybe my brain was relating it back a little bit to that. It wasn't as painful, but I think the kind of emotional aversion was there as well when I was during the pregnancy. So whereas earlier on breastfeeding, [child 1] the pain there it was, it was just pain and it was just

the fear of pain that was making me feel averse to it. It wasn't that sort of skin crawling get him off me kind of aversion that I had during pregnancy.

Researcher: So you just used the words emotional aversion.

Participant 6: Yeah.

Researcher: Can you talk to me more about that?

Participant 6: Yeah, I think that that feeling of like being frustrated with him, that I didn't have that feeling when he was a baby. But maybe I think I feel it as he's older because he's older and most kids his age don't still breastfeed and, you know, frustrated that he's still kind of like he'll be that. He's sort of still not demanding, but that, you know, I could expect him to wait a bit more and he doesn't want to. And then having like having to have an argument with him about it or it just even a conversation about having it later, or waiting a bit or explaining that it hurt. So he has to wait, which to be fair to him, he was really good. But it's so, you know, I sort of would be frustrated with him for it because yeah, I guess I thought, well, he's older. Like I should be able to choose when I want to do it, not him.

Researcher: And when you say emotional aversion, what are the emotions that you are experiencing with that emotional aversion?

Participant 6: Well, the aversion itself, I guess, was just feeling like frustrated and like touched out sort of over touched like overstimulated and needing space.

Participant 6: But then at the same time, I'd feel like sad and guilty because of feeling like that.

Participant 6: So I have one set of emotions that were to do directly with the aversion and then have another set of emotions that happened because of those emotions. So it was it did kind of build. But yeah, the initial kind of feelings were like frustration. Frustrated, kind of sometimes angry, irritated, like just needing space.

Researcher: So you were just saying that there were feelings that you were having about having aversion and then the feelings that you were having while having an aversion? I know you've already spoken about that a bit, but can you tell me more about that?

Participant 6: Yeah. So I guess the feelings that sort of causing me aversions where like the frustration and stuff like that would sort of trigger me to feel then a bit guilty and sad and anxious about the fact that I was having those feelings about breastfeeding because I for so long I. I loved it and was keen to breastfeed two children for as long as they wanted to. And then I wanted it to be his decision when he stopped, not not mine because of aversion. So that feeling that I hadn't quite reached that goals, a bit of a failure, feeling and guilt. And they were sort of they were triggered by by having the aversion. And not actually causing the aversion themselves.

Participant 6: I think I felt very yeah anxious and confused because I didn't want to feel those initial kind of feelings that I was getting from the aversion. It's really hard to explain. But I guess in a way it's a bit cyclic because then , the anxiety and the

guilt and the feelings of failure would then feed back into the aversion again. I suppose because I did notice that the more kind of worked up that I was the harder, the more I would get aversion. So I think it kind of goes around in a bit of a cycle.

Researcher: How did that impact your feelings about breastfeeding?

Participant 6: I felt like suddenly I understood a lot more about about breastfeeding. To be honest, it actually made me research a little bit more about what was going on, how it how it physically worked. And I think after breastfeeding him really easily after that initial stage of his babyhood, breastfeeding was very easy. I kind of took it for granted a lot. So I open my eyes a little bit about just how tough breastfeeding can be and made me really understand and have a lot of sympathy for mothers who struggle with it. It made me a bit more realistic, I think.

Participant 6: And going into the second child, I didn't have maybe as high expectations of of breastfeeding. I just thought, well, I'll just, um, see how it goes and and not put too much pressure on myself because I know that it can get can be hard with the with the physical feelings. And I didn't know if the aversion was going to stay. And I was actually quite worried that what happens if I'm feeling like this with my new baby and I can't feed her properly. So I was a little bit worried about that, but I tend to try not to worry about things until they actually happen. But that was definitely a thought in my mind. Is that what this might continue and it might not end and I might have to think about alternative ways of feeding. So I think it made me a little bit more. Brought me back down to Earth a bit. It may be a bit more realistic about about breastfeeding and its challenges.

Researcher: And then when [child 2] was born, how did you feel about breastfeeding after you started breastfeeding [child 2].

Participant 6: It was really easy. And it was a massive relief that it felt right. It felt nice again and it felt right to me. And my confidence boosted again and everything just fell into place. And just yeah, it was really it was good.

Researcher: Can you talk to me about that experience as a mother, how that has made you feel as a mother?

Participant 6: The aversion, you mean? I think it was I found it really challenging because I wanted to follow his lead with the breastfeeding and I wanted to be able to provide the comfort that obviously at his age still gives him a lot of comfort, not necessarily nutrients at his age, because he eats a lot. But he finally he still does find it very, very comforting. And. And I wanted to be able to provide that, so I felt really disappointed when when there were days where I just felt like I couldn't.

Participant 6: Yeah, I think. I think at other times I was able to see. Well, I have to keep myself happy first before I can be a good mom to him. So as much as I felt disappointed, if I needed to a the space than I needed the space. Otherwise I'd just be cranky all day. So it taught me to find other ways to comfort him and keep him happy. And I think that was that was positive, too. He made if he started to connect with his with my husband, his dad, a lot more. So he was

seeking comfort from other people, a lot more. And other people started being able to put him to bed, which wouldn't have happened if I didn't say I can't. I just can't do it tonight. So you have to do it tonight.

Participant 6: So I think I mentioned that it did make me feel sad because I wanted to provide that comfort that he got from breastfeeding. But at the same time, it made me look for other ways to comfort him and other people could put him to sleep and comfort him as well. So in many ways, that was good as well.

Researcher: Yeah. And could you tell me about any impact that it had on relationships?

Participant 6: The aversion itself for the breastfeeding? I think it definitely brought my son and his dad closer together because there were times where I just I know I would often fade into sleep. And if I quit, if I didn't feel like it, I didn't feel like I could do it, that he would have to be cuddled by his dad or my husband, my like. He would have to be in charge of bedtime and getting him into bed. So he'd turn to dad for a few more things than he normally would.

Participant 6: Sometimes I'd get because I had those feelings of frustration and anger and sometimes take it out of my husband's. Sometimes it created a bit of tension, but mostly it was mainly just between my son and I sort of just changing the dynamic of our relationship a little bit more, expecting him to be a little bit more grown up and waiting, which he learnt to do. At first he didn't like the idea of waiting or saying no because I was always so available. I always enjoyed it so much as well. But he learnt that how to wait for it and he didn't. He ended up not getting so upset if I said no. And he sort of learned to understand a bit more that I needed to set some boundaries, and that's continued. So I guess that relation that didn't the dynamic of our relationship has changed a bit. So, you know, now he understands. He still loves breastfeeding and I love breastfeeding him again. But he understands you know, the baby's gotta come first. And then if I feel like it, you can have some. And I might I might say, no, I don't. You know, I need a rest. We'll do it later. He's totally okay with it. So it's it's changed that dynamic a lot in a good way I think in the end.

Researcher: OK. Did you speak with people about it?

Participant 6: I spoke with my mom a lot because she's always been very supportive and she understood completely. I don't think she ever experienced aversion, but she's always been really supportive and a good person to talk to. And I think I spoke a little bit with a health nurse about about it at my son's One of my son's checkups. But yeah, apart from that, I didn't really discuss it with anybody else. Oh and my husband, of course.

Researcher: Could tell me more about talking about it with the health nurse?

Participant 6: I didn't find, she was a lovely lady, but I didn't find it particularly helpful, though, because I think when you're breastfeeding beyond one or two, I think she just couldn't understand why I didn't just stop. Like he's three just stopped doing it. So I didn't find that particularly helpful. I think a lot of people see breastfeeding an older child as unnecessary. And why would I put myself through it if if I wasn't know, if it wasn't feeling right or if I was getting

aversions then he doesn't need the milk so just stop. But I found that a bit unhelpful, to be honest.

Participant 6: But my mom was a good one and my husband's always been quite supportive, although he was sort of edging on the like, why are you still doing it? If you don't want to do it? But I guess it's more harder for him to understand the sort of the connection and the bonding that breastfeeding brings as well. He's always been supportive and respectful of my choices. So that's good. But I think my mom being a mom totally got it. She was great to talk to.

Researcher: When you say your mom totally got it. Can you tell me a bit more about the support that she offered you?

Participant 6: A lot of emotional support. So, you know, being to someone being being there to listen and, you know, if I could have a vent to her about how I was feeling without being told that it's because I'm doing it wrong and I have to stop, whereas she would say, oh, you know, you're doing such a wonderful thing. And she was very positive about it. Like, so, you know, if I told it, oh, I feel like stopping, she would support that as well. But when I said, you know, it's such it's been so important and it's such a lovely connection that [child 1] and I have. I don't really want to stop it, but I don't like these feelings. She was able to kind of understand that and say, well, look, you know, see how it goes. It's there's no pressure. So she's always just been really, really nonjudgmental, I think, and just supportive and, you know, offering to help. So some nights I'd go over there and she'd I'd stay the night and she'd put him to bed or something like that and cuddle him at night. So I didn't know if I can't just cuddle him, if I'm there he wants the milk. So she was able to sort of do a lot of that because she can. And he connected with her really nicely. So yeah, that support was great.

Researcher: Can you tell me about any impact that that experience might have had on your feelings about yourself?

Participant 6: At first I found it quiet because it was a bit of a shock I wasn't expecting to feel aversions. I was quite disappointed, a little bit like I felt a little bit like I was failing in a way, even though I know know now looking back that it wasn't at the time, it felt like. Why is this happening and why can't I control this feeling? And why does it hurt? Like, I kind of blamed myself a lot.

Participant 6: I thought that I shouldn't be feeling like this. This is this isn't right. Like, I've always loved breastfeeding. I was very cross at myself. Very. I blamed myself a lot.

Researcher: And can you tell me about how you feel about it now?

Participant 6: Looking back, I can say it was just just a stage. It was. I've done a lot of I'm in a couple of like parenting forums. And I'd I'd posted a couple of posts on there about what I was experiencing. And so many people, lovely women got back to me saying all they went through the same thing and got better. So they decided to stop and their kids find you just having that, knowing that, like, actually, it wasn't just me. It was a very common thing to have happened during pregnancy. And you know that more often than not, the women who decided to continue feeding found that their aversions lessened over time and

then went away when the baby was born. Not all of them, but some of them said that. So that gave me a lot of help. And I felt like I wasn't it wasn't me. It was just a thing. It's just a phase and it's something that I could get through than that that really helped me change my mindset about it. So I still feel that way. Like I look back and think that was a really tough, tough thing. And we got through it. And I'm I'm I'm I'm proud of it now.

Participant 6: I'm proud that we were able to continue breastfeeding and that we got that I got through those feelings.

Researcher: Can you tell me about anything that might have made those feelings better other than the things that you mentioned?

Participant 6: What made those feelings better, did you say. Well, it really helped. Again, having my mom to talk to I'm here hearing other people's stories on the forum that I was in. And then just thinking back to my own, I guess, feelings of finding ways to feel good about myself. So reminding myself of my value as a mother and not seeing setbacks as failures, but looking at my strengths and sort of and reviewing my identity as a mother and the things that I see I like about myself and about being a mom

Participant 6: Self-confidence, I think really helped overcome those feelings as well. And yeah, just being feeling like I was getting through it like with the breathing techniques and keeping up with the magnesium and that kind of thing. And then slowly over time. I think by about the third trimester, I wasn't enjoying breastfeeding, but I was finding it much at the aversions had had settled quite a lot. And I was really looking forward to seeing what would happen after the baby was born because I was quite confident that they would go away. So I think having self-confidence and knowing what my kind of being sort of very clear in myself about what kind of my identity, I guess, and the sort of mom that I wanted to be. Really helped. Feeling like focusing on the positives and not worrying too much and just being mindful in the moment that kind of thing.

