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Breast-Exit: Women's experiences of ceasing to breastfeed; An Australian qualitative study

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ABSTRACT

Objective: To investigate mothers infant feeding experiences (breastfeeding/formula milk feeding) with the aim of understanding how women experience cessation of breastfeeding.

Design: Multi-method, qualitative study; questionnaire, focus groups and interviews.

Setting: Northern and southern Tasmania, Australia.

Participants: 127 mothers from a broad age and social demographic completed a questionnaire and participated in 22 focus groups and 19 interviews across the north and south of Tasmania, 2011-2013.

Findings: Mothers experience a tension between breastfeeding as "natural" and "best" and formula milk as "wrong" and "unnatural." They experience and endure multiple issues (e.g. pain, low milk, mastitis, public shaming) whilst making use of social capital and other resources such as father/partner support, expressing breastmilk, bottles and dummies to prolong breastfeeding before cessation. Overall cessation of breastfeeding was frequently experienced as unexpected and "devastating" leaving mothers with a prolonged sense of loss and failure; "breastfeeding grief."

Conclusions and implications: The exit from breastfeeding (cessation) results in lingering feelings of grief and failure making it harmful to women's emotional wellbeing. Reframing breastfeeding as a family practice where fathers/partners are incorporated as breastfeeding partners has potential to help women negotiate and prolong breastfeeding. Proactive counselling and debriefing are needed to assist women to manage feelings of loss and "breastfeeding grief."

Key words: Breastfeeding, Cessation, Infant Formula, Qualitative Research, Mothers

ARTICLE SUMMARY

Strengths and limitations of this study

- Elicits the experiences of women stopping breastfeeding across a diverse demographic including 50% of women aged below 24 years of age, and who were living in socioeconomic disadvantaged areas.
- Original research that is hypothesis generating about the low rates of breastfeeding and will help inform policy and practice and preventative strategies.
- The findings may not be representative of all mothers experiences in other settings or countries, and relied on the mothers memories.
- The complex nature of the data limited the exploration of the concept "exclusive breastfeeding."
- The findings reveal fathers/partners as forms of social capital.

INTRODUCTION

A recent Lancet[1] series demonstrates the public health imperative to promote and support breastfeeding as a social and cultural norm. However, despite the convincing evidence of the benefits of exclusive (where the child is only feed breastmilk/breastfed) and continued breastfeeding (any) for both mothers and their children,[2-4] few women fulfil their choice to breastfeed. In well-resourced countries such as Australia, United Kingdom (UK) and United states it is estimated that more children are now formula milk feed (exclusively and partially) than exclusively breastfed within their first 6 months of life.[2 5] In Australia, whilst it is estimated that over 90% of mothers start exclusive breastfeeding by the first two months of age 50% of Australian infants who initiate at birth, are no longer exclusively breastfeeding.[6 7] In the UK, 69% of infants start exclusive breastfeeding, and by six weeks a quarter (23%) are continuing.[8] Victor et al,[2] cite that as few as 37% of infants are exclusively breastfed worldwide.

Cessation of breastfeeding occurs as a result of either partially or completely replacing breastfeeding or breastmilk feeding with formula milk feeding, or other fluids / foods. Our earlier analysis of the first Australian Institute of Health and Welfare (AIHW) first Australian National Infant Feeding (ANIFS) cross-sectional survey revealed a high prevalence of early cessation of exclusive breastfeeding within the first 6 months. The fathers infant feeding preference (formula or indifferent) maternal obesity (BMI>30) and regular dummy use increased the risk of cessation within the first 6 months.[7] Others have noted that maternal smoking, low maternal education levels, young mothers aged<24 years, returning to work within the first 13 weeks (mother), preterm infant, and postnatal/perinatal depression are associated with not breastfeeding and cessation of any breastfeeding.[7 9-11]

Mothers make decisions about how to feed their babies based on a range of factors that may include past experiences, family history, social context and what they know and understand about infant feeding from public health promotion, nutritional and nurturing perspectives.[12-14] These decisions are also influenced knowingly or unknowingly by health promotion public health campaigns such as the UNICEF Baby Friendly Hospital Initiative,[15] health professionals discourses[16] and by the mother's social, cultural, and political environments.[14] When the choice is made to breastfeed but breastfeeding is unsuccessful mothers are often left bereft and confused, citing feelings of failure.[17] Women have also described feeling relief and disconnectedness when they have chosen to not breastfeed.[16] To explore these issues in greater depth we undertook a state wide qualitative study investigating mothers infant feeding experiences (breastfeeding/formula milk feeding) with the aim of understanding how women experience interrupting breastfeeding with formula milk in the context of the their everyday lives. Our research contributes to informing preventative and appropriate context based support strategies for mothers and their families.

METHODS

Design, setting, rational

The Tasmanian Infant Feeding (TIF) study was a state wide multi-method qualitative study.[18] investigating the infant feeding practices of women whose infants were aged from 0 through to 36 months. A total of 22 focus groups (FG) and 19 semi-structured one–one interviews were conducted with mother/child dyads across the north and south of Tasmania, Australia, November 2011-March 2013. Ethics approval was obtained from the Tasmanian Social Science Ethics Committee (Ethics Ref No: H0011838).

Patient and Public Involvement

There was no patient or public involvement in setting the research agenda.

Sampling strategy and recruitment

Mothers who were aged over 16 years, with children aged 0-36 months were recruited from different areas of Tasmania (urban, rural, remote). A requirement of the funding body was that 50% of the sample should include women who lived in areas classified as socioeconomically disadvantaged SEIFA index ranks (1=most disadvantaged 5=least disadvantaged).[19] To attain a diverse sample we recruited women from pre-existing groups (mothers' groups), used snowballing techniques such as word-of-mouth, advertising and promoting the study within local newspapers, and flyers at community clinics and hospitals, direct contact with mothers, health professionals, and parenting support groups. Mothers could opt to participate in either a FG or one to one interview within their community and venue of choice. Recruitment ended when we judged that both data saturation and the sampling requirements of the funding body had been met.

Data collection

All data (demographic questionnaire and qualitative) were collected concurrently. Mother and child demographics and self-reported infant feeding practices were collected prior to the start of each FG/interview using a paper based questionnaire. One researcher conducted the interviews (Author 1 or 2) and two researchers were present at each FG (Authors 1 and 2 or 3). A FG/interview topic guide with open ended prompts (tell us how you are feeding, tell us more about that? what helped; what didn't? tell us about stopping) was used to encourage and explore experiences and facilitate the consistency of the data collection. The topic guide was piloted on one FG and one interview, and minor revisions were made. Field notes and a research log were kept, and all qualitative data were audio taped. Team debriefing occurred at the end of each

FG/interview. Each participant received a $20.00 supermarket gift voucher in recognition of their time.

Data analysis

Data were analysed using an iterative thematic approach and a coding framework informed by the aims of the study and interpretivist qualitative methodology.[18 20] Demographic data were analysed for frequencies and distributions using the statistical software Stata (v. 14).[21] NVivo (v. 10.2) was used to support the analysis of qualitative data. Qualitative data were transcribed verbatim and checked against the audio recording for accuracy after each FG/interview by two researchers. Pseudonyms were used in the transcripts to maintain participant confidentiality. Three female researchers (Author's 1, 2, 3) with postgraduate qualifications in public health & midwifery, sociology and allied health analysed the transcripts using an iterative thematic analysis. A broad coding framework was developed during preliminary analysis. These were then reduced into broad subthemes and themes. An abductive process revealed three final themes; Value-to breastfeed, Endurance and Grief. (Figure 1)

Definitions

All infant feeding definitions were consistent with the World Health Organizations (WHO) indicators for assessing infant and young child feeding practices.[22] Exclusive breastfeeding refers to an infant who receives breast milk (including expressed breast milk or breast milk from a wet nurse) and allows ORS, drops, syrups (vitamins, minerals, medicines), but nothing else. Breastfeeding is where the infant receives breast milk (including expressed or from a wet nurse and food or liquid including non-human milk / formula.[22]

Validation and trustworthiness

Qualitative transcripts were linked to demographic data and used to cross check themes, sources, references and adequate participate representation. Emerging data analysis/ themes were also cross checked with different data sources (interview, field note and focus group data). Text searches using the "query" option within NVivo verified the frequency of use and relevance of the concepts and themes. For example, transcripts were searched for commonly-used terms such as "best" and "formula" this help to verify that women used that term to explain why they preferred to breastfeed over formula feeding, and their use of formula. A research log recorded the coding process, ideas, questions, and reflections.[18 23]

FINDINGS

127 mothers participated in 22 FG and 19 interviews across southern and northern Tasmanian between May, 2011 and March, 2013. (Tables 1&2) The mean age of the women was 29 years (SD 5.9), with 46% living in an area classified as most disadvantaged (SEIFA 1&2). (Table 1&2) As women did not refer directly to "exclusive breastfeeding" as a way of feeding their children, and instead spoke about "breastfeeding" "not breastfeeding" and "formula" feeding, this analysis describes the women's accounts of how they experienced breastfeeding and their use of formula milk in their day to day lives unless otherwise stated. Pseudonyms and participant ages are used to identify direct quotes.

