ORIGINAL ARTICLE

The prevalence of breastfeeding aversion response in Australia: A national cross-sectional survey

Melissa A. Morns¹ | Elaine Burns² | Erica McIntyre^{1,3} | Amie E. Steel¹

¹School of Public Health, Australian Centre for Public and Population Health Research, University of Technology Sydney, Ultimo, New South Wales, Australia

²School of Nursing and Midwifery, Western Sydney University, Penrith, New South Wales, Australia

³Institute for Sustainable Futures, University of Technology Sydney, Ultimo, New South Wales, Australia

Correspondence

Melissa A. Morns, School of Public Health, Australian Centre for Public and Population Health Research, University of Technology Sydney, PO Box 222, Jones St, Ultimo, 2007 NSW, Australia.

Email: Melissa.a.morns@student.uts.edu.au

Funding information

The first author is the recipient of an Australian Government Research Scholarship.

Abstract

Some women who breastfeed will experience complex ongoing difficulties, such as breastfeeding aversion response (BAR). This recently named breastfeeding challenge is defined as feelings of aversion while breastfeeding for the entire time that the child is latched. This study provides the first prevalence data for the experience of BAR 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 BAR, 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 a BAR (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 experience BAR as good (n = 471, 38.7%) or very good (n = 533, 43.8%). BAR 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 BAR. Complications with breastfeeding are pervasive, but women who can overcome breastfeeding issues often report a positive overall breastfeeding experience.

KEYWORDS

breastfeeding, emotions, family support, lactation, maternal health, post-natal care, prevalence

1 | 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 (Australian Bureau of Statistics, 2022). Breastfeeding is a complex practice that

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited and is not used for commercial purposes.

© 2023 The Authors. *Maternal & Child Nutrition* published by John Wiley & Sons Ltd.

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 socioecological 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., 2012; 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 is defined as feelings of aversion while breastfeeding for the entire time that the child is latched (Morns et al., 2021). Previous research on BAR has identified that breastfeeding with BAR feels tiring, exhausting and sickening (Morns et al., 2023). The in-themoment sensations of BAR were described by those experiencing it as, 'touched out, feeling violated, feeling angry, sad, dread, anxiety, guilt, worry, and feeling a disconnect between wanting to breastfeed and having negative feelings' (Morns et al., 2023). 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.

Key messages

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

2 | 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.

2.1 | Participants and data collection

The survey was offered to participants using Qualtrics™ (Qualtrics, 2020) and was available online from 6 August 2021 to 5 September 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 were 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.

2.2 | 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 the availability of breastfeeding support. Participants were presented with 25 survey items of which seven were repeated for each child.

2.3 | 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.

And Medical Research Council, Wiley Online Library on [11/06/2023]. See

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 Likerttype responses, multiple-choice responses, and short-answer text response options.

2.5 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 selfcare 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 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.

2.7 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. The survey response rate was 74.4% of those who clicked the survey link, and the survey completion rate, after data cleaning, was 80.1% (n = 4491). Data analysis of closed-response survey questions was completed using Statistical Package for Social Sciences (SPSS) software. The χ^2 test for association was used to analyse if urban or remote living had an association with BAR. One-way Welch analysis of variance (ANOVA) was conducted to determine whether there were statistically significant differences between socioeconomic indicators and the prevalence of BAR, and 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).

Ethical Considerations 2.8

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).

RESULTS

The findings of this survey describe the breastfeeding experience of 5511 Australian women. The 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 3). The prevalence of BAR was consistently just over one in five for participants living in urban (n = 899, 22.5%), rural (n = 312, 22.5%), or remote areas (n = 20, 22.5%) 23.2%) (see Table 1).

A one-way Welch ANOVA was conducted to determine if the reporting of BAR was different among those with different levels of

TABLE 1 Participant demographics.

| Demographics | With BAR n (%) | Without BAR n (%) | Total sample n (%) | | | |
|-----------------------------------|-------------------|-------------------|--------------------|--|--|--|
| Level of education (n = 5499) | | | | | | |
| 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) | | | |
| Postgraduate degree | 329 (26.6) | 1355 (31.8) | 1684 (30.6) | | | |
| Economic manageability (n = 5511) | | | | | | |
| 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) | | | | | | |
| 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) | | | |

Abbreviation: BAR, breastfeeding aversion response.