Researcher: Can you tell me more about things that might have made it more difficult or worse?

Participant 6: If I was going because I'm quite prone to having anxiety so if I during the pregnancy, I found that my anxiety would sort of go up and down a lot. And on the more anxious days, the aversions were were terrible. They were days when I just couldn't breastfeed, couldn't just couldn't do it. So yeah keeping track of my anxiety levels was really important cause anxiety would make it worse. Lack of sleep if I wasn't sleeping well would make it worse. And if I was sort of if if I wanted and went into that focusing on the negative type mindset to basically if I was feeling if I wasn't feeling good in myself, the aversions were worse.

Participant 6: So if I wasn't feeling confident, if I was having a bad day or if I was feeling a bit anxious or even just unwell or tired or under the weather, then the aversions would just that be back really, really strong again.

Researcher: OK. What information or what would you like people to know about breastfeeding aversion?

Participant 6: Definitely that it's it's completely normal. It's I don't think it's anything that you do wrong. It just happens. I think it can have a variety of causes maybe.

Participant 6: And I think it was really helpful to connect with people who'd experienced it and got through it, whether or not they chose to stop breastfeeding or chose to continue. I think it's really important to be on in some kind of have some kind of connections with people that have been there and got through it because I found that really helpful. And I forgot to say that. I called the Australia Breastfeeding Association and spoke to a counsellor in the find there who was really helpful, too. I forgot I forgot that because she was really helpful and and she'd gone through it. So I think definitely having speaking to people who've who've got who've had it and they've they've come through, it was definitely really helpful.

Researcher: Can you tell me more about that, the ABA call?

Participant 6: Yeah. So I was sort of really upset one night because my husband works some evenings. And so I was at home about maybe five months pregnant, trying to get my three year old son into bed. And of course, he just wanted to cuddle and breastfeed. And I just didn't feel like it and couldn't get him to sleep. So he'd become overtired, his hyperactive. And I just I felt like he's gonna like how I didn't I didn't know how to cope with it. So I I gave them a call and said, ah, you know, I'm not used to feeling like this about breastfeeding and sort of just vented about my evening. And, yes, she was really helpful. And, you know, and not sort of pushing me in either direction either not saying, oh, you have to stop or you have to keep going. But just saying, oh, look, you know, what can you do tonight to help him? And, you know, this is reassuring me that it was really normal, especially during pregnancy it happens. It happens to a lot of women during pregnancy. And just that I found it very reassuring. So I've an and nonjudgmental and not pushy. Like she wasn't telling me to stop and she wasn't telling me to to keep going. She was just saying helping me to focus on what I need to do tonight and oh, that night. Sorry. And just being really reassuring that it was normal and I wasn't going crazy. And, you know, she offered some suggestions of other ways to comfort him. And I think in the end, I got him in the car and drove him around till he was asleep and then carried him inside later. So, yeah, that was that was great. That phone call, I really appreciated that. That lady's advice.

Researcher: Is there anything else about breastfeeding, aversion that you would like to tell me that we haven't spoken about yet?

Participant 6: I can't think of anything we haven't touched on. I think that's OK

Researcher: OK If you do think of anything else and you might have another meeting, we can have a shorter one. You get to send me an email.

Researcher: Can ask you one more question about something you said early on?

Researcher: You said go with the flow kind of person. Yeah. Has this had any impact on your feeling? That feeling like that?

Participant 6: I think in a way I tend to. I am a little bit of a chronic. Well, I'm naturally a bit of a chronic worrier. So I like to like a lately that's got a lot better. But now what I

tend to do is I tend to not worry about things that may or may not happen in the future. And I kind of I guess when I say go, go with the flow sort of coming into my first child I just thought breastfeeding was easy and you just stick them on and off they go and wasn't expecting a lot of the challenges that that come up.

Participant 6: And then, yeah. So not expecting the challenges. And definitely once once breastfeeding was easier with [child 1] then feeling like taking it for granted and then feeling like, oh yeah, I you think this is easy. I know all of a sudden when the aversion came, that took me by surprise. I didn't even know that, I knew that breastfeeding aversion existed because my my sister had it with her child. But I couldn't understand it because I had such a good time. Up until then, with him, apart from the Early on, and so it really I wasn't expecting the aversion. So that took me by surprise. So I guess maybe in a way it was nice not to not to be worrying about things all the time. But I was a little bit underprepared for what I might expect later on with the aversions and that kind of thing. So it might be nice to find a happy medium where you kind of know what can happen, but you're not not too worried about it. You just sort of sitting in the middle and I feel like that's what. That's one coming into breastfeeding [child 2] was like because I'd been through the thrush, the mastitis, the vasospasm and then the aversion. And I felt like I'd kind of had a broad range of experiences. So I felt like I knew what I would what could happen and I knew how good it could be. And I was just sort of cruising in the middle.

Researcher: And when you say it wasn't easy. You said it wasn't easy but I still loved being able to do it, that when you went through difficulties, it wasn't easy but you still loved being able to do it.

Participant 6: Yeah, I guess when. When he was really little. And I was. And I had you know, he had to lip ties and that was painful. And then the thrush and then the mastitis. And it was like one after another. I think maybe sometimes it was together. That was really, really hard. But I loved the love to be able would that feeling of that I was providing for him, especially as a little baby, when all's I can have is breast milk. I felt like feed. I felt good being able to provide him nourishment and comfort. That was a really nice feeling. And even later on, even during the Aversions, I still loved the fact that I could comfort him really easily with the breast feeding, even if it didn't feel quite the same or if it was something I had to sit with a bit sit with some emotions and feelings I still loved that I could have that connection and be able to comfort him, I guess. Does that make sense?

Researcher: Well, yeah. Well, thank you so much for sharing your experience. So just before I let you go, I'll just ask one more time is there anything else that you wanted to talk about to do with any of your breastfeeding journey or experience that you haven't told me about yet?

Participant 6: No, not really. I think the only other thing I haven't talked a lot about is if like you get a lot of judgment for feeding an old child, I felt like I was getting a lot of judgment for feeding an older child. And everyone understands when you've got a little baby and you're breastfeeding. But if, you know, once they turn one everyone expects that they're done with it. And, you know, if you

were at a relative's place and my son was really upset. So I'm like, I have to go in and feed him somewhere. And, you know, I was getting a lot of unsolicited advice and opinions, and I found that that side of it really a bit annoying and a little bit like it made me question myself. Oh is this right? And especially when the aversion started, I felt like I couldn't talk to a lot of people about it because a lot of people didn't know that I was still breastfeeding him at the time. So and I felt like a lot of people that I knew would just say, well he's three. Just stop. So I think that was feeling like that. Feeding an older child is a big taboo or no t done, or not unnecessary. Why would I put myself through it? That's kind of the judgment of feeding an older child was was tough. I think that like it was a bit more isolating because there are less there's less people who do it and it isn't. So I felt like there's less people, who actually knew that he was still breastfeeding. So I think, yeah, that's probably the I mean, the only other thing I can think of

Researcher: How do you feel about that judgment of feeding an older child?

Participant 6: It was a little bit. It was frustrating because they're not really. And then, you know, it's not really their business. But at the same time, it made me doubt myself a little bit and question what I was doing and why. And especially when it's people that you expect to be supportive and they're not. That's tough as well. So, yeah, that's why I tend to just keep it to myself after that. And just talk to people that I know wouldn't understand.

Researcher: OK If there isn't anything else that you think you would like to tell me, then we'll wrap it up. But if you think of anything else, please send me an email and we can have a chat about it. You can even email more thoughts to me if you want to.

Researcher: Thank you so much. I'm going to pause the recording.

Appendix 6. Mapping of Phase 2 qualitative findings to Phase 3 survey items.

Superordinate Theme Operationalised	Theme Operationalised	Theoretical Domains (constructs)	Statement / survey question pool	Indicator type
Experience of aversion	Physical feelings of aversion	Paraesthesia type feelings	“Like you've got ants or bugs under your skin” “It is like being itchy, but you can't scratch” “It is like a skin crawling feeling” It is a prickling feeling It was a feeling of numbness It is like a burning or cold feeling I was an unpleasant tingling feeling	Likert scale items
Breastfeeding as a cause of physical and emotional feelings of aversion	Other physical sensations of aversion		Overwhelming urge to remove baby from the breast The feelings last for the duration of the whole breastfeeding session	Likert scale items Yes/No questions
		Feelings during aversion	Overwhelming Unbearable Nauseating Violating Irritating	Scale point intervals with Likert statements
		Menstruation	"around that time of the month, the aversion would be really, really bad"	
Undesirable feelings	Emotions of aversion	Anger	“I would just start feeling really angry” “irritation” “frustration”	Dimensions of Anger Scale (DAR)
		Anxiety Fear	“Anxiety in the pit of your stomach”	DASS21 Scale
		Sadness Disconnection	"issues with allowing me to bond properly with her because it was just so intense"	Being a Mother scale (BAM)
		Disgust	“it almost had become to the point of repulsion” “I have to stop you feeding because this is causing me to feel so yuck”	Scale point intervals with Likert statements

	Thoughts during aversion	Frustration Disappointment Confusion	“as soon as I stopped breastfeeding, that feeling would stop” “I had to control myself not to throw her off me” “I started having heart palpitations” The feeling lasts throughout the entire feeding session “it would definitely intensify in the lead up to my period” “I loved breastfeeding up until I was feeding while pregnant”	Scale point intervals with Likert statements
		Distraction	"distracting my mind from what my body was doing"	
	Aversion toward the child	Touched out	"just feeling like frustrated and like touched out" “In the moment I feel touched out” “I wanted to throw them off and run out of the room”	Scale point intervals with Likert statements
	Pain	Aversion pain or not pain	"I wouldn't call it pain"	VALIDATED PAIN SCALE Semantic differential scale
	Tandem and pregnant aversion	Oldest child only	"It was only ever aversion with the oldest child"	
		Pregnancy	"during the pregnancy, I found that's when the aversions really kicked in"	
		Simultaneous tandem feeding	"I can't have them both on at the same time"	
Experience of breastfeeding	Feelings about breastfeeding	Loathing Hatred Valuable Happiness Attachment Separation		Breastfeeding Self Efficacy Scale (Short form)_
Expectations about breastfeeding **The meaning of**	Changed expectations	Expectations	Changes in expectations for second child after breastfeeding first child	

breastfeeding				
Interacting with others and aversion **Changing relationship dynamics**	Relationships	BF community Child Mother (Grandmother) Partner Health care workers	"only other moms that have felt aversions understand it" "issues with allowing me to bond properly with her because it was just so intense" "she listened and understood and supported me" "I certainly think my husband found it hard" "nobody seemed to really be able to even tell me how to get the help I needed" "if it was so awful, then you should have just stopped"	Child Parent Relationship Scale
Making sense of the experience of aversion	Support Just stop feeding then	Advice or help I wanted	"You don't have to stop if you don't want to"	Open-ended questions
Conflict between the feelings of aversion coming from within, while also being the mother	Retrospective feelings	Emotions about having experienced aversion	"guilty and sad and anxious about the fact that I was having those feelings"	Brief Resilience Scale (BRS)
		Hard to describe or talk about	"It's a really hard thing to describe"	Open-ended questions
		Hx of abuse	"quite a difficult childhood and the trauma that goes along with that"	
		Reason for aversion	"that's really how I've sort of made my peace with it"	
		Unprepared	"I wasn't expecting that"	
		Why I kept going	"we try and justify why we keep going through the issues"	
		Child not ready to wean	"they’re not ready to be weaned"	
		Worth it	"it was definitely worth the pain"	
Sense of self **Living with**	Identity	Confidence with breastfeeding	"it became, I guess a source of pride"	Parenting Sense of Competence

conflict of selves				Scale (Gibaud-Wallston & Wandersman, 1978)
		Peer supporting others	"you're not alone"	
		Negative thoughts of self	"like that it was something that was wrong with me"	
		Resilience	"So I just push through the aversion of wanting to push her off my boob"	BRS scale
		Self as mother	"I feel better as a mom in a way, because I like have persisted and tried"	Scale point intervals with Likert statements
		Self-doubt	"I kind of thought this is not normal and it's all my fault"	
Coping mechanisms	Self-directed strategies	Self-care	"deep breathing and yoga and stuff like that helped"	EQ-5D Wellbeing scale
Breastfeeding through aversion **- the struggle to regain control of self**		Setting limits Distraction Self-care	“I tried to limit the feeding because I didn’t want to wen him” “I'll try and distract myself” “If I took care of myself the aversions eased a bit” “People talk about enjoying breastfeeding and I never understood what they meant” “I really don’t want to do this” “it just feels like you're being a bit violated”	The Edinburgh Postnatal Depression Scale