Table 1.Characteristics of the mothers (N=127) who participated in the 22 FGs and 19 Interviews. Values are in n(%) mean ± standard deviation(SD)

Mothers Characteristics	n	(%)	Mean ± SD
Feeding preference before birth			
Breast	120	94.5	
Formula	7	5.5	
*Previously breastfed	57	44.9	
Maternal age (years)			29 ± 5.9
15-24	33	26.0	
25-29	30	23.6	
30-34	39	30.7	
35 or older	25	19.7	
Parity			2 ± 0.9
Pregnant at time of study	2	1.6	
One (given birth once)	6	4.7	
Two or more	119	93.7	
Method of delivery			
Spontaneous vaginal delivery	70	55.1	
††Assisted delivery	16	12.6	
†Caesarean (elective / emergency)	41	32.3	
Maternal smoking	24	18.9	
Living arrangements			
Living with father of the child (defector or married)	103	81.1	
Single parent	24	18.9	
Current Occupation			
Professional	40	31.5	
Clerical/Admin or Service/Sales	19	15.0	
Home duties /self employed	45	35.4	
Student or unemployed	23	18.1	
Mothers employment status			
Full time	75	59.1	
Part time /casual	39	30.7	
Student	13	10.2	
**SEIFA quintiles			
Quintile 1(most disadvantaged)	48	37.8	
Quintile 2	10	7.9	
Quintile 3	21	16.5	
Quintile 4	27	21.3	
Quintile 5 (least disadvantaged)	21	16.5	
Education status			
Bachelor degree /higher	54	42.5	
Diploma/Certificate	41	32.3	
Year 12 or below	32	25.2	
Country of birth			
Australia	119	93.7	
Overseas	8	6.3	

**Previoulsy breastfeed: any breastfeeding irrespective of length of time (hours, days, weeks or months) ** SEIFA quintiles: Socio Economic Index for Areas*

Instrumental: ††vaginal delivery by forceps or ventouse. †Caesarean: combined emergency and elective caesarean delivery! #Multiple birth =x6 twin x1 triplet.

Table 2. Characteristics of the children (n=133) whose mother participated in 22 FGs and 19 interviews. Values are in n(%) mean ± standard deviation(SD).

Child Characteristics	***n***	**(%)**	**Mean ± SD**
Initiated breastfeeding at birth	129	97.0	
Gender			
Male	67	50.8	
Age groups (to completed months)			12.2 ± 8.6
0-6	35	26.3	
7-12	45	33.8	
13 -18	28	21.1	
19≥	25	18.8	
Birth weight (grams)			3284 ± 689.2
≤2499g	18	13.5	
≥2500g	115	86.5	
Gestational age at birth (weeks)			38.7 ± 2.4
[+]Preterm	23	17.3	
[++]Term	110	82.7	
Place of birth			
Public hospital	84	63.2	
Private hospital	49	36.8	
Type of birth			
Vaginal	70	52.6	
[††] Instrumental	19	14.3	
[†]Caesarean	44	33.1	
Singletons	120	90.2	
[$]Multiples (twin/triplet)	13	9.8	
[*]Current feeding method			
[**]Exclusive breastfeeding	17	12.8	
Infant formula milk	14	10.5	
Breast milk & infant formula milk (includes [***]EBM)	7	5.3	
Family foods & breast milk (includes EBM)	37	27.8	
Family foods & other milk/fluids (includes infant formula)	58	43.6	

+Preterm: born at less than 36 6/7 completed weeks gestation ++Term: born on or greater than 37 0/7 completed weeks gestation.**24** †† Instrumental: vaginal delivery by forceps or ventouse. †Caesarean: combined emergency and elective caesarean delivery! $ sets of; twins =5 / triplet =1

*Self-reported data at the time of the FG/interview; based on the previous 24 hours. Initiated breastfeeding: breastfed at the breast or received colostrum. **Exclusive breastfeeding: breast milk only no other foods or fluids with the exception of vitamins, oral rehydration solutions. ***EBM: expressed breast milk **22**

Valuing to breastfeed and cessation

In this study 94% of women reported that they had intended to breastfeed prior to birth, with the majority (97%) initiating breastfeeding at and around the time birth. Women expressed their desire to "just breastfeed" and conceptualized this as feeding directly from the breast because it

was "more natural." Overall irrespective of age and social-economic status women highly valued breastfeeding and breastmilk above other milks or methods (expressing, bottle/formula milks),

> Well, I'm obviously breastfeeding and picked it because of everything that I've read about it being healthy, economical, the bonding, the portability, "have boob, will travel" and it will stay warm and clean, and all those sorts of things, so it just seemed like the natural thing to do. (Elinore, 30)

Women often used normative language when talking about breastfeeding, formula and cessation; healthy, unhealthy, best, natural, "a god given right" and "the right thing to do," unnatural, failure, wrong, bad mother. They did not question the value or their choice to breastfeed, instead they accepted breastfeeding as their biological and personal right. Chelsea (26) mused "I don't know where that comes from, but that's the kind of expectation you have… it's what we are made to do." For women who did not want to breastfeed like Jane (20), the nutritional and social value attached to breastfeeding and breastmilk was a powerful motivator in directing her feeding practices, I didn't really want to but I intended to breastfeed anyway because I knew the benefits of it." (Ella, 20) These conscious and unconscious values and beliefs appeared underpin women's preferences their deep desire to feed directly from the breast and perceived need to avoid formula milks.[25]

Endurance; resources

In our analysis the term endurance refers to the pressure women felt and put themselves under to breastfeed and avoid formula milk, and the resources they employed to mitigate this burden. Across the social spectrum and irrespective of their feeding intention women referred to using

formula, citing that they "had to give in"—use formula milk at some stage during their breastfeeding experience. Fiona, a mother of two who had breast and formula fed both her children until they were four months of age recalled that "it's harder than it looks…you think it's just going to happen, that you will just pop the baby on, but breastfeeding is bloody hard work." (Fiona, 28) Similarly, Harper (29) stated,

> Everybody before, when you're pregnant, only tells you all the good things about breastfeeding and why you should breastfeed but nobody actually, well, I didn't find anyone . . . talked about how hard and how painful it was going to be. And then the only advice I could get from people was "just keep going, just keep going, just keep going." (Harper, 29)

The participant's desperate accounts of personal endurance "to get through it [breastfeeding]" included narratives about facing physical, personal and social battles. As reported elsewhere[16] women in this study described suffering through multiple issues such as pain, low supply feelings of immorality, failure, loneliness and isolation in the effort to keep breastfeeding. Mothers breastfed through "torn and bleeding nipples," expressed for 4, 6, 9 months to "just keep going a little longer," and "just to give him a little breast milk." Many also breastfed despite experiencing shaming for breastfeeding. For example, being told that breastfeeding was dirty and disgusting and that they should "to do that [breastfeed] in private" or cover up.

Conversely, some mothers spoke about times when they had used a bottle to feed with breastmilk and strangers had asked them why they were not breastfeeding. In the following example Mary (30) describes to her distress at not being able to do what is she felt was "natural and right" demonstrating the stigma felt by many participants because they were "not breastfeeding."

> I just wanted to always breastfeed and I'm devastated that I can't and now I'm a bad mother because I can't do something that is natural. (Mary, 30)

Infant feeding is a complex moral and physical enterprise that places a variety of demands on mothers.[26] In response mothers appear to employ multiple resources such as bottles and teats, dummies, expressing pumps, and medications including natural therapies to keep breastfeeding and avoid formula milk. Simultaneously many women also deployed trusted social capital[27 28] (resources) often in the form of fathers as a source of emotional and physical support, citing their relief that "he [father of the child] could feed the baby with expressed breastmilk so I could rest and make milk." (Lee, 28) These forms of social capital/resources allowed women to exchange[27] their physical labour[29] of making milk and breastfeeding. Indeed, having the father of the child at hand to take over, to encourage "tell me keep going," " just be there to keep me sane" appeared to offer unwavering support and reassurance "when it [breastfeeding] got too much." (Jenna, 32) For those women who did not have a partner in their lives (19%), mothers and other family members, female friends acted as moral and physical supports. Generally using resources such as dummies, teats, bottles and intimate partners (father of the child) were felt to be essential in helping mothers negotiate the complex processes of infant feeding/breastfeeding.

Other supports such as health professionals (midwives, doctors, nurses) were frequently perceived and experienced as either instructing women to try various techniques (expressing, positioning and attachment, medications including homeopathic remedies) or discordant. Many women in the study described health professionals as "annoying because they kept telling me what to do…like grabbing my boob and telling me something different all the time." (Peta, 25) This was particularly noticeable amongst women aged <24 years who felt they could not trust, or

felt that they were not trusted by health professionals to feed their babies. Women throughout the study repeatedly voiced their anger at being asked by health professionals if they were breastfeeding and the frequency of confusing and conflicting advice,

> Everyone kept asked me are you breastfeeding? I wanted to breastfeed...I initially started with breastfeeding, but I had the worst delivery, and I got problems, I saw loads different health professionals—doctors, midwives, nurses, which was really confusing. They didn't trust me and I didn't trust them. I wasn't able to breastfeed her, so I put her on formula, and now she's on solids and bottles. (Clare, 22)

Grief; a sense of failure

The theme Grief explores the way that mothers spoke about a prolonged sense of loss, sense of failure, shame and anguish, and the tension between their deep individual desire to breastfeed and the ensuing reality; exit from breastfeeding through the use of formula milk. Overwhelmingly women felt they failed themselves, were judged as "bad" "dirty" or "naughty" mothers who put their baby at risk because they could not—as Elizabeth (30) reflected "do what women have been doing . . . for so long: breastfeed,"

> The first time, it's [using formula] very hard to say "I can't do this, I'm a failure" basically, that's what you feel, you feel like "I should be able to do it [breastfeed]." Because, we've been told, or had the feeling that it should [be] and is natural. (Hannah, 40)

Participants across the age groups often struggled to resolve the inner conflict between something they valued and that was "meant to be so natural" and "not being able to feed my

own baby." (Sophie, 30) Many appeared to be grieving saying repeatedly "I just wanted to breastfeed." Concurrently, women often acknowledged the practical need for formula "to feed him so he wouldn't starve." (Caitlyn, 21) Feelings of internal crisis and "anti-formula" resonated with other women's stories of confusion, and feelings of personal and moral crisis and shame. Subsequently there was a strong sense of failure and immorality around formula use likened to "doing something wrong like unprotected sex." (Kate, 24)

It was clear from the women experiences that formula had a strong physical and social presence. Referred to as "always in the back ground" the use of formula was felt to physically replace their milk and breasts and in turn replace their role as a mother by making them as Anna (30) said "redundant—and now I'm no longer a good mother." Women struggled to make sense of this tension and mourned the loss of being necessary citing as Petra (30) did, "I'm just not needed anymore." Evie (24) who had been "struggling with breastfeeding," reflected on her experience of introducing one bottle of formula to her baby who was 4 weeks of age. She had been advised by a health professional that she "didn't have to endure it [breastfeeding] or do this to herself,"