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 different 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 < 0.0005). 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=0.012), as well as the increase from living comfortably to just about getting by (0.103, 95% CI [0.09, 0.39], p=0.000), and the increase from living comfortably to finding it quite difficult (0.240, 95% CI [0.09, 0.39], p=0.000). BAR reporting was also statistically

 TABLE 2
 Prevalence and onset of BAR and other breastfeeding difficulties.

| TABLE 2 Prevalence and onset of BAR a | nd other breastfeeding of | difficulties. | |
|---|---------------------------------|---------------|--------------|
| Did you experience any of the following when (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, that is, BAR | | | 1227 (22.6) |
| Overwhelming sad feelings during the letdown reflex but not at other times, that is, 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 breastfeeding 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 | With BAR | Without BAR | Total sample |
| (n = 5451) | (n = 1218) | (n = 4233) | (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) |
| | | | |

Note: Percentages may equal greater than 100 because participants could choose multiple answers. Abbreviation: BAR, breastfeeding aversion response.

different among education groups, Welch's F(4, 123.623) = 7.830, p < 0.0005. BAR reporting increased from the postgraduate 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 = 0.007), as wasthe increase from degree to certificate (0.05, 95% CI [0.01, 0.09], p = 0.008).

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 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, 21.4-23.6). 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%).

Most participants rated their breastfeeding experience with each breastfed infant, as 'good' or 'extremely good'. The experience of 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 3). The most common weaning age was 13-24 months across subsequent nurslings (42.6%-45.9%), and the

TABLE 3 Breastfeeding experience with each child.

| Breastfeeding experience with each child | Child 1 (aldost) 52/2 (9/) | Child 2 m = 2400 /0/) | Child 2 m = 4077 /0/\ | Child 4 = 227 (04) |
|--|--------------------------------|-----------------------|-----------------------|----------------------|
| (n = 5511) | Child 1 (eldest), n = 5363 (%) | , | , , , | 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) |
| 13-24 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) |

Abbreviation: BAR, breastfeeding aversion response.

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 towards child-led weaning with each subsequent child from child 1 (n = 854, 22.7%) to child 4 (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 2 15.2% (n = 114), child 3 15.1% (n = 37), and child 4 17.0% (n = 7) (see Table 3).

3.2 | 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 healthcare 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, 68) 18.2%) used breathing, meditation and positive self-talk to continue feeding. In open-text responses, women described positive self-talk as reminding themselves 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 4).

4 | DISCUSSION

This is the first study to report the prevalence of BAR in Australia. This survey also revealed the Australian prevalence of 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

TABLE 4 Breastfeeding support from others and self-help strategies used to reduce feelings of BAR.

| rategies 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) |

Abbreviation: BAR, breastfeeding aversion response.

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, the presentation and onset of BAR, and the strategies that participants have used to overcome BAR.

4.1 | 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 their feelings about 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 healthcare providers (Morns et al., 2023).

4.2 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 trimesters (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 towards 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 post-natal 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 about BAR. The most common coping strategy, reported by participants with BAR, was a 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 post-natal depression, suicidal ideation, or post-natal psychosis are exacerbated by complex breastfeeding difficulties such as BAR. Possible treatment 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. Healthcare 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 woman is experiencing BAR are: D-MER, body dysphoria, sensory processing disorder, nipple or breast discomfort from another cause, post-natal mental health conditions such as post-natal anxiety, a childhood history of sexual assault, and maternal fatigue and exhaustion.

4.5 | Strengths and limitations

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.

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 selfidentified as having breastfed and did not include those who selfidentified as having predominantly formula fed their infant. The number 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.

5 | 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 used to reduce feelings of aversion while breastfeeding that warrant further research. Breastfeeding support from partners 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.

AUTHOR CONTRIBUTIONS

Melissa A. Morns was involved in conceptualization, methodology, formal analysis, investigation, data curation, writing—original draft, writing—review and editing, and visualization. Elaine Burns was involved in supervision, formal analysis, writing—review and editing, and visualization. Erica McIntyre was involved in supervision, formal analysis, writing—review and editing, and visualization. Amie E. Steel was involved in supervision, formal analysis, writing—review and editing, and visualization.