Appendix 7. Phase 3 Facebook invitation for administrator - Survey 1

INVITATION LETTER

Facebook Breastfeeding Support Groups

Project Name: The Experience of Women Who Self-identify as Perceiving Feelings of Aversion While Breastfeeding

Dear Facebook Group Administrator,

My name is Amie Steel and I am an academic at the University of Technology Sydney. I am contacting you on behalf of Melissa Morns who is a student at the University of Technology, Sydney. I am contacting you in place of Melissa Morns because Melissa Morns may be known to you and/or the members of your group and ethically it is better if you are invited to participate by an independent person that is not known to you.

Melissa Morns is conducting research into the experience of women who self-identify as perceiving feelings of aversion while breastfeeding and we would welcome your assistance. The research will involve consenting participants taking part in an online survey questionnaire at a time of their convenience that should take no more than 1 hour. I am contacting you because your Facebook Support Groups may have members that have experienced this phenomena who are interested in participating in this research.

This research has been funded by an Australian Government Research Training Program (RTP) Scholarship.

If you think that any of your group members would be interested in participating, I would be glad if you would share the questionnaire link (which includes survey information and informed consent) in your group.

You are under no obligation to participate in this research.

Yours sincerely,

Dr Amie Steel

Senior Research Fellow

School of Public Health

Faculty of Health

University of Technology Sydney

NOTE:

This study has been approved by the University of Technology, Sydney Human Research Ethics Committee. If you have any complaints or reservations about any aspect of your participation in this research which you cannot resolve with the researcher, you may contact the Ethics Committee through the Research Ethics Officer (ph: +61 2 9514 2478 Research.Ethics@uts.edu.au), and quote the UTS HREC ETH20-5341 Any complaint you make will be treated in confidence and investigated fully and you will be informed of the outcome.

Appendix 8. Phase 3, Survey 1 social media invite tile with clickable survey link.

Appendix 9. Phase 3, Survey 1 questionnaire.

The experience of those who self-identified as having feelings of aversion while breastfeeding

Start of Block: Information about this questionnaire

X→

Q1.1 **Hello and thanks for following the link** **What is this research study about?** The purpose of this anonymous online survey is to better understand the experience and characteristics of those who perceive intense feelings of aversion and negative sensations while breastfeeding, and in that way be of benefit to those who experience this phenomenon. The questions in this survey have been informed by in-depth interviews with participants who self-identify as experiencing feelings of aversion while breastfeeding. The topics in this survey relate to your experience off breast feeding and parenting and your wellbeing. You will also be asked about your feelings of aversion and negative sensations while breastfeeding. You have been invited to participate because you are breastfeeding and self-identify as currently having feelings of aversion while breastfeeding. **Who is conducting this research?** My name is Melissa Morns and I am a PhD candidate at UTS. My supervisor is Dr Amie Steel, Faculty of Health University of Technology Sydney; Email: amie.steel@uts.edu.au, Phone: +61 . **Inclusion/Exclusion Criteria** Before you decide to participate in this research study, we need to ensure that it is OK for you to take part. This research is targeting those in Australia who self-identify as currently experiencing feelings of aversion while breastfeeding. **Do I have to take part in this research study?** Participation in this study is voluntary. It is completely up to you whether or not you decide to take part. If you decide to participate, I will invite you to read the information carefully (ask questions if necessary); and complete an online questionnaire. You can change your mind at any time and stop completing the survey without consequences. **Are there any risks/inconvenience?** Yes, there are some risks of emotional distress. You may be asked sensitive questions and be asked to comment about difficult feelings which may cause emotional distress. You can leave the survey at any time if you feel any distress and submit the completed section or come back to complete it later. If you do experience emotional distress as a result of completing this survey please contact the following services: - Australian Breastfeeding Association 24-hour free phone counselling service – 1800 686 268.
- A doctor/general practitioner (GP) involved in your care, or local doctor (GP).
- Lifeline counselling (anyone having a personal crisis) – call 13 11 14 or chat to someone online at https://www.lifeline.org.au/Get-Help/I-Need-Help-Now - Beyond Blue counselling - 1300 22 4636 or online chat at https://www.beyondblue.org.au You will also need to allow approximately 25 - 40 minutes of your time to complete this survey which may be difficult. If you are unable to complete the survey in one attempt you can leave it and come back to the

same spot automatically later by clicking on the link. **What will happen to information about me?** Access to the questionnaire follows from this information and consent. By clicking yes to consent, you consent to the research team collecting and using anonymous personal information about you for the research project. All information will be treated confidentially and will be anonymous. We would like to store your anonymous information for future use in research projects that are an extension of this research project. In all instances your information will be treated confidentially. We plan to publish the results of this research within a thesis for the University of Technology Sydney and in Peer Reviewed Journals to expand understanding of these phenomena. In any publication, information will be provided in such a way that you cannot be identified. **What if I have concerns or a complaint?** If you have concerns about the research that you think I, Melissa Morns, melissa.a.morns@student.uts.edu.au or my supervisor, Dr Amie Steel, amie.steel@uts.edu.au can help you with please feel free to contact us. NOTE: This study has been approved in line with the University of Technology Sydney Human Research Ethics Committee [UTS HREC] guidelines. If you have any concerns or complaints about any aspect of the conduct of this research, please contact the Ethics Secretariat on ph.: +61 2 9514 2478 or email: Research.Ethics@uts.edu.au, and quote the reference number UTS HREC REF NO. ETH20-5341. Any matter raised will be treated confidentially, investigated and you will be informed of the outcome. Would you like to participate in this research?

- ○ Yes
- ○ No

Page Break

Q1.2 Are you in Australia and feel that you are currently experiencing feelings of aversion while you are breastfeeding?

- ○ Yes
- ○ No

Q1.3 INFORMED CONSENT

I agree to participate in the research project, The Experience of Women Who Self-identify as Perceiving Feelings of Aversion While Breastfeeding [UTS HREC REF NO. ETH20-5341] being conducted by Melissa Morns Health Research Office, Faculty of Health, University of Technology Sydney, Jones St, Ultimo 2007 (PO Box 222) T +61 [redacted] E Melissa.a.morns@student.uts.edu.au. I understand that funding for this research has been provided by an Australian Government Research Training Program (RTP) Scholarship. I have read the Participant Information Sheet or someone has read it to me in a language that I understand. I understand the purposes, procedures and risks of the research as described in the Participant Information Sheet. I have had an opportunity to ask questions and I am satisfied with the answers I have received. I freely agree to participate in this research project as described and understand that I am free to withdraw at any time without affecting my relationship with the researchers or the University of Technology Sydney.

- ○ I consent
- ○ I do not consent

End of Block: Information about this questionnaire

Start of Block: Experience of feelings of aversion while breastfeeding.

Q2.1 Let's start by talking about your experience of feelings of aversion while breastfeeding. The questions in this section have been informed by in-depth interviews with participants who self identify as experiencing feelings of aversion while breastfeeding.

Q2.2 When did you start to experience feelings of aversion while breastfeeding?
Please choose the answer that most fits your experience

- ○ When I was breastfeeding my first child
- ○ When I was pregnant and breastfeeding my toddler
- ○ When my period returned
- ○ When I was tandem breastfeeding both my toddler and newborn
- ○ Other

X→

Q2.3 Does the feeling stop within 1-5 minutes of latching?

- ○ Yes
- ○ No

X→

Q2.4 In which trimester during your pregnancy did the feelings of aversion while breastfeeding start? If you can't remember exactly when, choose the option that seems most right.

- ○ During the beginning of the pregnancy in the first trimester (first 12 weeks)
- ○ In the second trimester (13 - 26 weeks)
- ○ Toward the end of the pregnancy in the third trimester (27 - 40 weeks)
- ○ I don't remember

X→

Q2.5 Did you experience a reduction in milk supply during pregnancy at the same time as increased feelings of aversion while breastfeeding?

- ○ Yes
- ○ Unsure
- ○ No

X→

Q2.6 At what time during your menstrual cycle are the feelings of aversion while breastfeeding the strongest?

- ○ It feels strongest in the days before my period
- ○ It feels strongest during my period
- ○ It feels strongest in the days after my period
- ○ It feels strongest when I'm ovulating
- ○ I'm not sure

X→

Q2.7 Which child do you most experience feelings of aversion with while breastfeeding?

- ○ My younger child only
- ○ Both of my tandem feeding children
- ○ My older child only
- ○ I'm not sure

---

*

Q2.8 Could you please describe **when** the feelings of aversion while breastfeeding first started for you?

_____

_____

_____

_____

_____

Q2.9 When you first started experiencing feelings of aversion while breastfeeding, how old was your eldest breastfeeding child?

- 0 - 6 months old
- 6 - 12 months old
- 13 - 18 months old
- 19- 24 months old
- 2 - 3 years old
- 3 - 4 years old
- 5 years or older

End of Block: Experience of feelings of aversion while breastfeeding.

Start of Block: Teasing out the types of aversion - D-MER/CSA/BA

Q3.1 For the following questions please choose the answers that most apply to your experience while breastfeeding

Q3.2 The worst time of the day for experiencing negative feelings and sensations during a breastfeeding is?

- ○ Mornings
- ○ During the daytime
- ○ Evenings
- ○ During the night-time
- ○ All of the time
- ○ I'm not sure

X→

Q3.3 During a breastfeeding session, when do you experience negative feelings and sensations?

- ○ Throughout the entire breastfeeding session while my child is latched
- ○ Only the first few minutes of the breastfeeding session
- ○ Only the end of the breastfeeding session
- ○ Only during the let-down reflex or when latching
- ○ None of these describe my experience
- ○ Other, please describe _____

Page Break

Q3.4

Please complete this sentence:

When I experience feelings of aversion I have an overwhelming urge to remove my child from the breast...

- ○ Throughout the entire breastfeeding session while my child is latched
- ○ Only in the first few minutes of the breastfeeding session
- ○ Only at the end of the breastfeeding session
- ○ Other, please describe _____

Q3.5 Do you experience negative feelings and sensations when expressing breast milk or pumping?