> I felt a bit redundant. You don't need me anymore . . . it's your milk in there and stuff but it's just, I don't know. I don't think you can put it into words really because you just don't have that, I guess it's that closeness that you're missing out on, that precious little time that you have where they're feeding and they can look at you and when someone else is doing it it's like, "well, no, that's my little thing with them," I think, and it's that sort of 'someone else is taking over that role. (Evie, 24)

Coupled with a loss was a deep and penetrating sense of guilt and shame. Elisa (28), shared that after attempting to breastfeed each of her three children and then stopping at three weeks due to intense pain and low milk supply that "the guilt is huge, and I live with it each day especially when I look at them." Similarly, in the following quote, Samantha (30) a mother of two who had been persevering with breastfeeding through mastitis, and cracked and painful nipples talks of her grief,

> So many people said to me "why are you still going? You don't have to go through this, you can just stop, you can bottle-feed your baby, it's fine," but like I say, I think it's just that . . . it's something that you always imagined you'd do and you think it's . . . well it is the best thing for your baby and you romanticise this beautiful idea about this breastfeeding relationship with your baby, and it's just so much to let go. I think there was a whole grieving process for me around that, around letting go of that dream of this lovely relationship that's going to happen. So then when she was about six weeks old it got to the point, we were just doing breastfeeding in the morning and it just got to the point where she'd just latch on and just look at me like "what are we doing?" There's not enough going on here, so I just stopped. I think by the time it came to actually stopping, I had grieved and grieved about the whole process and I was actually quite relieved in the end just to go OK, that whole entire thing is just over.. . . I had six months to mourn the whole thing by that point so I was quite relieved actually when that last breastfeed ended. (Samantha, 30)

As the quote suggests women struggled with their expectations of breastfeeding and the reality of cessation and moving between two mutually exclusive roles "breast-feeder" and "formula-feeder."

DISCUSSION

This paper draws on a large and diverse sample of women to provide in-depth, rich and highly personal accounts of their experiences of breastfeeding/formula feeding and cessing to breastfeed. Our finding that the majority of women set out (have the intention) to breastfeed yet use formula milk whilst breastfeeding is consistent with national and global trends, revealing a high breastfeeding intention and initiation followed by an exit from exclusive and any breastfeeding through increasing formula use.[2 6 8] Our study shows that this trend is underpinned by women's desire to "just breastfeed;" embodied as a deeply held natural desire and something that reflects the notion that natural is equal to good mothering.[26 30 31] Consequently, when breastfeeding is interrupted mothers marginalise themselves as unnatural, dirty and immoral because they and their bodies do not conform to the social, public health and cultural ideals of "good" motherhood.[32-35] As others have suggested the public health promotional campaigns promoting exclusive breastfeeding establish an ideal and principle about what is healthy and best practice.[36] For women however this generates tension between the expectation to breastfeed (best and natural) and reality of cessation (bad and immoral),[36 37] resulting in prolonged feelings of anxiety and grief; which we suggest is "breastfeeding grief" a potential mental health issue for women. Further research to explore this phenomena is needed.

A limitation of the study is the non-representativeness of the data. Many mothers in the study relied on their memories of their experiences. To address this studies that engage with mothers/fathers/intimate partners at multiple time points are recommended. Our purposive sampling allowed us to deliberately seek and include women who would normally not self-select such as younger women <24 years who made up 50% of the sample. This data would lend itself

to further analysis, a possible comparative analysis with the older and more socioeconomically advantaged women and follow up interviews in the future. We used the same interview guide, a common code book and coding cross-checks to improve standardization and interpretation of our results.[18] In an area of research where survey and physiological research dominates, this study offers new understandings to how women conceptualise and experience breastfeeding/infant feeding and their exit from breastfeeding with the formula.

Both young and older women's experiences of cessation in this study were laced with feelings of loneliness, isolation, failure, and being morally judged.[25] [38] These negative experiences were exacerbated by the lack of—and at times absent—partner support, general public judgment, health professionals and conflicting advice and disrespect for the young mothers as a social group.[39] [40] [41] Collectively these have a detrimental impact on the mother, creating tension and confusion around infant feeding choices. For young mothers and some older women in this study, the use of formula was sometimes felt to be a "practical necessity" of needing to feed their dependent child. Happy to agree "to breastfeed" because it is "natural" initially young women struggle to continue to breastfeed because they may not have the social resources to support and sustain their choice.[42] What they do have was access to infant formula, that has now become a normalised alternative.[43] This helps to understand that the use of formula represents a pragmatic mercantile exchange (money for food) that was for many women in the study "a means to an end" — a well-fed baby. Despite the mothers wanting to and valuing breastfeeding, the value young mothers placed on making sure the baby was fed irrespective of the type of milk was an interesting finding as it suggest that within the social context of motherhood and being "young mum" a well fed baby offers greater social benefit than breastfeeding. This view helps

to theorise the documented breastfeeding disparities amongst younger women and those living in areas of social disadvantaged.[44]

Our finding that mothers used fathers as a form of social capital[27 45] (a resource that can be exchanged and used to benefit the mother) to help them navigate their breastfeeding experiences is consistent with other work, showing the positive effect fathers' support and involvement has on maternal wellbeing.[46] Indeed, breastfeeding is more likely to be sustained with intimate partner support and engagement, as father of the child offers a "bi-parental" approach in negotiating and managing care, and the feeding demands of the dependent child.[47] For many of the women in this study, feeling pressured, isolated, burdened by the demands of breastfeeding—"being the only one," and then the sense of failure (not breastfeeding/using formula) was often mitigated by a positive relationship with the father/partner. Indeed, cross-cultural evidence suggests that pair-bonding (intimacy of the relationship) is protective of continued breastfeeding.[47] This is an unexplored area in regards to breastfeeding and infant feeding in modern society, where the roles have been assigned to gender, biology and are skill-based.[26 33] For mothers who lack secure supportive relationships, as some did in this study or those whose partner preferred or were indifferent to bottle feeding, the risk of stopping and not breastfeeding is greater.[7] Here lies an opportunity for health policy and clinicians to increase the fathers' and family infant feeding knowledge though antenatal education, engaging both mother, father and extended family. The findings from this study highlight that the fathers' place in breastfeeding is poorly understood. Robust randomized controlled trials are need to provide evidence to inform family centered infant feeding/breastfeeding support strategies.

CONCLUSION

The exit from breastfeeding (cessation) through formula often results in feelings of prolonged grief and failure thus making it harmful to women's emotional wellbeing. Supporting fathers/partners to become collaborative breastfeeding/infant feeding partners and reframing breastfeeding as a family practice is essential to support women and prolong breastfeeding. Proactive counselling and debriefing are needed to assist women to manage feelings of loss and breastfeeding grief.

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Contributors

All authors were involved in the design of the study, the analysis of data and the writing and final editing of this manuscript. Authors 1, 2, and 3 conducted the FG/interviews with participants and had full access to all the data in the study, were responsible for the integrity of the data and the accuracy of the data analysis. Author 1 wrote the first draft of the paper, and all authors made important in contributions to the final manuscript.

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Conflict of Interest declaration:

There are no competing interests

Ethics approval

Ethics approval was obtained from the Tasmanian Social Science Ethics Committee (Ethics Ref No: H0011838).

A data sharing statement

Due to the nature of the data (audio recordings and transcripts) we are not able to share the raw data. We are able to share the de-identified transcripts to researchers for the purposes of further analysis and comparison or research translation.

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Figure legends

Figure 1. Derivation of the themes that emerged from the thematic analysis.

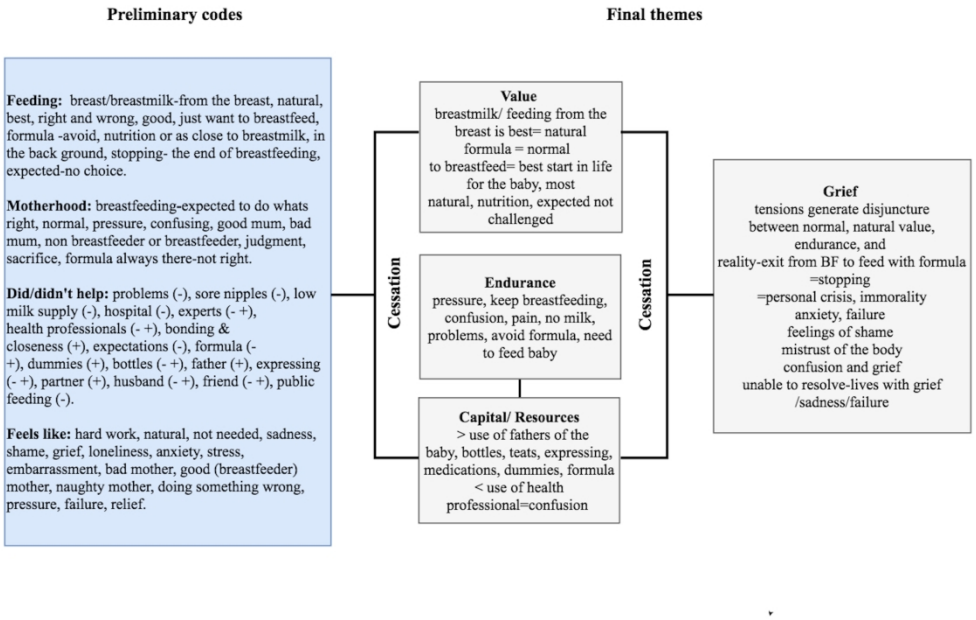

Figure 1. Derivation of the themes that emerged from the thematic analysis.