ACKNOWLEDGEMENTS

The authors are grateful to the Australian Breastfeeding Association for supporting this research. Open access publishing facilitated by University of Technology Sydney, as part of the Wiley - University of Technology Sydney agreement via the Council of Australian University Librarians. The first author is the recipient of an Australian Government Research Scholarship.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

ORCID

Melissa A. Morns http://orcid.org/0000-0002-4254-3690

REFERENCES

Armstrong, S. A., & Herr, M. J. (2022). Physiology, nociception, In StatPearls. StatPearls Publishing LLC. https://europepmc.org/article/ MED/31855389/NBK431128#free-full-text

Australian Bureau of Statistics. (2022). Key statistics and data about breastfeeding, exclusive breastfeeding, and introduction to solid foods. https://www.abs.gov.au/statistics/health/health-conditions-and-risks/breastfeeding/latest-release#breastfeeding-prevalence

Awaliyah, S. N., Rachmawati, I. N., & Rahmah, H. (2019). Breastfeeding self-efficacy as a dominant factor affecting maternal breastfeeding satisfaction. *BMC Nursing*, 18(1), 30. https://doi.org/10.1186/s12912-019-0359-6

Beggs, B., Koshy, L., & Neiterman, E. (2021). Women's perceptions and experiences of breastfeeding: A scoping review of the literature. BMC Public Health, 21, 2169. https://doi.org/10.1186/s12889-021-12216-3

Burns, E., Schmied, V., Fenwick, J., & Sheehan, A. (2012). Liquid gold from the milk bar: Constructions of breastmilk and breastfeeding women in the language and practices of midwives. Social Science & Medicine, 75(10), 1737–1745. https://doi.org/10.1016/j.socscimed.2012.07.035

Chipojola, R., Chiu, H.-Y., Huda, M. H., Lin, Y.-M., & Kuo, S.-Y. (2020). Effectiveness of theory-based educational interventions on

- breastfeeding self-efficacy and exclusive breastfeeding: A systematic review and meta-analysis. International Journal of Nursing Studies, 109, 103675. https://doi.org/10.1016/j.ijnurstu.2020.103675
- Deif, R., Burch, E. M., Azar, J., Yonis, N., Abou Gabal, M., El Kramani, N., & DakhlAllah, D. (2021). Dysphoric milk ejection reflex: The psychoneurobiology of the breastfeeding experience. Frontiers in Global Women's Health, 2, 669826. https://doi.org/10.3389/fgwh.2021.669826
- Gianni, M. L., Bettinelli, M. E., Manfra, P., Sorrentino, G., Bezze, E., Plevani, L., Cavallaro, F., Raffaeli, G., Crippa, B. L., Colombo, L., Morniroli, D., Liotto, N., Roggero, P., Villamor, E., Marchisio, P., & Mosca, F. (2019). Breastfeeding difficulties and risk for early breastfeeding cessation. Nutrients, 11(10), 2266. https://doi.org/ 10.3390/nu11102266
- Grant, A., Jones, S., Williams, K., Leigh, J., & Brown, A. (2022). Autistic women's views and experiences of infant feeding: A systematic review of qualitative evidence. Autism, 26, 1341-1352.
- Heise, A. M., & Wiessinger, D. (2011). Dysphoric milk ejection reflex: A case report. International Breastfeeding Journal, 6(1), 6-12. https:// doi.org/10.1186/1746-4358-6-6
- Hinic, K. (2016). Predictors of breastfeeding confidence in the early postpartum period. Journal of Obstetric, Gynecologic, and Neonatal Nursing, 45(5), 649-660. https://doi.org/10.1016/j.jogn.2016.04.010
- Kronborg, H., & Væth, M. (2004). The influence of psychosocial factors on the duration of breastfeeding. Scandinavian Journal of Public Health, 32(3), 210-216. https://doi.org/10.1080/14034940310019218
- Lucas, R., Zhang, Y., Walsh, S. J., Evans, H., Young, E., & Starkweather, A. (2019). Efficacy of a breastfeeding pain self-management intervention: A pilot randomized controlled trial. Nursing Research, 68(2), E1-E10. https://doi.org/10.1097/nnr.0000000000000336
- McFadden, A., Gavine, A., Renfrew, M. J., Wade, A., Buchanan, P., Taylor, J. L., Veitch, E., Rennie, A. M., Crowther, S. A., Neiman, S., & MacGillivray, S. (2017). Support for healthy breastfeeding mothers with healthy term babies. Cochrane Database of Systematic Reviews, 2017(2), CD001141. https://doi.org/10.1002/14651858.CD001141.pub5
- Morns, M. A., Steel, A., Burns, E., & McIntyre, E. (2023). Breastfeeding aversion response (BAR): A descriptive study. Journal of Midwifery and Women's Health. https://doi.org/10.1111/jmwh.13474
- Morns, M. A., Steel, A. E., Burns, E., & McIntyre, E. (2021). Women who experience feelings of aversion while breastfeeding: A metaethnographic review. Women and Birth, 34(2), 128-135. https:// doi.org/10.1016/j.wombi.2020.02.013
- Morns, M. A., Steel, A. E., 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. https://doi.org/ 10.1016/j.wombi.2022.01.001
- North, K., Gao, M., Allen, G., & Lee, A. C. (2022). Breastfeeding in a global context: Epidemiology, impact, and future directions. Clinical Therapeutics, 44(2), 228-244.