- ○ Yes
- ○ No

Page Break

Q3.6 Do you end breastfeeding sessions because of negative feelings and sensations?

- Most of the time
- About half the time
- Rarely

Q3.7 Do you need to take breaks during feeding sessions because of negative feelings and sensations?

- Most of the time
- About half the time
- Rarely

End of Block: Teasing out the types of aversion - D-MER/CSA/BA

Start of Block: From Qual findings - experience during aversion

Q4.1 The below statements were taken from interviews with breastfeeding mothers who self-identify as experiencing feelings of aversion while breastfeeding.

When you think your experience of feelings of aversion while breastfeeding, do you agree or disagree with the following statements?

	Strongly Agree	Somewhat agree	Neither agree nor disagree	Somewhat Disagree	Strongly Disagree
As soon as I stop breastfeeding, that feeling stops	○	○	○	○	○
I feel touched out	○	○	○	○	○
It is as if my body is telling me that I've got to stop	○	○	○	○	○
It almost feels like I am being violated	○	○	○	○	○
I just start feeling really angry	○	○	○	○	○
When my child twiddles the other nipple it gives me feelings of aversion while breastfeeding	○	○	○	○	○
It's a sudden homesick feeling of dread and despair	○	○	○	○	○

End of Block: From Qual findings - experience during aversion

Start of Block: From Qual findings - thoughts and feelings about aversion

Q5.1 The below statements were taken from interviews with breastfeeding mothers who self-identify as experiencing feelings of aversion while breastfeeding.

When you think your experience of feelings of aversion while breastfeeding, do you agree or disagree with the following statements?

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
It gives me a sense of anxiety about breast feeding	○	○	○	○	○
I feel guilty for feeling like that	○	○	○	○	○
It makes me feel sad	○	○	○	○	○
I don't feel ready for breastfeeding to end	○	○	○	○	○
I'm worried that I will have to wean my child before they are ready	○	○	○	○	○
I enjoyed breastfeeding up until I was feeding while pregnant / tandem feeding	○	○	○	○	○
People talk about enjoying breastfeeding and I never understood what they meant	○	○	○	○	○
It's a disconnect between wanting to breastfeed but having negative feelings	○	○	○	○	○

End of Block: From Qual findings - thoughts and feelings about aversion

Start of Block: Pain SFMPQ

Q6.1 When you think about the feeling of aversion that you experience while breastfeeding to what degree would you describe that feeling as physically painful?

- ⊗ No pain
- Mild
- Discomforting
- Distressing
- Horrible
- Excruciating

Q6.2 On a scale from zero to ten, zero indicating no pain and ten indicating worst pain imaginable, rate your pain during feelings of aversion while breastfeeding

	0 1 2 3 4 5 6 7 8 9 10
Pain when experiencing feelings of aversion while breastfeeding	

Page Break

Q6.3 The following is a list of words that describe some of the different qualities of pain and related symptoms. Please rate the intensity of each of the pain and related symptoms you felt during the past week while breastfeeding on 0 to 10 scale, with 0 being no pain and 10 being the worst pain you can imagine.

Q6.4 Use 0 if the word does not describe your pain or related symptoms while experiencing feelings of aversion while breastfeeding.

Limit yourself to a description of the pain related to feelings of aversion while breastfeeding

_____ Throbbing
_____ Shooting
_____ Stabbing
_____ Sharp
_____ Cramping
_____ Gnawing
_____ Hot - Burning
_____ Aching
_____ Heavy
_____ Tender
_____ Splitting

End of Block: Pain SFMPQ

Start of Block: Pain SFMPQ 2

Page Break

Q7.1 Use 0 if the word does not describe your pain or related symptoms when experiencing negative sensations while breastfeeding

Limit yourself to a description of the negative sensations that you experience while breastfeeding

_____ Tiring - Exhausting
_____ Sickening
_____ Fearful
_____ Punishing - Cruel
_____ Electric-shock pain
_____ Cold-freezing pain
_____ Piercing
_____ Pain caused by light touch
_____ Itching
_____ Tingling or 'pins and needles'
_____ Numbness

End of Block: Pain SFMPQ 2

Start of Block: How many children?

Q8.1

Please answer the following questions for the children you are currently breastfeeding.

How many children are you **currently breastfeeding**?

- One
- Two
- Three
- Four

End of Block: How many children?

Start of Block: Birth Hx child 1

Q9.1 What is the age of your oldest child that you are currently breastfeeding?

- ○ Between 0 - 6 months
- ○ Between 6 - 12 months
- ○ Between 1 - 2 years
- ○ Between 2 - 3 years
- ○ Between 3 - 4 years
- ○ Between 4 - 5 years
- ○ Between 5 - 6 years
- ○ Between 6 - 7 years
- ○ Over the age of 7 years

X→

Q9.2 When you were pregnant, how did you plan to feed this child?

- ○ I didn't think about it while I was pregnant
- ○ I planned to breastfeed
- ○ I planned to formula feed
- ○ I planned to breastfeed and formula feed
- ○ I wanted to wait until after the birth before deciding

X→

Q9.3 How long had you intended to feed in this way?

- ○ 0 - 3 months
- ○ 3 -6 months
- ○ 6 months - 1 year
- ○ 1 - 2 years
- ○ 2 years or longer

Q9.4 Where did you give birth to this child?

- ○ Public Hospital
- ○ Private Hospital
- ○ At home or another community location
- ○ Birth centre
- ○ Other _____

Q9.5 How many weeks pregnant were you when this child was born?

- ○ 36 weeks or earlier
- ○ Between 37 - 40 weeks
- ○ 41 weeks or later

Page Break

Q9.6 Tell us about the birth for this child? (Choose all that apply)

- [ ] I was induced
- [ ] I had an epidural
- [ ] I had an assisted birth with vacuum or forceps
- [ ] I had a caesarean section
- [ ] I had a vaginal birth

Q9.7 When was this caesarean section planned

- ○ Before labour started
- ○ During labour

Q9.8 Did you have a time of separation from your baby after the birth for medical reasons?

- ○ No
- ○ Yes, we were separated for less than 24 hours
- ○ Yes, we were separated for more than 24 hours

Q9.9 Did this child have any of the following in the time right after the birth? (check all that apply)

- ☐ Breathing problems
- ☐ Jaundice
- ☐ Infection
- ☐ Administered antibiotics
- ☐ Tested for blood sugar irregularities
- ☐ Fed with formula
- ☐ None of the above
- ☐ Other _____

End of Block: Birth Hx child 1

Start of Block: BF Hx child 1

X→

Q10.1 Are you currently breastfeeding your oldest child?

- ○ Yes
- ○ No

X→

Q10.2 Have you had any of the following problems when breastfeeding this child? (choose all that apply)

- [ ] I had sore nipple pain
- [ ] I felt embarrassed breastfeeding in front of others
- [ ] I experienced mastitis or breast infection
- [ ] Too much milk/engorged breasts
- [ ] Baby had colic/irritable/crying
- [ ] Not enough milk
- [ ] Baby had lactose intolerance
- [ ] Baby had tongue-tie
- [ ] I experienced negative sensations or feelings of aversion while breastfeeding
- [ ] None of these
- [ ] Other _____

Q10.3 How much confidence do you have about breastfeeding this child?

- ○ A great deal
- ○ A lot
- ○ A moderate amount
- ○ A little
- ○ None at all

Q10.4 How much do you enjoy breastfeeding this child?

- ○ Always
- ○ Most of the time
- ○ About half the time
- ○ Sometimes
- ○ Never
- ○ Other _____

Q10.5 How successful do you feel you were at breastfeeding this child?

- ○ Always
- ○ Most of the time
- ○ About half the time
- ○ Sometimes
- ○ Never
- ○ Other _____

Q10.6 Did you use formula with this child?

- ○ Yes
- ○ No

X→

Q10.7 How old was this child when they started receiving formula?

- ○ Under 3 months
- ○ 3 - 6 months
- ○ 7 - 12 months
- ○ 1 - 2 years
- ○ 2 - 4 years
- ○ Older than 4 years

End of Block: BF Hx child 1

Start of Block: BaM 13 child 1

Q11.1 The statements below will help us understand how you are experiencing being a mother. There are no right or wrong answers. Just answers that tell us how you have been feeling. Please consider your **eldest child** for each statement think about how you have been feeling over the past 2–3 weeks.

X→

Q11.2 I have felt confident about looking after my baby/toddler

- ○ Yes, most or all of the time
- ○ Yes, some of the time
- ○ No, not very often
- ○ No, rarely or never

X→

Q11.3 I have missed the life I had before I became pregnant with this baby/toddler (*or for adoptive mothers*: before I had this baby/toddler)

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

Q11.4 I have found it hard to cope when my baby/toddler cries

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

Q11.5 I have felt close to my baby/toddler

- ○ Yes, most or all of the time
- ○ Yes, some of the time
- ○ No, not very often
- ○ No, rarely or never

Page Break

Q11.6 The statements below will help us understand how you are experiencing being a mother. There are no right or wrong answers. Just answers that tell us how you have been feeling. Please consider your **eldest child** for each statement think about how you have been feeling over the past 2–3 weeks.

X→

Q11.7 I have felt lonely or isolated

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

X→

Q11.8 I have felt bored

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

X→

Q11.9 I have felt unsupported

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

X→

Q11.10 I have felt alright about asking people for help or advice when I needed to

- ○ Yes, most or all of the time
- ○ Yes, some of the time
- ○ No, not very often
- ○ No, rarely or never

Page Break

Q11.11 The statements below will help us understand how you are experiencing being a mother. There are no right or wrong answers. Just answers that tell us how you have been feeling. Please consider your **eldest child** for each statement think about how you have been feeling over the past 2–3 weeks.

Q11.12 I have felt nervous or uneasy around my baby/toddler

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

Q11.13 I have been worried that something would happen to my baby/toddler

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

Q11.14 I have been annoyed or irritated with my baby/toddler

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

X→

Q11.15 I worry I am not as good as other mothers

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

X→

Q11.16 I have felt guilty

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

End of Block: BaM 13 child 1

Start of Block: Birth Hx for child 2

Q12.1 Please answer the following questions for your second child who you are currently breastfeeding

Q12.2

What is the age of your second child?

- Between 0 - 6 months
- Between 6 - 12 months
- Between 1 - 2 years
- Between 2 - 3 years
- Between 3 - 4 years
- Between 4 - 5 years
- Between 5 - 6 years
- Between 6 - 7 years
- Over the age of 7 years

Q12.3 When you were pregnant, how did you plan to feed this child?

- I didn’t think about it while I was pregnant
- I planned to breastfeed
- I planned to formula feed
- I planned to breastfeed and formula feed
- I wanted to wait until after the birth before deciding

Q12.4 How long had you intended to feed in this way?

- ○ 0 - 3 months
- ○ 3 -6 months
- ○ 6 months - 1 year
- ○ 1 - 2 years
- ○ 2 years or longer

Q12.5 Where did you give birth to this child?

- ○ Public Hospital
- ○ Private Hospital
- ○ home or another community location
- ○ Birth centre
- ○ Other _____

Q12.6 How many weeks pregnant were you when this child was born?

- ○ 36 weeks or earlier
- ○ Between 37 - 41 weeks
- ○ 41 weeks or later

Page Break

Q12.7 Tell us about the birth of this child? (Choose all that apply)

- [ ] I was induced
- [ ] I had an epidural
- [ ] I had an assisted birth with vacuum or forceps
- [ ] I had a caesarean
- [ ] I had a vaginal birth after C-section (VBAC)
- [ ] I had a vaginal birth

Q12.8 When was this caesarean section planned

- ○ Before labour started
- ○ During labour

Q12.9 Did you have a time of separation from your baby after the birth for medical reasons?