421x277mm (300 x 300 DPI)

Table 1

Consolidated criteria for reporting qualitative studies (COREQ): 32-item checklist

No	Item	Guide questions/description
Domain 1: Research team and reflexivity		
Personal Characteristics		
1.	Interviewer/facilitator	Which author/s conducted the interview or focus group? yes p 4,5
2.	Credentials	What were the researcher's credentials? *E.g. PhD, MD* yes title page
3.	Occupation	What was their occupation at the time of the study? yes p 5
4.	Gender	Was the researcher male or female? yes p 5 yes p 5
5.	Experience and training	What experience or training did the researcher have? Author 1, 2, 3 are all experienced in qualitative methods and published qualitative research
Relationship with participants		
6.	Relationship established	Was a relationship established prior to study commencement? no relationships established
7.	Participant knowledge of the interviewer	What did the participants know about the researcher? e.*g. personal goals, reasons for doing the research* the participants were informed about the purpose/ reasons for the research as per ethics approaval
8.	Interviewer characteristics	What characteristics were reported about the interviewer/facilitator? e.g. *Bias, assumptions, reasons and interests in the research topic* page 5, researchers experience / occupations
Domain 2: study design		
Theoretical framework		

Skip to Main Content

No	Item	Guide questions/description
9.	Methodological orientation and Theory	What methodological orientation was stated to underpin the study? *e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis* **Yes P7 Interpretivist methodology**
Participant selection		
10.	Sampling	How were participants selected? *e.g. purposive, convenience, consecutive, snowball* **p 3,4**
11.	Method of approach	How were participants approached? e.*g. face-to-face, telephone, mail, email* **p 3,4**
12.	Sample size	How many participants were in the study? **N=127 p 3-4 & 6**
13.	Non-participation	How many people refused to participate or dropped out? Reasons? **no drop outs and no refusals**
Setting		
14.	Setting of data collection	Where was the data collected? e.*g. home, clinic, workplace* **Multiple sites; community, homes- p 4-5**
15.	Presence of non-participants	Was anyone else present besides the participants and researchers? **the mothers child/children**
16.	Description of sample	What are the important characteristics of the sample? *e.g. demographic data, date* **Listed in tables 1, 2; . P 7, 8.**
Data collection		
17.	Interview guide	Were questions, prompts, guides provided by the authors? Was it pilot tested? **Yes; p 4,5**
18.	Repeat interviews	Were repeat interviews carried out? If yes, how many? **no repeat interviews .**
19.	Audio/visual recording	Did the research use audio or visual recording to collect the data? **Yes audio recorder**
20.	Field notes	Were field notes made during and/or after the interview or focus group? **Yes; p 5**
21.	Duration	What was the duration of the interviews or focus group? **1-2 hours**

No	Item	Guide questions/description
22.	Data saturation	Was data saturation discussed? Yes p 4
23.	Transcripts returned	Were transcripts returned to participants for comment and/or correction? No
Domain 3: analysis and findingsz		
Data analysis		
24.	Number of data coders	How many data coders coded the data? Three; all authors
25.	Description of the coding tree	Did authors provide a description of the coding tree? Yes; p 5
26.	Derivation of themes	Were themes identified in advance or derived from the data? Derived from the data Figure 1.
27.	Software	What software, if applicable, was used to manage the data? NVivo . P 5
28.	Participant checking	Did participants provide feedback on the findings? no
Reporting		
29.	Quotations presented	Were participant quotations presented to illustrate the themes / findings? Was each quotation identified? e.*g. participant number* Yes; p 9-14
30.	Data and findings consistent	Was there consistency between the data presented and the findings? themes underpin the data and findings presented . Figure 1 for the derivation and from p-9>
31.	Clarity of major themes	Were major themes clearly presented in the findings? Yes
32.	Clarity of minor themes	Is there a description of diverse cases or discussion of minor themes? Some description of age related diversity

BMJ Open

Women's experiences of ceasing to breastfeed; An Australian qualitative study

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ABSTRACT

Objective: To investigate mothers infant feeding experiences (breastfeeding/formula milk feeding) with the aim of understanding how women experience cessation of exclusive breastfeeding.

Design: Multi-method, qualitative study; questionnaire, focus groups and interviews.

Setting: Northern and southern Tasmania, Australia.

Participants: 127 mothers from a broad age and social demographic contexts completed a questionnaire and participated in 22 focus groups or 19 interviews across the north and south of Tasmania, 2011-2013.

Results: Mothers value breastfeeding but experience a tension between breastfeeding as "natural" and "best" and formula milk as "wrong" and "unnatural." In an effort to avoid formula and prolong exclusive breastfeeding mothers endure multiple issues (e.g. pain, low milk supply, mastitis, public shaming) and make use of various forms of social and physical capital; resources such as father/partner support, expressing breastmilk, bottles, and dummies to prolong breastfeeding. Overall cessation of exclusive breastfeeding was frequently experienced as unexpected and "devastating" leaving mothers with a prolonged sense of loss and failure; "breastfeeding grief."

Conclusions and implications: Cessation of exclusive breastfeeding results in lingering feelings of grief and failure making it harmful to women's emotional wellbeing. Reframing breastfeeding as a family practice where fathers/partners are incorporated as breastfeeding partners has the potential to help women negotiate and prolong breastfeeding. Proactive counselling and debriefing are needed to assist women to manage feelings of loss and "breastfeeding grief."

Key words: Breastfeeding, Cessation, Infant Formula, Qualitative Research, Mothers

ARTICLE SUMMARY

Strengths and limitations of this study

- This qualitative study was the first in Australia to explore a wide range of mothers' experiences, including 50% of women aged below 24 years of age and who were living in socioeconomic disadvantaged areas.
- In an area of research where survey and biological research dominates this study offers a new approach and greater insight into understanding cessation of exclusive breastfeeding from the mother's perspective.
- The multi method qualitative approach generated rich and highly complex perspectives about breastfeeding and cessation supporting the triangulation of the data.

INTRODUCTION

A recent Lancet[1] series demonstrates the public health imperative to promote and support breastfeeding as a social and cultural norm. However, despite the convincing evidence of the benefits of exclusive (where the child is only fed breastmilk/breastfed) and continued breastfeeding (any) for both mothers and their children,[2-4] few women fulfil their choice to breastfeed. In well-resourced countries such as Australia, the United Kingdom (UK) and the United states it is estimated that more children are now formula milk feed (exclusively and partially) than exclusively breastfed within their first 6 months of life.[2 5] Whilst 90% of Australian women choose to and initiate exclusive breastfeeding around the time of birth, 50% have stopped by the first two months.[6 7] In the UK, 69% of mothers initiate exclusive breastfeeding, and by six

weeks a quarter (23%) are continuing.[8] Victor et al,[2] cite that as few as 37% of infants are exclusively breastfed worldwide.

Cessation of exclusive breastfeeding occurs as a result of either partially or completely replacing breastfeeding or breastmilk feeding with formula milk feeding, or other fluids/foods. Our earlier analysis of the first Australian Institute of Health and Welfare (AIHW) first Australian National Infant Feeding (ANIFS) cross-sectional survey revealed a high prevalence of early cessation of exclusive breastfeeding within the first 6 months. The fathers infant feeding preference (formula or indifferent) maternal obesity (BMI>30) and regular dummy use increased the risk of cessation within the first 6 months.[7] Others have noted that maternal smoking, low maternal education levels, young mothers aged<24 years, mother returning to work within the first 13 weeks, preterm infant, and postnatal/perinatal depression are associated with not breastfeeding and cessation of any breastfeeding.[7 9-11]

Mothers make decisions about how to feed their babies based on a range of factors that may include past experiences, family history, social context and what they know and understand about infant feeding from public health promotion, nutritional and nurturing perspectives.[12-14] These decisions are also influenced knowingly or unknowingly by health promotion and public health campaigns such as the UNICEF Baby Friendly Hospital Initiative,[15] health professionals discourses[16] and by the mother's social, cultural, and political environments.[14] When the choice is made to breastfeed but breastfeeding ceases unexpectedly mothers are often left bereft and confused, citing feelings of failure.[17] Women have also described feeling relief and disconnectedness when they have chosen to not breastfeed.[16] To explore these issues in greater depth we undertook a qualitative study investigating mothers' infant feeding experiences

(breastfeeding/formula milk feeding) with the aim of understanding how women experience cessation of breastfeeding with formula milk in the context of their everyday lives. Our research contributes to informing preventative and appropriate context-based support strategies for mothers and their families.

METHODS

Design, setting, rational

The Tasmanian Infant Feeding (TIF) study was a state wide multi-method qualitative study[18] investigating the infant feeding practices of women whose infants were aged from 0 through to 36 months. A total of 22 focus groups (FG) and 19 semi-structured one to one interviews were conducted with mother/child dyads across the north and south of Tasmania, Australia, November 2011-March 2013. Mother/child demographic characteristics and feeding practices were collected using a questionnaire. Field notes were kept throughout the study. Ethics approval was obtained from the Tasmanian Social Science Ethics Committee (Ethics Ref No: H0011838).

Patient and Public Involvement

There was no patient or public involvement in setting the research agenda.

Sampling strategy and recruitment

Mothers who were aged over 16 years, with children aged 0-36 months were recruited from urban, rural, remote areas of Tasmania. A requirement of the funding body was that 50% of the sample should include women who lived in areas classified as socioeconomically disadvantaged SEIFA index ranks (1=most disadvantaged 5=least disadvantaged).[19] To attain a diverse sample, we recruited women using multiple techniques; purposeful and snowballing such as word-of-mouth, advertising and promoting the study within local newspapers, and flyers at community clinics and

hospitals, direct contact with mothers, health professionals, and young mothers and parenting support groups. Participants contacted the researchers using the advertised email address/phone number or via health professionals, support groups. Mothers could opt to participate in either FG's or a one to one interview within their community and venue of choice. Recruitment ended when we judged that both data saturation and the sampling requirements of the funding body had been met. Written informed consent was obtained from participants prior to commencing FG's and interviews.