- O'rourke, M. P., & Spatz, D. L. (2019). Women's experiences with tandem breastfeeding. The American Journal of Maternal/Child Nursing, 44(4),
- Prior, L. (2014). 'Content analysis'. In L. Patricia (Ed.), The Oxford handbook of qualitative research (pp. 359-379). Oxford University Press.
- Qualtrics, P. (2020). Qualtrics software. https://www.qualtrics.com
- Snyder, K., Hulse, E., Dingman, H., Cantrell, A., Hanson, C., & Dinkel, D. (2021). Examining supports and barriers to breastfeeding through a socio-ecological lens: A qualitative study. International Breastfeeding Journal, 16(1), 52. https://doi.org/10.1186/s13006-021-00401-4
- Ureño, T. L., Berry-Cabán, C. S., Adams, A., Buchheit, T. L., & Hopkinson, S. G. (2019). Dysphoric milk ejection reflex: A descriptive study. Breastfeeding Medicine, 14(9), 666-673. https://doi.org/10. 1089/bfm.2019.0091
- Uvnas-Moberg, K., & Kendall-Tackett, K. (2018). The mystery of D-MER: What can hormonal research tell us about dysphoric milk-ejection reflex? Clinical Lactation, 9(1), 23-29.
- Victora, C. G., Bahl, R., Barros, A. J. D., França, G. V. A., Horton, S., Krasevec, J., Murch, S., Sankar, M. J., Walker, N., & Rollins, N. C. (2016). Breastfeeding in the 21st century: Epidemiology, mechanisms, and lifelong effect. The Lancet, 387(10017), 475-490. https:// doi.org/10.1016/S0140-6736(15)01024-7
- Wagi, C. R. (2019). "What I Hadn't Realized is How Difficult it is, You Know?": Examining the protective factors and barriers to breastfeeding in the UK. University of South Florida.
- Whipps, M. D. M., Yoshikawa, H., Demirci, J. R., & Hill, J. (2021). "Painful, yet beautiful, moments": Pathways through infant feeding and dynamic conceptions of breastfeeding success. Qualitative Health Research, 32(1), 31-47. https://doi.org/10.1177/10497323211032158
- WHO. (2020). Protecting, promoting and supporting breastfeeding in facilities providing maternity and newborn services: the revised Babyfriendly Hospital initiative: 2018 implementation guidance: Frequently asked questions.

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

How to cite this article: Morns, M. A., Burns, E., McIntyre, E., & Steel, A. E. (2023). The prevalence of breastfeeding aversion response in Australia: A national cross-sectional survey. Maternal & Child Nutrition, e13536. https://doi.org/10.1111/mcn.13536