- ○ No
- ○ Yes, we were separated for less than 24 hours
- ○ Yes, we were separated for more than 24 hours

Q12.10 Did this child have any of the following in the time right after the birth? (check all that apply)

- ☐ Breathing problems
- ☐ Jaundice
- ☐ Infection
- ☐ Administered antibiotics
- ☐ Tested for blood sugar irregularities
- ☐ Fed with formula
- ☐ None of the above
- ☐ Other _____

End of Block: Birth Hx for child 2

Start of Block: BF Hx for child 2

X→

Q13.1 Are you currently breastfeeding your second child?

- ○ Yes
- ○ No

X→

Q13.2 Have you had any of the following problems breastfeeding this child? (choose all that apply)

- [ ] I had sore nipple pain
- [ ] I felt embarrassed breastfeeding in front of others
- [ ] I experienced mastitis or breast infection
- [ ] Too much milk/engorged breasts
- [ ] Baby had colic/irritable/crying
- [ ] Not enough milk
- [ ] Baby had lactose intolerance
- [ ] Baby had tongue-tie
- [ ] I experienced negative sensations or feelings of aversion while breastfeeding
- [ ] None of these
- [ ] Other _____

Q13.3 How much confidence do you have about breastfeeding this child?

- ○ A great deal
- ○ A lot
- ○ A moderate amount
- ○ A little
- ○ None at all

Q13.4 How much do you enjoy breastfeeding this child?

- ○ Very much
- ○ Quite a lot
- ○ Not sure
- ○ Not much
- ○ Not at all
- ○ Other _____

Q13.5 How successful do you feel you were at breastfeeding this child?

- ○ Not at all
- ○ Not very
- ○ Unsure
- ○ Reasonably
- ○ Very
- ○ Other _____

Q13.6 Did you use formula with this child?

- ○ Yes
- ○ No

Q13.7 How old was this child when they started receiving formula?

- Under 3 months
- 3 - 6 months
- 7 - 12 months
- 1 - 2 years
- 2 - 4 years
- Older than 4 years

End of Block: BF Hx for child 2

Start of Block: BaM 13 child 2

Q14.1 The statements below will help us understand how you are experiencing being a mother. There are no right or wrong answers. Just answers that tell us how you have been feeling. Please consider your **second child** for each statement think about how you have been feeling over the past 2–3 weeks.

Q14.2

I have felt confident about looking after my baby/toddler

- Yes, most or all of the time
- Yes, some of the time
- No, not very often
- No, rarely or never

Q14.3 I have missed the life I had before I became pregnant with this baby/toddler (*or for adoptive mothers*: before I had this baby/toddler)

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

Q14.4 I have found it hard to cope when my baby/toddler cries

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

Q14.5 I have felt close to my baby/toddler

- ○ Yes, most or all of the time
- ○ Yes, some of the time
- ○ No, not very often
- ○ No, rarely or never

Page Break

Q14.6 The statements below will help us understand how you are experiencing being a mother. There are no right or wrong answers. Just answers that tell us how you have been feeling. Please consider your **second child** for each statement think about how you have been feeling over the past 2–3 weeks.

Q14.7 I have felt lonely or isolated

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

Q14.8 I have felt bored

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

Q14.9 I have felt unsupported

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

X→

Q14.10 I have felt alright about asking people for help or advice when I needed to

- ○ Yes, most or all of the time
- ○ Yes, some of the time
- ○ No, not very often
- ○ No, rarely or never

Page Break

Q14.11 The statements below will help us understand how you are experiencing being a mother. There are no right or wrong answers. Just answers that tell us how you have been feeling. Please consider your **second child** for each statement think about how you have been feeling over the past 2–3 weeks.

X→

Q14.12 I have felt nervous or uneasy around my baby/toddler

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

X→

Q14.13 I have been worried that something would happen to my baby/toddler

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

X→

Q14.14 I have been annoyed or irritated with my baby/toddler

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

X→

Q14.15 I worry I am not as good as other mothers

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

X→

Q14.16 I have felt guilty

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

End of Block: BaM 13 child 2

Start of Block: Birth Hx for child 3

Q15.1 Please answer the following questions for your third child who you are currently breastfeeding

Q15.2

What is the age of your third child?

- Between 0 - 6 months
- Between 6 - 12 months
- Between 1 - 2 years
- Between 2 - 3 years
- Between 3 - 4 years
- Between 4 - 5 years
- Between 5 - 6 years
- Between 6 - 7 years
- Over the age of 7 years

Q15.3 When you were pregnant, how did you plan to feed this child?

- I didn’t think about it while I was pregnant
- I planned to breastfeed
- I planned to formula feed
- I planned to breastfeed and formula feed
- I wanted to wait until after the birth before deciding

Q15.4 How long had you intended to feed in this way?

- ○ 0 - 3 months
- ○ 3 -6 months
- ○ 6 months - 1 year
- ○ 1 - 2 years
- ○ 2 years or longer

Q15.5 Where did you give birth to this child?

- ○ Public Hospital
- ○ Private Hospital
- ○ home or another community location
- ○ Birth centre
- ○ Other _____

Q15.6 How many weeks pregnant were you when this child was born?

- ○ 36 weeks or earlier
- ○ Between 37 - 41 weeks
- ○ 41 weeks or later

Q15.7 Tell us about the birth of this child? (Choose all that apply)

- [ ] I was induced
- [ ] I had an epidural
- [ ] I had an assisted birth with vacuum or forceps
- [ ] I had a vaginal birth
- [ ] I had a caesarean
- [ ] I had a vaginal birth after C-section (VBAC)

Q15.8 When was this caesarean section planned

- ○ Before labour started
- ○ During labour

Q15.9 Did you have a time of separation from your baby after the birth for medical reasons?

- ○ No
- ○ Yes, we were separated for less than 24 hours
- ○ Yes, we were separated for more than 24 hours

Q15.10 Did this child have any of the following in the time right after the birth? (check all that apply)

- ☐ Breathing problems
- ☐ Jaundice
- ☐ Infection
- ☐ Administered antibiotics
- ☐ Tested for blood sugar irregularities
- ☐ Fed with formula
- ☐ None of the above
- ☐ Other _____

End of Block: Birth Hx for child 3

Start of Block: BF Hx for child 3

Q16.1 Are you currently breastfeeding your third child?

- ○ Yes
- ○ No

Q16.2 Have you had any of the following problems breastfeeding this child? (choose all that apply)

- [ ] I had sore nipple pain
- [ ] I felt embarrassed breastfeeding in front of others
- [ ] I experienced mastitis or breast infection
- [ ] Too much milk/engorged breasts
- [ ] Baby had colic/irritable/crying
- [ ] Not enough milk
- [ ] Baby had lactose intolerance
- [ ] Baby had tongue tie
- [ ] I experienced negative sensations or feelings of aversion while breastfeeding

---

X→

Q16.3 How much confidence do you have about breastfeeding this child?

- ○ A great deal
- ○ A lot
- ○ A moderate amount
- ○ A little
- ○ None at all

Q16.4 How much you enjoy breastfeeding this child?

- ○ Very much
- ○ Quite a lot
- ○ Not sure
- ○ Not much
- ○ Not at all
- ○ Other _____

Q16.5 How successful do you feel you were at breastfeeding this child?

- ○ Not at all
- ○ Not very
- ○ Unsure
- ○ Reasonably
- ○ Very
- ○ Other _____

Q16.6 Did you use formula with this child?

- ○ Yes
- ○ No

Q16.7 How old was this child when they started receiving formula?

- Under 3 months
- 3 - 6 months
- 7 - 12 months
- 1 - 2 years
- 2 - 4 years
- Older than 4 years

End of Block: BF Hx for child 3

Start of Block: BaM 13 child 3

Q17.1 The statements below will help us understand how you are experiencing being a mother. There are no right or wrong answers. Just answers that tell us how you have been feeling. Please consider your **third child** for each statement think about how you have been feeling over the past 2–3 weeks.

Q17.2
I have felt confident about looking after my baby/toddler

- Yes, most or all of the time
- Yes, some of the time
- No, not very often
- No, rarely or never

Q17.3 I have missed the life I had before I became pregnant with this baby/toddler (*or for adoptive mothers*: before I had this baby/toddler)

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

Q17.4 I have found it hard to cope when my baby/toddler cries

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

Q17.5 I have felt close to my baby/toddler

- ○ Yes, most or all of the time
- ○ Yes, some of the time
- ○ No, not very often
- ○ No, rarely or never

Page Break

Q17.6 The statements below will help us understand how you are experiencing being a mother. There are no right or wrong answers. Just answers that tell us how you have been feeling. Please consider your **third child** for each statement think about how you have been feeling over the past 2–3 weeks.

Q17.7 I have felt lonely or isolated

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

Q17.8 I have felt bored

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

Q17.9 I have felt unsupported

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

Q17.10 I have felt alright about asking people for help or advice when I needed to

- ○ Yes, most or all of the time
- ○ Yes, some of the time
- ○ No, not very often
- ○ No, rarely or never

Page Break

Q17.11 The statements below will help us understand how you are experiencing being a mother. There are no right or wrong answers. Just answers that tell us how you have been feeling. Please consider your **third child** for each statement think about how you have been feeling over the past 2–3 weeks.

Q17.12 I have felt nervous or uneasy around my baby/toddler

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

Q17.13 I have been worried that something would happen to my baby/toddler

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

Q17.14 I have been annoyed or irritated with my baby/toddler

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

Q17.15 I worry I am not as good as other mothers

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

Q17.16 I have felt guilty

- ○ No, rarely or never
- ○ No, not very often
- ○ Yes, some of the time
- ○ Yes, most or all of the time

End of Block: BaM 13 child 3

Start of Block: Coping strategies

Q18.1 Let's talk about how you manage and deal with the feelings of aversion that you experience while breastfeeding

Q18.2
Please indicate which of the following things you have used to manage feelings of aversion while breastfeeding? (choose all that apply)

- ☐ Distracting self while feeding, trying to think about something else
- ☐ Reducing the length of each feeding session
- ☐ Reducing the number of feeds per day
- ☐ Night weaning
- ☐ Encouraging child not to twiddle while feeding
- ☐ Not feeding two infants at once
- ☐ ⊗ I did not use anything to manage feelings of aversion while breastfeeding
- ☐ Other _____

Q18.3 Please indicate which of the following approaches you have used to manage and deal with feelings of aversion while breastfeeding?

(Please consult with a healthcare professional before taking supplements)

- [ ] A breathing technique
- [ ] A meditation technique
- [ ] Other relaxation technique
- [ ] Eating or drinking
- [ ] Taking or using a form of Magnesium
- [ ] Taking another nutritional supplement
- [ ] Having another person with you, company
- [ ] Other _____
- [ ] ⊗ None

Q18.4 Please rate how helpful the following things were in managing your feelings of aversion while breastfeeding

	Not helpful	Somewhat helpful	Very helpful	Unsure
A breathing technique	○	○	○	○
A meditation technique	○	○	○	○
Other relaxation technique	○	○	○	○
Eating or drinking	○	○	○	○
Taking or using a form of Magnesium	○	○	○	○
Taking another nutritional supplement	○	○	○	○
Having another person with you, company	○	○	○	○
Other	○	○	○	○
⊗ None	○	○	○	○

End of Block: Coping strategies

Start of Block: BRS Brief Resilience Scale

Q19.1 The following questions are about you and your wellbeing.
Select one option for each statement below to indicate how much you disagree or agree with each of the statements.