Data collection

All data (demographic questionnaire and qualitative, field notes) were collected concurrently. Mother and child demographics and self-reported infant feeding practices were collected prior to the start of each FG/interview using a paper-based questionnaire. One researcher conducted the interviews (Author 1 or 2) and two researchers were present at each FG (Authors 1 and 2 or 3). An FG/interview topic guide with open ended prompts (tell us how you are feeding, tell us more about that? what helped; what didn't? tell us about stopping) was used to encourage and explore experiences and facilitate the consistency of the data collection.[20] The topic guide was initially piloted on one FG and one interview, and minor revisions were made. Field notes and a research log were kept, and all qualitative data were audio-recorded. Team debriefing occurred at the end of each FG/interview. Written notes taken at the debriefings were added to the field notes and used to verify, confirm and support the triangulation of the data.[20 21] Each participant received a $20.00 supermarket gift voucher in recognition of their time.

Data analysis

All qualitative data (FG, interviews, field notes) were analysed using an iterative thematic approach using a preliminary coding framework informed by the aims of the study and an

interpretivist qualitative methodology.[18 20] Demographic data were used to ensure an adequate variation within the sample[18] and analysed for frequencies and distributions using the statistical software Stata (v.14).[22] NVivo (v.10.2) was used to data manage; store and collate all qualitative data. Qualitative data were transcribed verbatim and checked against the audio recording for accuracy after each FG/interview by two researchers. Pseudonyms were used in the transcripts to maintain participant confidentiality. Three female researchers (Author's 1, 2, 3) with postgraduate qualifications in public health and midwifery, sociology and allied health analysed the transcripts using an iterative thematic analysis. Researchers read and reread the transcripts meeting weekly for 8 months to discuss and reflect on emerging patterns and themes from the data; first organising, summarising and coding the data into the four broad preliminary codes, then following an abductive process expanding and reducing themes with the relevant sources.[18] Three final themes were identified 'Valuing breastfeeding', 'Endurance' and 'Grief'. (Figure 1)

Validation and trustworthiness

All data (FG, interview transcripts, field notes) were linked to demographic data and used to cross check themes, sources, references support adequate participant representation and triangulation of the data.[21] Emerging data analysis/themes were also cross checked with different data sources (FG, interview, field notes). Text searches using the "query" option within NVivo verified the frequency of use and relevance of the concepts and themes. For example, transcripts were searched for commonly-used terms such as "best" and "formula" this help to verify that women used that term to explain why they preferred to breastfeed over formula feeding, and their use of formula. A research log recorded the coding process, ideas, questions, and reflections.[18 23]

Definitions

All infant feeding definitions were consistent with the World Health Organizations (WHO) indicators for assessing infant and young child feeding practices[24] and the Australian Institute of Health and Welfare (AIHW) National Infant Feeding Survey.[6] Exclusive breastfeeding refers to an infant who receives breast milk (including expressed breast milk or breast milk from a wet nurse) and allows oral rehydration solutions, drops, syrups vitamins, minerals, medicines, but nothing else. Breastfeeding (any) is where the infant receives breast milk (including expressed or from a wet nurse and food or liquid including non-human milk/formula.[24]

RESULTS

A total of 127 mothers participated in 22 FGs and 19 interviews across southern and northern Tasmanian between May 2011 and March 2013. (Tables 1&2) The mean age of the women was 29 years (SD 5.9), with 46% living in an area classified as most disadvantaged (SEIFA 1&2). A quarter (26%) of the children where aged less than 6 months at the time of the study. (Table 1&2) As women did not refer directly to "exclusive breastfeeding" as a way of feeding their children, and instead they spoke about "breastfeeding" "not breastfeeding" and "formula" feeding, this analysis describes the women's accounts of how they experienced breastfeeding and their use of formula milk in their day to day lives unless otherwise stated. Pseudonyms, participant ages are used to identify quotes. FG numbers are used to distinguish the source; all other quotes are derived from interviews.

Table 1. Characteristics of the mothers (N=127) who participated in the 22 FGs and 19 Interviews. Values are in n (%) mean ± standard deviation (SD)

Mothers Characteristics	n	(%)	Mean ± SD
Feeding preference before birth			
Breast	120	94.5	
Formula	7	5.5	
*Previously breastfed	57	44.9	
Maternal age (years)			29 ± 5.9
15-24	33	26.0	
25-29	30	23.6	
30-34	39	30.7	
35 or older	25	19.7	
Parity			2 ± 0.9
Pregnant at time of study	2	1.6	
One (given birth once)	6	4.7	
Two or more	119	93.7	
Method of delivery			
Spontaneous vaginal delivery	70	55.1	
††Assisted delivery	16	12.6	
†Caesarean (elective / emergency)	41	32.3	
Maternal smoking	24	18.9	
Living arrangements			
Living with father of the child (de-facto or married)	103	81.1	
Single parent	24	18.9	
Current Occupation			
Professional	40	31.5	
Clerical/Admin or Service/Sales	19	15.0	
Home duties /self employed	45	35.4	
Student or unemployed	23	18.1	
Mothers employment status			
Full time	75	59.1	
Part time /casual	39	30.7	
Student	13	10.2	
**SEIFA quintiles			
Quintile 1(most disadvantaged)	48	37.8	
Quintile 2	10	7.9	
Quintile 3	21	16.5	
Quintile 4	27	21.3	
Quintile 5 (least disadvantaged)	21	16.5	
Education status			
Bachelor degree /higher	54	42.5	
Diploma/Certificate	41	32.3	
Year 12 or below	32	25.2	
Country of birth			
Australia	119	93.7	
Overseas	8	6.3	

*Previoulsy breastfeed: any breastfeeding irrespective of length of time (hours, days, weeks or months) ** SEIFA quintiles: Socio Economic Index for Areas Instrumental: ††vaginal delivery by forceps or ventouse. †Caesarean: combined emergency and elective caesarean delivery! #Multiple birth =x6 twin x1 triplet.

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Table 2. Characteristics of the children (n=133) whose mother participated in 22 FGs and 19 interviews. Values are in n (%) mean ± standard deviation (SD).

Child Characteristics	*n*	(%)	Mean ± SD
Initiated breastfeeding at birth	129	97.0	
Gender			
Male	67	50.8	
Age groups (to completed months)			12.2 ± 8.6
0-6	35	26.3	
7-12	45	33.8	
13 -18	28	21.1	
19≥	25	18.8	
Birth weight (grams)			3284 ± 689.2
≤2499g	18	13.5	
≥2500g	115	86.5	
Gestational age at birth (weeks)			38.7 ± 2.4
+Preterm	23	17.3	
++Term	110	82.7	
Place of birth			
Public hospital	84	63.2	
Private hospital	49	36.8	
Type of birth			
Vaginal	70	52.6	
†† Instrumental	19	14.3	
†Caesarean	44	33.1	
Singletons	120	90.2	
$Multiples (twin/triplet)	13	9.8	
*Current feeding method			
**Exclusive breastfeeding	17	12.8	
Infant formula milk	14	10.5	
Breast milk & infant formula milk (includes ***EBM)	7	5.3	
Family foods & breast milk (includes EBM)	37	27.8	
Family foods & other milk/fluids (includes infant formula)	58	43.6	

+Preterm: born at less than 36 6/7 completed weeks gestation ++Term: born on or greater than 37 0/7 completed weeks gestation.25 †† Instrumental: vaginal delivery by forceps or ventouse. †Caesarean: combined emergency and elective caesarean delivery! $ sets of; twins =5 / triplet =1

*Self-reported data at the time of the FG/interview; based on the previous 24 hours. Initiated breastfeeding: breastfed at the breast or received colostrum. **Exclusive breastfeeding: breast milk only no other foods or fluids with the exception of vitamins, oral rehydration solutions. ***EBM: expressed breast milk 24

Valuing breastfeeding

In this study 94% of women reported that they had intended to breastfeed prior to birth, with the majority (97%) initiating breastfeeding at and around the time birth. Women expressed their desire to "just breastfeed" because it was "more natural" and conceptualized this as feeding directly from

the breast. Overall irrespective of age and social-economic status women valued breastfeeding and breastmilk above other milks or methods (expressing, bottle/formula milks),

> Well, I'm obviously breastfeeding and picked it because of everything that I've read about it being healthy, economical, the bonding, the portability, "have boob, will travel" and it will stay warm and clean, and all those sorts of things, so it just seemed like the natural thing to do. (Elinore, 30, FG 6)

Women throughout the study often used normative language when talking about breastfeeding, formula and cessation; healthy, unhealthy, best, natural, "a god given right" (Pricilla, 27, FG 3) and "the right thing to do," (Sally, 34) unnatural, failure, wrong, bad mother. When talking about breastfeeding participants did not differentiate between partial and any breastfeeding and made no reference to exclusivity as a type of breastfeeding. The women did not spontaneously use the term or discuss exclusive breastfeeding as a distinct way to feed their infants. The notion of exclusivity was rarely, if at all, talked about by the women without prompting from the researcher/facilitator of the groups. When completing the questionnaire and during the FGs/interviews women often asked, "what does exclusive mean . . . isn't that just breastfeeding?" (Anthia, 30 FG 8) Prompts such as "how does exclusive breastfeeding fit in?" or "what are your thoughts about exclusive breastfeeding?" produced responses such as "isn't it recommended that you feed them [babies] to 6 months?" (Lucy, 29)

Women did not question the value of breastfeeding or their choice to breastfeed, instead they accepted breastfeeding as their biological and personal right. Chelsea (26) mused "I don't know where that [need to breastfeed] comes from, but that's the kind of expectation you have… it's what

we are made to do." For women who were reluctant breastfeed like Jane (20), the nutritional and social value attached to breastfeeding and breastmilk was a powerful motivator in directing feeding practices; "I didn't really want to, but I intended to breastfeed anyway because I knew the benefits of it." These conscious and unconscious values and beliefs appeared underpin women's deep desire to feed directly from the breast and perceived need to avoid formula milks.[26]

Endurance

In our analysis the theme endurance refers to the pressure women felt and put themselves under to breastfeed and avoid formula milk, and the resources they employed to mitigate this burden. These resources are described as social and physical capital; resources that can be exchanged and used for personal or social benefit.[27]

Across the social spectrum and irrespective of their feeding intention when women referred to using formula, they described having to give in and use formula milk at some stage during their breastfeeding experience. Fiona (28), a mother of two who had breast and formula fed both her children until they were four months of age, recalled that "it's harder than it looks…you think it's just going to happen, that you will just pop the baby on, but breastfeeding is bloody hard work." Similarly, Harper (29) stated,

> Everybody before, when you're pregnant, only tells you all the good things about breastfeeding and why you should breastfeed but nobody actually, well, I didn't find anyone [who] talked about how hard and how painful it was going to be. And then the only advice I could get from people was "just keep going, just keep going, just keep going."