Q19.2 I tend to bounce back quickly after hard times

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly disagree

Q19.3 I have a hard time making it through stressful events

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

Q19.4 It does not take me long to recover from a stressful event

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

Q19.5 It is hard for me to snap back when something bad happens

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

Q19.6 I usually come through difficult times with little trouble

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

Q19.7 I tend to take a long time to get over setbacks in my life

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

End of Block: BRS Brief Resilience Scale

Start of Block: Peer support and networks

X→

Q20.1 How easy or difficult it is for you to speak to others about your experience of feelings of aversion while breastfeeding? Is it?

- Extremely easy
- Somewhat easy
- Neither easy nor difficult
- Somewhat difficult
- Extremely difficult

X→

Q20.2 What is your current relationship status?

- Single
- De facto
- Married
- Other

Page Break

Q20.3 Did the following people encourage or discourage you with breastfeeding?

	Not applicable	Encouraged	Neither encouraged nor Discouraged	Discouraged
Online friends or online community	○	○	○	○
Partner	○	○	○	○
Parent	○	○	○	○
Other family members	○	○	○	○
Friend/s	○	○	○	○
Neighbour	○	○	○	○
People from your in-person community, group or club	○	○	○	○

Q20.4 Please choose any of the following people who have helped or supported you specifically with your experience of feelings of aversion while breastfeeding? (choose all apply)

- ☐ Partner
- ☐ Parent
- ☐ Other family members
- ☐ Friend
- ☐ Neighbour
- ☐ People in your community, group or club
- ☐ Online friends or online community
- ☐ ⊗ None of the above
- ☐ Other _____

End of Block: Peer support and networks

Start of Block: Health care providers

X→

Q21.1 Please indicate which health care providers have given you helpful support for your experience of aversion while breastfeeding? (choose all that apply)

- [ ] Midwife
- [ ] Certified lactation consultant
- [ ] Counsellor or other mental health care worker
- [ ] Doula
- [ ] Acupuncturist
- [ ] General practitioner (GP)
- [ ] Maternal and child health nurse
- [ ] Naturopath or herbalist
- [ ] Obstetrician
- [ ] ⊗ None of these
- [ ] Other, please specify

_____

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Q21.2 Please indicate which support providers have given you useful help for your experience of aversion while breastfeeding? (choose all apply)

- ☐ Australian Breastfeeding Association (ABA) phone counselling
- ☐ 13 Health phone support
- ☐ In person ABA, or other breastfeeding support group
- ☐ Online breastfeeding support group
- ☐ Phone counselling with Lifeline, Beyond Blue or other phone support service.
- ☐ Online counselling support with Lifeline, Beyond Blue or other online counselling service.
- ☐ ⊗ None of these
- ☐ Other, please specify _____

End of Block: Health care providers

Start of Block: Current Medication

Q22.1 Please choose the medications that you are currently taking

- ☐ Contraceptive
- ☐ Anxiety medication
- ☐ Anti-psychotic
- ☐ Antidepressant or SSRI
- ☐ Thyroid medication
- ☐ Pain medication
- ☐ ⊗ No medication
- ☐ Other, please name the medication _____

End of Block: Current Medication

Start of Block: Medical Hx

X→

Q23.1 Do you have a diagnosis of, or received health support for any of the following neurological conditions? Choose all that apply

- [ ] Sensory processing disorder
- [ ] Autism or Asperger's
- [ ] Anxiety disorder
- [ ] Postnatal depression
- [ ] Post-traumatic stress disorder
- [ ] Bipolar disorder
- [ ] Dissociative disorder
- [ ] ⊗ None of these
- [ ] Other _____

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Q23.2 Do you have a diagnosis of, or have you received health support for any of the following endocrine conditions? Choose all that apply

- ☐ Cushing's syndrome
- ☐ Addison's disease
- ☐ Hyperthyroidism
- ☐ Hypothyroidism
- ☐ Hypopituitarism
- ☐ Lupus
- ☐ ⊗ None of these
- ☐ Other _____

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Q23.3 Do you have a history of, or have you received health support for any of the following menstrual conditions? Choose all that apply

- ☐ Premenstrual dysphonic disorder (PMDD)
- ☐ Amenorrhea (the absence of menstrual bleeding)
- ☐ Dysmenorrhea (severe and frequent menstrual cramps and pain associated with menstruation)
- ☐ Polycystic ovary syndrome (PCOS)
- ☐ Menorrhagia (heavy and prolonged menstrual bleeding)
- ☐ Endometriosis
- ☐ Irregular periods
- ☐ Premenstrual Tension Syndrome (PMTS)
- ☐ I have not had any menstrual problems
- ☒ None of the above
- ☐ Other _____

End of Block: Medical Hx

Start of Block: Demographics

Q24.1 Please indicate your age range?

- ○ 18 - 24
- ○ 25 - 30
- ○ 31 - 35
- ○ 36 -40
- ○ 41 -45
- ○ 46 - 50
- ○ 51 - 60

Q24.2 Please indicate level of education completed

- ○ Primary school
- ○ High school
- ○ Trade certificate
- ○ Diploma or Advanced diploma
- ○ Bachelor degree
- ○ Postgraduate qualification

Q24.3 On average how many hours sleep do you get each night?

- ○ Less than 5 hours
- ○ Betweeen 5 - 7 hours
- ○ Between 7 - 9 hours
- ○ More than 9 hours

End of Block: Demographics

Start of Block: DASS-21 Depression Anxiety Stress Scale

Q25.1 Please read each statement and choose a number 0, 1, 2 or 3 which indicates how much the statement applied to you **over the past week**.
There are no right or wrong answers. Do not spend too much time on any statement.
0 - Did not apply to me at all 1 - Applied to me to some degree, or some of the time 2 - Applied to me to a considerable degree or a good part of time 3 - Applied to me very much or most of the time

	0 Did not apply to me at all	1 Applied to me to some degree, or some of the time	2 Applied to me to a considerable degree or a good part of time	3 Applied to me very much or most of the time
I found it hard to wind down	○	○	○	○
I was aware of dryness of my mouth	○	○	○	○
I couldn't seem to experience any positive feeling at all	○	○	○	○
I experienced breathing difficulty (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion)	○	○	○	○
I found it difficult to work up the initiative to do things	○	○	○	○
I tended to over-react to situations	○	○	○	○
I experienced trembling (e.g. in the hands)	○	○	○	○
I felt that I was using a lot of nervous energy	○	○	○	○
I was worried about situations in which I might panic and make a fool of myself	○	○	○	○
I felt that I had nothing to look forward to	○	○	○	○
I found myself getting agitated	○	○	○	○

I found it difficult to relax	○	○	○	○
I felt down-hearted and blue	○	○	○	○
I was intolerant of anything that kept me from getting on with what I was doing	○	○	○	○
I felt I was close to panic	○	○	○	○
I was unable to become enthusiastic about anything	○	○	○	○
I felt I wasn't worth much as a person	○	○	○	○
I felt that I was rather touchy	○	○	○	○
I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat)	○	○	○	○
I felt scared without any good reason	○	○	○	○
I felt that life was meaningless	○	○	○	○

End of Block: DASS-21 Depression Anxiety Stress Scale

Start of Block: DAR-5 Dimensions of Anger Reactions Scale

Q26.1 Thinking over the past 4 weeks, choose the option that best describes the amount of time you felt that way

Q26.2 I found myself getting angry at people or situations

- None or almost none of the time
- A little of the time
- Some of the time
- Most of the time
- All or almost all of the time

Q26.3 When I got angry, I got really mad

- None or almost none of the time
- A little of the time
- Some of the time
- Most of the time
- All or almost all of the time

Q26.4 When I got angry, I stayed angry

- None or almost none of the time
- A little of the time
- Some of the time
- Most of the time
- All or almost all of the time

Q26.5 When I got angry at someone I wanted to hit them

- None or almost none of the time
- A little of the time
- Some of the time
- Most of the time
- All or almost all of the time

Q26.6 My anger prevented me from getting along with people as well as I'd have liked to

- None or almost none of the time
- A little of the time
- Some of the time
- Most of the time
- All or almost all of the time

End of Block: DAR-5 Dimensions of Anger Reactions Scale

Start of Block: EQ-5D Mobility

Q27.1 Please select the ONE box that best describes your health TODAY.

Q27.2 **MOBILITY**

- ○ I have no problems in walking around
- ○ I have some problems in walking around
- ○ I am confined to bed

Q27.3 © EuroQol Research Foundation. EQ-5D™ is a trade mark of the EuroQol Research Foundation.

End of Block: EQ-5D Mobility

Start of Block: EQ-5D Self-care

X→

Q28.1 Please select the ONE box that best describes your health TODAY.
PERSONAL-CARE

- ○ I have no problems with personal-care
- ○ I have some problems washing or dressing myself
- ○ I am unable to wash or dress myself

Q28.2 *© EuroQol Research Foundation. EQ-5D™ is a trade mark of the EuroQol Research Foundation.*

End of Block: EQ-5D Self-care

Start of Block: EQ-5D Usual activities

X→

Q29.1 Please select the ONE box that best describes your health TODAY.

USUAL ACTIVITIES *(e.g. work, study, housework, family or leisure activities)*

- ○ I have no problems with performing my usual activities
- ○ I have some problems with performing my usual activities
- ○ I am unable to perform my usual activities

Q29.2 *© EuroQol Research Foundation. EQ-5D™ is a trade mark of the EuroQol Research Foundation.*

End of Block: EQ-5D Usual activities

Start of Block: EQ-5D Pain / Discomfort

X→

Q30.1 Please select the ONE box that best describes your health TODAY.

PAIN / DISCOMFORT

- ○ I have no pain or discomfort
- ○ I have moderate pain or discomfort
- ○ I have extreme pain or discomfort

Q30.2 *© EuroQol Research Foundation. EQ-5D™ is a trade mark of the EuroQol Research Foundation.*

End of Block: EQ-5D Pain / Discomfort

Start of Block: EQ-5D Anxiety / Depression

X→

Q31.1 Please select the ONE box that best describes your health TODAY.

ANXIETY / DEPRESSION

- ○ I am not anxious or depressed
- ○ I am moderately anxious or depressed
- ○ I am extremely anxious or depressed

Q31.2 *© EuroQol Research Foundation. EQ-5D™ is a trade mark of the EuroQol Research Foundation*

End of Block: EQ-5D Anxiety / Depression

Start of Block: EQ-5D Block 7

Q32.1
We would like to know how good or bad your health is TODAY.
You will see a scale numbered from 0 to 100.
100 means the best health you can imagine
0 means the worst health you can imagine.

Q32.2
Please enter a number in the box below to indicate how your health is TODAY.

_____

Q32.3 *© EuroQol Research Foundation. EQ-5D™ is a trade mark of the EuroQol Research Foundation.*

End of Block: EQ-5D Block 7

Start of Block: Closing questions

Q33.1 Have we missed anything?
If there is anything else that you would like mention about your experience of feeling aversion while breastfeeding, please type it in the box below.
Your response is anonymous.

_____

Q33.2 How satisfied are you with in this survey?

12345

End of Block: Closing questions

Start of Block: Distress protocol

Q34.1 If you have experienced any emotional distress as a result of completing this survey please consider contacting the following services:

- Australian Breastfeeding Association 24-hour free phone counselling service – 1800 686 268.