The participant's often desperate accounts of personal endurance "to get through it [breastfeeding]" (Sue, 36), included narratives about facing physical, personal and social battles. As reported elsewhere[16] women in this study described suffering through multiple issues such as pain, low supply feelings of immorality, failure, loneliness and isolation in the effort to keep breastfeeding. Mothers breastfed through torn and bleeding nipples, or expressed for 4, 6, 9 months to "just keep going a little longer and give him a little breast milk."(Wendy, 31) Many also breastfed despite being socially shamed for example, being told that breastfeeding was dirty and disgusting and that they should do that [breastfeed] in private or cover up.

Conversely, some mothers spoke about times when they had used a bottle to feed with breastmilk and strangers had asked them why they were not breastfeeding. In the following example Mary (30) describes her distress at not being able to do what she felt was "natural and right" demonstrating the stigma felt by many participants because they were not breastfeeding,

> I just wanted to always breastfeed, and I'm devastated that I can't and now I'm a bad mother because I can't do something that is natural.

Infant feeding is a complex moral and physical enterprise that places a variety of demands on mothers.[28] In response mothers appeared to employ multiple forms of social (kin, family, social groups) and physical (embodied skills and material) capital/resources.[27] These included consumables[26] such as bottles and teats, dummies, expressing pumps, and medications including natural therapies to help them negotiate breastfeeding and avoid formula milk. For example, Selina (21) used a combination of resources,

> She [the baby] would want to feed some days all day, sometimes use my breast like a dummy, and sometimes you needed a little break from it but she would just want to be on it all the time, so I put her on the dummy at three or four months, and sometimes used a bottle so my partner could help just to give myself a break.

Many women simultaneously also deployed trusted social capital[27 29] such as fathers as emotional and physical supports. Women spoke about their relief that "he [father of the child] could sometimes feed the baby with expressed breastmilk so I could rest and make milk." (Lee, 28) These forms of social capital allowed women to exchange[27] their physical labour[30] of making milk and breastfeeding. Indeed, having the father of the child at hand to take over, to encourage "tell me keep going," "just be there to keep me sane" (Tara, 23) or to offer unwavering support and reassurance "when it [breastfeeding] got too much" (Jenna, 32) seemed to be the most important resource available to many participants. For the 19% of women who did not have a partner in their lives, other family members, and female friends sometimes provided similar support. Overall, for women in this study using dummies, teats, bottles and intimate partners (father of the child) as social and physical capital was felt to be essential in helping them to negotiate the complex processes of infant feeding/breastfeeding.

Other supports such as health professionals (midwives, doctors, nurses) were frequently perceived and experienced as either instructing women to try various techniques (expressing, positioning and attachment, medications including homeopathic remedies) or confusing. Many women in the study described health professionals as "annoying because they kept telling me what to do…like grabbing my boob and telling me something different all the time." (Peta, 25) This narrative was particularly noticeable amongst women aged <24 years who felt they could not trust or felt that

they were not trusted by health professionals to feed their babies. Women throughout the study repeatedly voiced their anger at being asked by health professionals if they were breastfeeding and the frequency of confusing and conflicting advice,

> Everyone kept asked me are you breastfeeding? I wanted to breastfeed...I initially started with breastfeeding, but I had the worst delivery, and I got problems, I saw loads different health professionals—doctors, midwives, nurses, which was really confusing. They didn't trust me and I didn't trust them. I wasn't able to breastfeed her, so I put her on formula, and now she's on solids and bottles. (Clare, 22, FG 19)

Despite wanting to breastfeed and using social and physical capital, young (<24 years) and older mothers struggled to avoid formula milk while breastfeeding.

Grief

The theme grief explores the way that mothers spoke about cessation of exclusive breastfeeding and their prolonged sense of failure, loss, shame and anguish. Throughout the study women talked of their deep individual desire to breastfeed and the ensuing reality of cessation though the use of formula milk. Overwhelmingly women felt they had failed themselves, were judged as "bad" "dirty" or "naughty" mothers who put their baby at risk because they could not—as Elizabeth (30) reflected "do what women have been doing . . . for so long: breastfeed."

Throughout the study participants across the age groups struggled to resolve the inner conflict between what was "meant to be so natural" and "not being able to feed my own baby." (Sophie, 30) Many appeared to be grieving saying repeatedly "I just wanted to breastfeed." Concurrently, women acknowledged the practical need for formula "to feed him so he wouldn't starve." (Caitlyn,

21) Feelings of internal crisis and anti-formula resonated within stories of confusion, and feelings of personal and moral crisis and shame. Subsequently there was a strong sense of failure and immorality around formula use which was likened by Kate (24, FG 22) as "doing something wrong like unprotected sex."

It was clear from the data that formula had a strong physical and social presence in the mother's lives. Referred to as "always in the back ground" the use of formula was felt to physically replace their milk and breasts and in turn replace their role as a mother by making them as Anna (30) said "redundant—and now I'm no longer a good mother." Women struggled to make sense of this tension and mourned the loss of being necessary. Petra (30, FG 1) told us that "I'm just not needed anymore." Evie (24) from the same FG who had been "struggling with breastfeeding," reflected on her experience of introducing one bottle of formula to her baby who was 4 weeks of age. She had been advised by a health professional that she "didn't have to endure it [breastfeeding] or do this to herself,"

> I felt a bit redundant. You don't need me anymore . . . it's your milk in there and stuff but it's just, I don't know. I don't think you can put it into words really because you just don't have that, I guess it's that closeness that you're missing out on, that precious little time that you have where they're feeding and they can look at you and when someone else is doing it it's like, "well, no, that's my little thing with them," I think, and it's that sort of 'someone else is taking over that role.

Coupled with a loss was a deep and penetrating sense of guilt and shame. Elisa (28), shared that after attempting to breastfeed each of her three children and then stopping at three weeks due to intense pain and low milk supply that "the guilt is huge, and I live with it each day especially when

I look at them." Similarly, in the following quote, Samantha (30) a mother of two who had been persevering with breastfeeding through mastitis, and cracked and painful nipples talks of her grief,

> I think there was a whole grieving process for me around that, around letting go of that dream of this lovely relationship that's going to happen. So then when she was about six weeks old it got to the point, we were just doing breastfeeding in the morning and it just got to the point where she'd just latch on and just look at me like "what are we doing?" There's not enough going on here, so I just stopped. I think by the time it came to actually stopping I had grieved and grieved about the whole process and I was actually quite relieved in the end just to go OK, that whole entire thing is just over… I had six months to mourn the whole thing by that point so I was quite relieved actually when that last breastfeed ended.

As this quote illustrates women struggled with their expectations of breastfeeding and the reality of cessation and moving between two mutually exclusive roles a "breast-feeder" or "formula-feeder."

DISCUSSION

This paper draws on a large and diverse sample of women to provide in-depth, rich and highly personal accounts of their experiences of breastfeeding/formula feeding and ceasing to exclusively breastfeed. Our finding that the majority of women set out (have the intention) to breastfeed yet commonly use formula milk whilst breastfeeding is consistent with national and global trends, revealing a high breastfeeding intention and initiation followed by cessation of exclusive and any breastfeeding through increasing formula use.[2 6 8] Mothers in our study were unable to make sense of the use of formula milk while breastfeeding[31 32] and were often left

devastated with a prolonged "breastfeeding grief;" a sense of failure and grief which we view as a potential mental health issue for women.[33] In light of the prevalence of infant formula use, and its increasing dominance,[34] there is a need to explore the relationship between formula use during breastfeeding and maternal emotional health more closely. Proactive breastfeeding counselling and debriefing, and further research to explore this phenomenon are needed.

The tension that is generated between the deeply held desire to breastfeed (to do what is best/natural) and the unforeseen reality of cessation (immoral/bad) is concerning. Consistent with others work we suggest that mothers desire to just breastfeed (feed from the breast) is underpinned by an ideology that breastfeeding is equal to "good" and formula feeding "bad" mothering.[17 28 35-37] Consequently, when breastfeeding ceases through formula use, mothers experience a sense of failure and marginalise themselves as unnatural, dirty and immoral because they and their bodies do not conform to the social, public health and cultural ideals of "good" motherhood.[16 17 38-40] These social ideals are often imbedded within the public health campaigns and hospital practices that are perhaps out of step with what women do and understand as breastfeeding in their day to day lives and social contexts.[38 41 42] Indeed, mothers in our study did not understand the biomedical public health category "exclusive breastfeeding" as a way to feed their infants.[43] Instead they set out to just breastfeed. This helps to understand that the mothers desire to breastfeed is a deeply embodied social practice not simply a nutritional choice. There is also a need to re-evaluate policy and clinical practice in the way exclusive breastfeeding is promoted and translated to women and their families.

A limitation of the study is that many mothers relied on their memories of their experiences. To address this limitation future studies that engage with mothers/fathers/intimate partners at

multiple time points are recommended. Our purposive sampling allowed us to deliberately seek and include women who would normally not self-select such as younger women <24 years who made up 50% of the sample. This data would lend itself to further analysis, a possible comparative analysis with the older and more socioeconomically advantaged women and follow up interviews in the future. Inviting women to participate in either a FG or interview gave rich and highly complex perspectives and helped to triangulate the data.[21] We used the same interview guide, a coding framework and coding cross-checks to improve standardization and interpretation of our results.[18]

Understanding the supports mothers use while negotiating breastfeeding and cessation is important. An interesting finding from this study was that women used their social and physical capital [27 44] to endure/persevere through common feeding problems (such as pain, public shaming, low milk supply) whilst trying to avoid formula milk and prolong breastfeeding. Women frequently talked of how they relied on the father of the child to help them navigate their breastfeeding and cessation. Consistent with other research mothers often combined physical capital such as expressing breastmilk, bottles and dummies with social capital (fathers and other family/friends) relieve them of the intensity of feeding and mothering.[47] Although problematic because of the association with cessation of exclusive breastfeeding[7] and breastfeeding problems[45] bottles and dummies appear to be everyday tools that mothers use to help them negotiate breastfeeding and cessation. Conversely, social capital such as fathers or other family/social supports have been shown to have a positive effect on prolonging breastfeeding[46] and supporting maternal wellbeing.[47-49 50 51] Indeed mothers are less likely to use formula at one and 6 months when fathers are provided with support and education about exclusive breastfeeding during the antenatal period.[52] Here lies an opportunity for health policy and

clinicians to reframe breastfeeding as a family practice with fathers/intimate partners and extended family as collaborative partners and resources for mothers.[53] Robust studies are needed to provide evidence to inform family centered infant feeding/breastfeeding support and education strategies.

CONCLUSION

The cessation of exclusive breastfeeding through formula often results in feelings of prolonged grief and failure, making it potentially harmful to women's emotional wellbeing. Supporting fathers/intimate partners to become collaborative breastfeeding/infant feeding partners and reframing breastfeeding as a family practice may support women and prolong breastfeeding. Proactive counselling and debriefing are needed to assist those women who are experiencing feelings of loss and breastfeeding grief.

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Contributors

JA & EH designed the study. JA & LT conducted 90% of the FG/interviews/field notes with participants and collected the data. All authors and had full access to all the data, were responsible for the integrity of the data and were involved in the analysis and interpretation of the data. JA took the lead in writing the manuscript. Both LT & EH provided critical feedback and editing to the final version of the manuscript.

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Conflict of Interest declaration:

There are no competing interests

Ethics approval

Ethics approval was obtained from the Tasmanian Social Science Ethics Committee (Ethics Ref No: H0011838).

A data sharing statement

Due to the nature of the data (audio recordings and transcripts) we are not able to share the raw data. We are able to share the de-identified transcripts to researchers for the purposes of further analysis and comparison or research translation.

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Figure legends

Figure 1. Derivation of the themes that emerged from the thematic analysis.

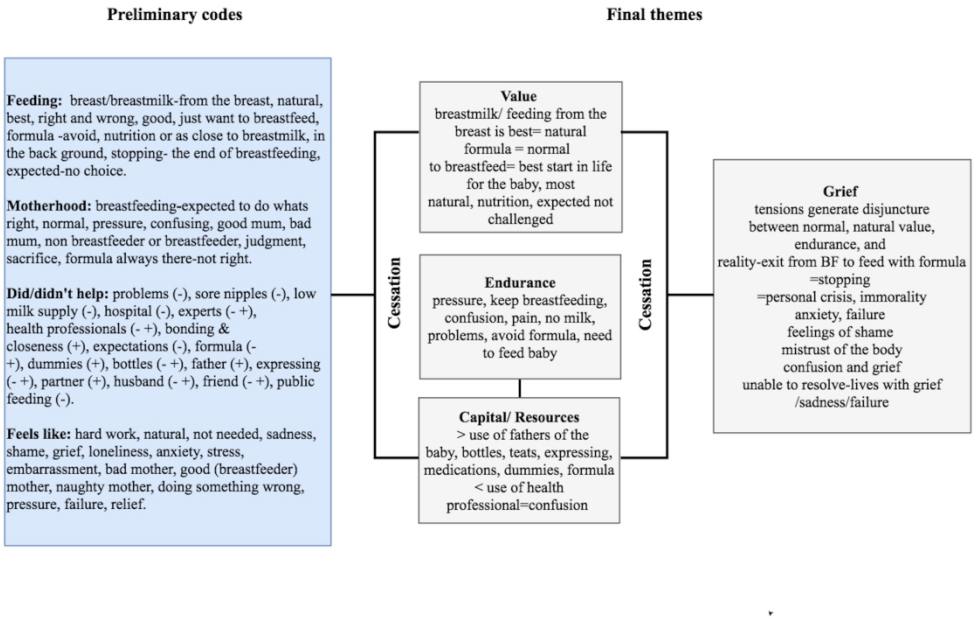

Figure 1. Derivation of the themes that emerged from the thematic analysis.

421x277mm (300 x 300 DPI)

Table 1

Consolidated criteria for reporting qualitative studies (COREQ): 32-item checklist

No	Item	Guide questions/description
Domain 1: Research team and reflexivity		
Personal Characteristics		
1.	Interviewer/facilitator	Which author/s conducted the interview or focus group? yes p 4,5
2.	Credentials	What were the researcher's credentials? *E.g. PhD, MD* yes title page
3.	Occupation	What was their occupation at the time of the study? yes p 5
4.	Gender	Was the researcher male or female? yes p 5 yes p 5
5.	Experience and training	What experience or training did the researcher have? Author 1, 2, 3 are all experienced in qualitative methods and published qualitative research
Relationship with participants		
6.	Relationship established	Was a relationship established prior to study commencement? no relationships established
7.	Participant knowledge of the interviewer	What did the participants know about the researcher? e.*g. personal goals, reasons for doing the research* the participants were informed about the purpose/ reasons for the research as per ethics approaval
8.	Interviewer characteristics	What characteristics were reported about the interviewer/facilitator? e.g. *Bias, assumptions, reasons and interests in the research topic* page 5, researchers experience / occupations
Domain 2: study design		
Theoretical framework		

Skip to Main Content

No	Item	Guide questions/description
9.	Methodological orientation and Theory	What methodological orientation was stated to underpin the study? *e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis* **Yes P7 Interpretivist methodology**
Participant selection		
10.	Sampling	How were participants selected? *e.g. purposive, convenience, consecutive, snowball* **p 3,4**
11.	Method of approach	How were participants approached? e.*g. face-to-face, telephone, mail, email* **p 3,4**
12.	Sample size	How many participants were in the study? **N=127 p 3-4 & 6**
13.	Non-participation	How many people refused to participate or dropped out? Reasons? **no drop outs and no refusals**
Setting		
14.	Setting of data collection	Where was the data collected? e.*g. home, clinic, workplace* **Multiple sites; community, homes- p 4-5**
15.	Presence of non-participants	Was anyone else present besides the participants and researchers? **the mothers child/children**
16.	Description of sample	What are the important characteristics of the sample? *e.g. demographic data, date* **Listed in tables 1, 2; . P 7, 8.**
Data collection		
17.	Interview guide	Were questions, prompts, guides provided by the authors? Was it pilot tested? **Yes; p 4,5**
18.	Repeat interviews	Were repeat interviews carried out? If yes, how many? **no repeat interviews .**
19.	Audio/visual recording	Did the research use audio or visual recording to collect the data? **Yes audio recorder**
20.	Field notes	Were field notes made during and/or after the interview or focus group? **Yes; p 5**
21.	Duration	What was the duration of the interviews or focus group? **1-2 hours**

No	Item	Guide questions/description
22.	Data saturation	Was data saturation discussed? Yes p 4
23.	Transcripts returned	Were transcripts returned to participants for comment and/or correction? No
Domain 3: analysis and findingsz		
Data analysis		
24.	Number of data coders	How many data coders coded the data? Three; all authors
25.	Description of the coding tree	Did authors provide a description of the coding tree? Yes; p 5
26.	Derivation of themes	Were themes identified in advance or derived from the data? Derived from the data Figure 1.
27.	Software	What software, if applicable, was used to manage the data? NVivo . P 5
28.	Participant checking	Did participants provide feedback on the findings? no
Reporting		
29.	Quotations presented	Were participant quotations presented to illustrate the themes / findings? Was each quotation identified? e.*g. participant number* Yes; p 9-14
30.	Data and findings consistent	Was there consistency between the data presented and the findings? themes underpin the data and findings presented . Figure 1 for the derivation and from p-9>
31.	Clarity of major themes	Were major themes clearly presented in the findings? Yes
32.	Clarity of minor themes	Is there a description of diverse cases or discussion of minor themes? Some description of age related diversity

BMJ Open

Women's experiences of ceasing to breastfeed; An Australian qualitative study

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ABSTRACT

Objective: To investigate mothers' infant feeding experiences (breastfeeding/formula milk feeding) with the aim of understanding how women experience cessation of exclusive breastfeeding.

Design: Multi-method, qualitative study; questionnaire, focus groups and interviews.

Setting: Northern and Southern Tasmania, Australia.

Participants: 127 mothers of childbearing age from a broad socio-demographic context completed a questionnaire and participated in 22 focus groups or 19 interviews across Tasmania, 2011-2013.

Results: Mothers view breastfeeding as "natural" and "best" and formula milk as "wrong" and "unnatural." In an effort to avoid formula and prolong exclusive breastfeeding, mothers will endure multiple issues (e.g. pain, low milk supply, mastitis, public shaming) and make use of various forms of social and physical capital; resources such as father/partner support, expressing breastmilk, bottles, and dummies. The cessation of exclusive breastfeeding was frequently experienced as unexpected and "devastating", leaving mothers with "breastfeeding grief" (a prolonged sense of loss and failure).

Conclusions and implications: For many mothers the cessation of exclusive breastfeeding results in lingering feelings of grief and failure making it harmful to women's emotional wellbeing. Reframing breastfeeding as a family practice where fathers/partners are incorporated as breastfeeding partners has the potential to help women negotiate and prolong breastfeeding. Proactive counselling and debriefing are needed to assist women who are managing feelings of "breastfeeding grief."