- A doctor/general practitioner (GP) involved in your care, or local doctor (GP).

- Lifeline counselling (anyone having a personal crisis) – call 13 11 14 or chat to someone online at
https://www.lifeline.org.au/Get-Help/I-Need-Help-Now

- Beyond Blue counselling - 1300 22 4636 or online chat at https://www.beyondblue.org.au

End of Block: Distress protocol

Appendix 10. Phase 4, Survey 2 social media invite tile with clickable link.

Breastfeeding Research
5 Aug 2021 ·

This survey aims to better understand the experience of breastfeeding. You can take part if you are Australian, over the age of 18, and have breastfed in the past or are currently breastfeeding. Follow this link: https://tinyurl.com/262m44sc

Appendix 11. Phase 4, Survey 2 questionnaire.

The experience of breastfeeding

Start of Block: Information and consent

Q1.1 WHO IS CONDUCTING THIS RESEARCH? My name is Melissa Morns and I am a student at UTS. My supervisor is Dr Amie Steel, Faculty of Health University of Technology Sydney; Email: amie.steel@uts.edu.au, Phone: +61 . WHAT IS THE RESEARCH ABOUT? The purpose of this anonymous online survey is to better understand the experience and characteristics of those who breastfeed, and in that way be of benefit to women who breastfeed. The questions in this survey have been informed by in-depth interviews with participants who breastfeed. You have been invited to participate because you are breastfeeding or have breastfed an infant in the past. WHY HAVE I BEEN INVITED? You have been invited to participate because you are breastfeeding or have breastfed an infant in the past. Before you decide to participate in this research study, please check the selection criteria we because need to ensure that it is OK for you to take part. This research is targeting those in Australian who have breastfed an infant or are currently breastfeeding. WHAT DOES MY PARTICIPATION INVOLVE? If you decide to participate, we will invite you to answer an anonymous online questionnaire that will take approximately 10 – 15 minutes to complete. ARE THERE ANY RISKS/INCONVENIENCE? Yes, there are some risks of emotional distress. You may be asked sensitive questions and be asked to comment about difficult feelings which may cause emotional distress. You can leave the survey at any time if you feel any distress and submit the completed section or come back to complete it later. If you do experience emotional distress as a result of completing this survey please contact the following services: - Australian Breastfeeding Association 24-hour free phone counselling service – 1800 686 268. - A doctor/general practitioner (GP) involved in your care, or local doctor (GP). - Lifeline counselling (anyone having a personal crisis) – call 13 11 14 or chat to someone online at https://www.lifeline.org.au/Get-Help/I-Need-Help-Now - Beyond Blue counselling - 1300 22 4636 or online chat at https://www.beyondblue.org.au You will also need to allow approximately 10 minutes of your time to complete the survey. If you are unable to complete the survey in one attempt, you can save it and come back to it later. You are free to withdraw from the survey at any time. DO I HAVE TO TAKE PART IN THIS RESEARCH PROJECT? Participation in this study is voluntary. It is completely up to you whether or not you decide to take part. If you decide not to participate, or to withdraw from the study, it will not affect your relationship with the researchers or the University of Technology Sydney or the online breastfeeding community. WHAT IF I WITHDRAW FROM THIS RESEARCH PROJECT? If you wish to withdraw from the study once it has started, you can do so at any time without having to give a reason, by contacting Melissa Morns melissa.a.morns@student.uts.edu.au. If you withdraw from the study, your data will be removed. However, it may not be possible to withdraw your data from the study results if these have already had your identifying details removed. WHAT WILL HAPPEN TO INFORMATION ABOUT ME? By signing the consent form you consent to the research team collecting and using personal information about you for the research project. All information will be treated confidentially and will be anonymous. We would like to store your anonymous information for future use in research projects that are an extension of this research project. In all instances your anonymous information will be treated

confidentially. We plan to publish the results of this research within a thesis for the University of Technology Sydney and in Peer-Reviewed Journals to expand the understanding of breastfeeding. In any publication, information will be provided in such a way that you cannot be identified. WHAT IF I HAVE CONCERNS OR A COMPLAINT? If you have concerns about the research that you think I, Melissa Morns Melissa.a.morns@student.uts.edu.au or my supervisor, Dr Amie Steel amie.steel@uts.edu.au can help you with, please feel free to contact us.

NOTE: This study has been approved in line with the University of Technology Sydney Human Research Ethics Committee [UTS HREC] guidelines. If you have any concerns or complaints about any aspect of the conduct of this research, please contact the Ethics Secretariat on ph.: +61 2 9514 2478 or email: Research.Ethics@uts.edu.au], and quote the UTS HREC reference number. Any matter raised will be treated confidentially, investigated and you will be informed of the outcome.

Q1.2 Are you currently breastfeeding or have you breastfed an infant in the past?

- ○ Yes (1)
- ○ No (2)

Skip To: End of Survey If Q1.2 = No

Q1.3

Consent to participate

I [anonymous survey respondent] agree to participate in the research project being conducted by My name is Melissa Morns and I am a student at UTS. My supervisor is Dr Amie Steel, Faculty of Health University of Technology Sydney; Email: amie.steel@uts.edu.au, Phone: +61 . I have read the Participant Information Sheet or someone has read it to me in a language that I understand. I understand the purposes, procedures and risks of the research as described in the Participant Information Sheet. I have had an opportunity to ask questions and I am satisfied with the answers I have received. I freely agree to participate in this research project as described and understand that I am free to withdraw at any time without affecting my relationship with the researchers or the University of Technology Sydney or the online breastfeeding community. I am aware that I can contact Melissa Morns (student at UTS) or supervisor is Dr Amie Steel, Faculty of Health University of Technology Sydney; Email: amie.steel@uts.edu.au, Phone: +61 if I have any concerns about the research.

○ I consent (1)

○ I do not consent (2)

Skip To: End of Survey If Q1.3 = I do not consent

End of Block: Information and consent

Start of Block: Demographics

*

Q2.1 What is your current age?

_____

*

Q2.2 How old were you when you started breastfeeding?

_____

*

Q2.3 If you are no longer breastfeeding how old were you when you stopped?

_____

Page Break

Q2.4 What is your level of education

- ○ High school (1)
- ○ Certificate or diploma (2)
- ○ Degree (3)
- ○ Post graduate degree (4)
- ○ Skip this question (5)

Q2.5 How well would you say you are managing financially these days?

- ○ Living comfortably (40)
- ○ Doing alright (41)
- ○ Just about getting by (42)
- ○ Finding it quite difficult (43)
- ○ Finding it very difficult (44)

Q2.6 What best describes the area in which you live?

- ○ Urban (1)
- ○ Rural (2)
- ○ Remote (3)
- ○ Very remote (4)
- ○ Unsure (5)

End of Block: Demographics

Start of Block: Currently pregnant and number of children

Q3.1 Are you currently pregnant?

- ○ Yes (1)
- ○ No (2)
- ○ Unsure (3)

Q3.2 How many children do you have?

- ○ One (1)
- ○ Two (2)
- ○ Three (3)
- ○ Four (4)
- ○ Five or more (5)

End of Block: Currently pregnant and number of children

Start of Block: Breastfeeding experience with child 1

Q4.1 How old is your first child?

_____

Q4.2 Did you breastfeed your first child?

- Yes (1)
- No (2)

Skip To: End of Block If Q4.2 = No

Q4.3 Are you still breastfeeding your first child?

- Yes (1)
- No (2)

Skip To: Q4.6 If Q4.3 = Yes

Page Break

Q4.4 How old was your first child when they stopped breastfeeding?

- ○ 0 - 3 months (1)
- ○ 3 - 6 months (2)
- ○ 6 - 12 months (3)
- ○ 12 months - 24 months (4)
- ○ Longer than 24 months (5)

*

Q4.5 How did breastfeeding end with your first child? Choose all that apply

- ☐ Health professional advice to stop breastfeeding (4)
- ☐ Parent led weaning (5)
- ☐ Child led weaning (6)
- ☐ Unsure (7)
- ☐ Other (8)
- ☐ If you would like to provide more information please do so here (9)

_____

Q4.6 What was your experience like with breastfeeding your first child?

- ○ Extremely good (1)
- ○ Moderately good (2)
- ○ Bad at first but later became good (3)
- ○ Neither good nor bad (4)
- ○ Good at first but later became bad (5)
- ○ Slightly bad (6)
- ○ Extremely bad (7)
- ○ Other, please specify (8) _____

Q50 Did you breastfeed your first child while you were also pregnant with another child?

- ○ Yes (1)
- ○ No (2)
- ○ Unsure (3)

End of Block: Breastfeeding experience with child 1

Start of Block: Child 2

*

Q5.1 How old is your second child?

_____

Q5.2 Did you breastfeed your second child?

- ○ Yes (1)
- ○ No (2)

Skip To: End of Block If Q5.2 = No

Q5.3 Are you still breastfeeding your second child?

- ○ Yes (1)
- ○ No (2)

Skip To: Q5.6 If Q5.3 = Yes

Page Break

Q5.4 How old was your second child when they stopped breastfeeding?

- ○ 0 - 3 months (1)
- ○ 4 - 6 months (2)
- ○ 7 - 12 months (3)
- ○ 13 months - 24 months (4)
- ○ Longer than 25 months (5)

Q5.5 How did breastfeeding end with your second child? Choose all that apply

- ☐ Health professional advice to stop breastfeeding (4)
- ☐ Parent led weaning (5)
- ☐ Child led weaning (6)
- ☐ Unsure (7)
- ☐ Other (8)
- ☐ If you would like to provide more information please do so here (9)

_____

Q5.6 What was your experience like with breastfeeding your second child?

- ○ Extremely good (1)
- ○ Moderately good (2)
- ○ Bad at first but later became good (3)
- ○ Neither good nor bad (4)
- ○ Good at first but later became bad (5)
- ○ Slightly bad (6)
- ○ Extremely bad (7)
- ○ Other, please specify (8) _____

Q5.7 Did you breastfeed your second child while you were also pregnant with another child?

- ○ Yes (1)
- ○ No (2)
- ○ Unsure (3)

End of Block: Child 2

Start of Block: Child 3

*

Q6.1 How old is your third child?

_____

Q6.2 Did you breastfeed your third child?

- ○ Yes (1)
- ○ No (2)

Skip To: End of Block If Q6.2 = No

Q6.3 Are you still breastfeeding your third child?

- ○ Yes (1)
- ○ No (2)

Skip To: Q6.6 If Q6.3 = Yes

Page Break

Q6.4 How old was your third child when they stopped breastfeeding?

- ○ 0 - 3 months (1)
- ○ 4 - 6 months (2)
- ○ 7 - 12 months (3)
- ○ 13 months - 24 months (4)
- ○ Longer than 25 months (5)

---

*

Q6.5 How did breastfeeding end with your third child? Choose all that apply

- ☐ Health professional advice to stop breastfeeding (4)
- ☐ Parent led weaning (5)
- ☐ Child led weaning (6)
- ☐ Unsure (7)
- ☐ Other (8)
- ☐ If you would like to provide more information please do so here (9)

_____

Q6.6 What was your experience like with breastfeeding your third child?

- ○ Extremely good (1)
- ○ Moderately good (2)
- ○ Bad at first but later became good (3)
- ○ Neither good nor bad (4)
- ○ Good at first but later became bad (5)
- ○ Slightly bad (6)
- ○ Extremely bad (7)
- ○ Other, please specify (8) _____

Q6.7 Did you breastfeed your third child while you were also pregnant with another child?

- ○ Yes (1)
- ○ No (2)
- ○ Unsure (3)

End of Block: Child 3

Start of Block: Child 4

*

Q7.1 How old is your fourth child?

_____

Q7.2 Did you breastfeed your fourth child?

- ○ Yes (1)
- ○ No (2)

Skip To: End of Block If Q7.2 = No

Q7.3 Are you currently breastfeeding your fourth child?

- ○ Yes (1)
- ○ No (2)

Skip To: Q7.6 If Q7.3 = Yes

Page Break

Q7.4 How old was this child when they stopped breastfeeding?

- ○ 0 - 3 months (1)
- ○ 4 - 6 months (2)
- ○ 7 - 12 months (3)
- ○ 13 months - 24 months (4)
- ○ Longer than 25 months (5)

Q7.5 How did breastfeeding end with your fourth child? Choose all that apply

- ☐ Health professional advice to stop breastfeeding (4)
- ☐ Parent led weaning (5)
- ☐ Child led weaning (6)
- ☐ Unsure (7)
- ☐ Other (8)
- ☐ If you would like to provide more information please do so here (9)

_____

Q7.6 What was your experience like with breastfeeding your fourth child?

- ○ Extremely good (1)
- ○ Moderately good (2)
- ○ Bad at first but later became good (3)
- ○ Neither good nor bad (4)
- ○ Good at first but later became bad (5)
- ○ Slightly bad (6)
- ○ Extremely bad (7)
- ○ Other, please specify (8) _____

Q7.7 Did you breastfeed your fourth child while you were also pregnant with another child?

- ○ Yes (1)
- ○ No (2)
- ○ Unsure (3)

End of Block: Child 4

Start of Block: Tandem Questions

Q8.1 Did you breastfeed more than one infant at a time, tandem breastfeed?

- ○ Yes (1)
- ○ No (2)
- ○ Unsure (3)

Q8.2 Did your menstrual cycle return while you were breastfeeding?

- ○ Yes (1)
- ○ No (2)

Display This Question:

If Q8.2 = Yes

Q8.3 What age was your breastfeeding infant (or oldest breastfeeding infant if tandem feeding) when your menstrual cycle returned?

- ○ 0 - 3 months old (1)
- ○ 4 - 6 months old (2)
- ○ 7- 12 months old (3)
- ○ 13 - 24 months old (4)
- ○ Older than 25 months (5)

End of Block: Tandem Questions

Start of Block: Breastfeeding difficulties

Q9.1 Did you experience any of the following when breastfeeding?

- ☐ Sore nipples and/or breast pain (1)
- ☐ Low milk supply (2)
- ☐ Feelings of aversion while breastfeeding throughout the entire feed while the child was latched (3)
- ☐ Issues with tongue-tie or poor latch (4)
- ☐ Mastitis (5)
- ☐ Overwhelming sad feelings during the let-down reflex but not an other times ie: D-MER (8)
- ☐ Over supply, engorgement (6)
- ☐ Other, please write your answer (7)

_____

End of Block: Breastfeeding difficulties

Start of Block: Aversion

Display This Question:

If Q9.1 = Feelings of aversion while breastfeeding throughout the entire feed while the child was latched

Q10.1 When did you FIRST start to experience feelings of aversion while breastfeeding?

- [ ] When breastfeeding while pregnant (2)
- [ ] From the first time I breastfed (3)
- [ ] Around the time of my period (4)
- [ ] Around the time that I ovulated (7)
- [ ] When tandem breast feeding (1)
- [ ] Other, please write your answer (6)

_____

Display This Question:

If Q10.1 = When tandem breast feeding

Q10.2 Which child did you MOST experience feelings of aversion with while breastfeeding? Please choose the most correct answer

- ○ Every child that I breastfed (1)
- ○ The oldest child that I breastfed (2)
- ○ The youngest child that I breastfed (3)
- ○ Other, please write your answer (5)

_____

Q48 Did anything stop or relieve your feelings of aversion while breastfeeding?

- ○ Yes (1)
- ○ No (2)
- ○ Unsure (3)

Skip To: End of Block If Q48 = No

Q49 Please provide details of anything that you feel relieved your experience of aversion while breastfeeding?

_____

End of Block: Aversion

Start of Block: Milk supply

Q11.1 How did you know that you had low milk supply?

- ☐ I could tell by the feel of my breasts (1)
- ☐ I could tell from the weight of my child (2)
- ☐ I could tell by the nappies from my child (3)
- ☐ My child did not seem satisfied (4)
- ☐ A health professional confirmed the low milk supply (5)
- ☐ Other, please write your answer (6)

_____

End of Block: Milk supply

Start of Block: Overall experience

Q12.1 How do you feel about your overall experience of breastfeeding?

1 (1) 2 (2) 3 (3) 4 (4) 5 (5)

End of Block: Overall experience

Appendix 12. Prospero protocol registration

PROSPERO

International prospective register of systematic reviews

The experiences of breastfeeding women who perceive an aversion to breastfeeding: a critical systematic review

Melissa Morns, Amie Steel, Erica McIntyre, Elaine Burns

Citation

Melissa Morns, Amie Steel, Erica McIntyre, Elaine Burns. The experiences of breastfeeding women who perceive an aversion to breastfeeding: a critical systematic review. PROSPERO 2018
CRD42018115103 Available from:
http://www.crd.york.ac.uk/PROSPERO/display_record.php?ID=CRD42018115103

Review question

To determine what are the experiences of breastfeeding women who perceive an aversion to breastfeeding?

Searches

Searches will include the following electronic bibliographic databases: MEDLINE (OVID), CINAHL (EBSCO), PsycINFO (EBSCO), Maternity and Infant Care (Ovid).
Sources used to identify studies for the review include bibliographic databases, reference lists of eligible studies, key journals, internet resources and contact with experts. Including grey literature to improve dating of review. The search strategy will include only terms relating to the research question. The full search strategy for all databases is supplied as an attachment (table 1 & 2). Searches will be limited by English language and Human. Review articles will be excluded. Studies published between January 2000 to current date will be included. Database searches will be re-run before final data extraction for further retrieval.

Types of study to be included

Peer reviewed original research, both qualitative and quantitative will be included.
Review articles will be excluded.

Condition or domain being studied

The benefits of breastfeeding for mother and child are universally accepted (Kramer 2001); however some mothers experience difficulties with breastfeeding (Flower 2003; Watkinson 2016). The complications that arise for breastfeeding mothers in the neonatal period are well documented (Gatti 2008), yet little research exists on obstacles that occur after this period. Breastfeeding may cause a range of strong emotions in mothers (Watkinson 2016). These may be unfamiliar, unexpected and both positive and/or negative in nature. Feelings of aversion are known to occur for some women who breastfeed (Flower 2003). These breastfeeding mothers may experience strong embodied emotional sensations of irritation or aggression (Watkinson 2016).
References:
Flower, H. 2003, Adventures in Tandem Nursing: Breastfeeding during Pregnancy and Beyond, 1st edn. La Leche League International, Illinois.
Gatti, L. 2008, 'Maternal perceptions of insufficient milk supply in breastfeeding', Journal of Nursing Scholarship. Vol. 40, no. 4, pp. 355-63.
Kramer, M., Kakuma, R. 2001, 'The optimal duration of exclusive breastfeeding a systematic review, World Health Organisation', Geneva, viewed 2 April 2018.
Watkinson, M., Murray, C., Simpson, J. 2016, 'Maternal experiences of embodied emotional sensations during breast feeding: An Interpretative Phenomenological Analysis, Midwifery, vol. 36, pp. 53-60.

Participants/population

Inclusion - women/mothers who are breastfeeding or have breastfed.
Exclusion - non breastfeeding women.

Intervention(s), exposure(s)

Breastfeeding women/mothers who have or who do experience an aversion to breastfeeding.

Comparator(s)/control

Not applicable.

Context

Main outcome(s)

Greater understanding of the phenomena of breastfeeding aversion. This research is likely to have direct benefit to the population being studied.

Additional outcome(s)

None

Data extraction (selection and coding)

Covidence software will be used for screening, full text review, and risk of bias assessment.
Analysis and reporting methods –
• Selection criteria will be agreed upon by entire four person review team.
• Individual researcher will perform database search and initial data extraction with quality checks by second
researcher.
• Individual researcher will remove duplicates and filter by title and abstract with quality checking by second
researcher.
• Disagreements between the review authors over risk of bias will be resolved by discussion. Third and
fourth review authors will be consulted where necessary.
• Full text article inclusion will be agreed upon by entire research team.

Risk of bias (quality) assessment

Data selection process will be based on four criteria (Hawker, 2002)
Accept or reject criteria:
1. Relevance to the research question – what are the experiences of breastfeeding women who perceive an aversion to breastfeeding.
2. Context – Is breastfeeding aversion a;
a. Major focus of the study?
b. Minor focus of the study?
c. Mentioned in the study?
3. The source – the population being studied: breastfeeding women.
4. Type of study – peer reviewed; original research, empirical studies or theoretical studies.
(Hawker, 2002). Hawker, S., Payne, S., Kerr, C., Hardey, M., & Powell, J. (2002). Appraising the Evidence: Reviewing Disparate Data Systematically. Qualitative Health Research, 12(9), 1284–1299.

Strategy for data synthesis

If sufficient qualitative manuscripts are identified, we will provide a meta ethnography synthesis of the findings from included studies. Using the approach put forward by Noblit and Hare (1988), we will use interpretive and inductive reasoning to find themes from each paper. We will then provide a summary of findings of primary and secondary themes. Themes will be compared, and key themes will be identified. Researchers will then determine how the studies are related. Researchers will then translate the studies into one another and synthesise the translations for final data synthesis. Data synthesis stages will be completed with collaboration of the entire research team. Noblit, GW & Hare, RD. (1988) Meta-ethnography: synthesizing qualitative studies. Newbury Park, CA: Sage.

Analysis of subgroups or subsets

The data will be sorted based on emergent categories (or in the instance where meta-synthesis is conducted – themes) identified though the analysis. These categories will not be determined a priori, but will be directly informed by the content of the identified studies.

Contact details for further information

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Organisational affiliation of the review

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Anticipated or actual start date

01 September 2018

Anticipated completion date

01 July 2019

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Conflicts of interest

The lead reviewer (MM) has facilitated community support groups on this topic. The other authors declare that they have no known conflicts of interest.

Language

English

Country

Australia

Stage of review [1 change]

Review Completed published

Details of final report/publication(s) or preprints if available [1 change]

Morns, Steel, Burns, & McIntyre. (2021). Women who experience feelings of aversion while breastfeeding: A meta-ethnographic review. Women Birth, 34(2), 128-135. doi:10.1016/j.wombi.2020.02.013
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Subject index terms status

Subject indexing assigned by CRD

Subject index terms

Breast Feeding; Female; Humans; Mothers; Perception

Date of registration in PROSPERO

29 November 2018

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09 November 2018

Stage of review at time of this submission

Stage	Started	Completed
Preliminary searches	Yes	Yes
Piloting of the study selection process	Yes	Yes
Formal screening of search results against eligibility criteria	Yes	Yes
Data extraction	Yes	Yes
Risk of bias (quality) assessment	Yes	Yes
Data analysis	Yes	Yes

Revision note

This review has now been published.
The record owner confirms that the information they have supplied for this submission is accurate and complete and they understand that deliberate provision of inaccurate information or omission of data may be construed as scientific misconduct.
The record owner confirms that they will update the status of the review when it is completed and will add publication details in due course.