Key words: Breastfeeding, Cessation, Infant Formula, Qualitative Research, Mothers

ARTICLE SUMMARY

Strengths and limitations of this study

- This qualitative study was the first in Australia to explore the cessation experiences of women from varied socio-economic backgrounds. Women aged below 24 years of age who were living in socioeconomic disadvantaged areas comprised half the sample.
- In an area of research dominated by survey and biological research this qualitative study generated rich and highly complex perspectives about breastfeeding and cessation, facilitating increased understanding of the cessation of exclusive breastfeeding from the mother's perspective.
- The multi-method qualitative approach supported data triangulation.
- Although we draw from a large sample of women the findings cannot be extended to wider populations.

INTRODUCTION

A recent Lancet[1] series demonstrates the public health imperative to promote and support breastfeeding as a social and cultural norm. However, despite convincing evidence of the benefits of exclusive (where the child is only fed breastmilk/breastfed) and continued breastfeeding (any) for both mothers and their children,[2-4] few women fulfil their choice to breastfeed. In well-resourced countries such as Australia, the United Kingdom (UK) and the United States of America (USA) it is estimated that more children are now formula milk fed (exclusively and partially) than exclusively breastfed within their first 6 months of life.[2 5] Whilst 90% of Australian women choose to initiate exclusive breastfeeding around the time of birth, 50% have ceased by the first two

months.[6 7] In the UK, 69% of mothers initiate exclusive breastfeeding, and by six weeks only a quarter (23%) are continuing.[8] Victor et al,[2] cite that as few as 37% of infants are exclusively breastfed worldwide.

Cessation of exclusive breastfeeding occurs as a result of either partially or completely replacing breastfeeding or breastmilk feeding with formula milk feeding, or other fluids/foods.[7] Our earlier analysis of the first Australian Institute of Health and Welfare (AIHW) Australian National Infant Feeding (ANIFS) cross-sectional survey revealed a high prevalence of early cessation of exclusive breastfeeding within the first 6 months. Fathers' infant feeding preference (formula or indifferent), maternal obesity (BMI>30) and regular dummy use increased the risk of cessation within the first 6 months.[7] Others have noted that preterm infants, maternal smoking, low maternal education levels, young mothers aged<24 years, mother returning to work within the first 13 weeks, and postnatal/perinatal depression are associated with not breastfeeding and cessation of any breastfeeding.[7 9-11]

Mothers make decisions about how to feed their babies based on a range of factors that may include past experiences, family history, social context and what they know and understand about infant feeding from public health promotion, nutritional and nurturing perspectives.[12-14] These decisions are also influenced knowingly or unknowingly by health promotion and public health campaigns such as the UNICEF Baby Friendly Hospital Initiative,[15] health professionals discourses[16] and by the mother's social, cultural, and political environments.[14] When the choice is made to breastfeed but breastfeeding ceases unexpectedly, mothers are often left bereft and confused, citing feelings of failure.[17] Women have also described feeling relief and disconnectedness when they have chosen to not breastfeed.[16] To explore these issues in greater

depth we undertook a qualitative study investigating mothers' infant feeding experiences. Our aim was to understand how women experience the cessation of exclusive breastfeeding in the context of their everyday lives. Our research contributes to informing preventative context-based support strategies for mothers and their families.

METHODS

Design, setting, rationale

The Tasmanian Infant Feeding (TIF) study was a state wide multi-method qualitative study[18] investigating the infant feeding practices of women whose infants were aged from 0 through to 36 months. A total of 22 focus groups (FG) and 19 semi-structured one to one interviews were conducted with mother/child dyads across Tasmania, Australia, between November 2011 and March 2013. Mother/child demographic characteristics and feeding practices were collected using a questionnaire. Field notes were kept throughout the study. Ethics approval was obtained from the Tasmanian Social Science Ethics Committee (Ethics Ref No: H0011838).

Patient and Public Involvement

There was no patient or public involvement in setting the research agenda.

Sampling strategy and recruitment

Mothers who were aged over 16 years, with children aged 0-36 months were recruited from urban, rural and remote areas of Tasmania. A requirement of the funding body was that 50% of the sample should include women who lived in areas classified as socioeconomically disadvantaged using SEIFA index ranks (1=most disadvantaged 5=least disadvantaged).[19] To attain a diverse sample, we recruited women using purposeful and snowballing sampling and techniques such as word-of-mouth, promoting the study within local newspapers, flyers at community clinics and hospitals,

direct contact with mothers, health professionals, young mother forums and parenting support groups. Participants contacted the researchers using the advertised email address/phone number or via health professionals or support groups. Mothers could opt to participate in either a FG or a one to one interview held within their community and at a venue of their choice. Recruitment ended when we judged that both data saturation and the sampling requirements of the funding body had been met. Written informed consent was obtained from participants prior to commencing FGs and interviews.

Data collection

All data (demographic questionnaire, interview or FG and qualitative, field notes) were collected concurrently. Mother and child demographics and self-reported infant feeding practices were collected prior to the start of each FG/interview using a paper-based questionnaire. One researcher conducted the interviews (Author 1 or 2) and two researchers were present at each FG (Authors 1 and 2 or 3). A FG/interview topic guide with open ended prompts (tell us how you are feeding, tell us more about that? what helped; what didn't? tell us about stopping) was used to encourage and explore experiences and facilitate the consistency of the data collection.[20] The topic guide was initially piloted on one FG and one interview, and minor revisions were made. Field notes and a research log were kept, and all qualitative data were audio-recorded. Team debriefing occurred at the end of each FG/interview. Written notes taken at the debriefings were added to the field notes and used to verify, confirm and support the triangulation of the data.[20 21] Each participant received a $20.00 grocery food gift voucher in recognition of their time.

Data analysis

FG/Interview recordings were transcribed verbatim and checked against the audio recording for accuracy by two researchers. Pseudonyms were used in the transcripts to maintain participant

confidentiality. Demographic data were used to ensure an adequate variation within the sample[18] and analysed for frequencies and distributions using the statistical software Stata (v.14).[22] NVivo (v.10.2) was used to data manage; store and collate all data. Three female researchers (Author's 1, 2, 3) with postgraduate qualifications in public health and midwifery, sociology and allied health analysed the transcripts using an iterative thematic analysis. A preliminary coding framework was informed by the aims of the study and an interpretivist qualitative methodology.[18 20] Researchers read and reread the transcripts meeting weekly for 8 months to discuss and reflect on emerging patterns and themes from the data; first organising, summarising and coding the data into the four broad preliminary codes, then following an abductive process expanding and reducing themes with the relevant sources.[18] Three final themes were identified 'Valuing breastfeeding', 'Endurance' and 'Grief'. (Figure 1)

Validation and trustworthiness

All data (FG, interview transcripts, field notes) were linked to demographic data and used to cross check themes, sources and support adequate participant representation and triangulation of the data.[21] Emerging data analysis/themes were also cross checked with different data sources (FG, interview, field notes). Text searches using the "query" option within NVivo verified the frequency of use and relevance of the concepts and themes. For example, transcripts were searched for commonly-used terms such as "best" and "formula" to help verify that women used that term to explain why they preferred to breastfeed over formula feeding, and their use of formula. A research log recorded the coding process, ideas, questions, and reflections.[18 23]

Definitions

All infant feeding definitions were consistent with the World Health Organizations (WHO) indicators for assessing infant and young child feeding practices[24] and the Australian Institute of Health and Welfare (AIHW) National Infant Feeding Survey.[6] Exclusive breastfeeding refers to an "infant who receives breast milk (including expressed breast milk or breast milk from a wet nurse) and allows oral rehydration solutions, drops, syrups, vitamins, minerals, medicines, but nothing else". Breastfeeding (any) is "where the infant receives breast milk (including expressed or from a wet nurse and food or liquid including non-human milk/formula".[24]

RESULTS

A total of 127 mothers participated in 22 FGs and 19 interviews between May 2011 and March 2013. (Tables 1&2) The mean age of the women was 29 years (SD 5.9), with 46% living in an area classified as most disadvantaged (SEIFA 1&2). A quarter (26%) of the children where aged less than 6 months at the time of the study. (Table 1&2) As participants did not refer directly to "exclusive breastfeeding" as a way of feeding their children, and instead spoke about "breastfeeding" "not breastfeeding" and "formula" feeding, this analysis makes use of the participants' own terminology for describing breastfeeding and their use of formula milk in their day to day lives unless otherwise stated. Pseudonyms, and participant ages are used to identify interview extracts. FG numbers are used to distinguish the source; all other quotes are derived from interviews.

Table 1. Characteristics of the mothers (N=127) who participated in the 22 FGs and 19 Interviews. Values are in n (%) mean ± standard deviation (SD)

Mothers Characteristics	n	(%)	Mean ± SD
Feeding preference before birth			
Breast	120	94.5	
Formula	7	5.5	
*Previously breastfed	57	44.9	
Maternal age (years)			29 ± 5.9
15-24	33	26.0	
25-29	30	23.6	
30-34	39	30.7	
35 or older	25	19.7	
Parity			2 ± 0.9
Pregnant at time of study	2	1.6	
One (given birth once)	6	4.7	
Two or more	119	93.7	
Method of delivery			
Spontaneous vaginal delivery	70	55.1	
††Assisted delivery	16	12.6	
†Caesarean (elective / emergency)	41	32.3	
Maternal smoking	24	18.9	
Living arrangements			
Living with father of the child (de-facto or married)	103	81.1	
Single parent	24	18.9	
Current Occupation			
Professional	40	31.5	
Clerical/Admin or Service/Sales	19	15.0	
Home duties /self employed	45	35.4	
Student or unemployed	23	18.1	
Mothers employment status			
Full time	75	59.1	
Part time /casual	39	30.7	
Student	13	10.2	
**SEIFA quintiles			
Quintile 1(most disadvantaged)	48	37.8	
Quintile 2	10	7.9	
Quintile 3	21	16.5	
Quintile 4	27	21.3	
Quintile 5 (least disadvantaged)	21	16.5	
Education status			
Bachelor degree /higher	54	42.5	
Diploma/Certificate	41	32.3	
Year 12 or below	32	25.2	
Country of birth			
Australia	119	93.7	
Overseas	8	6.3	

*Previously breastfed: any breastfeeding irrespective of length of time (hours, days, weeks or months) ** SEIFA quintiles: Socio Economic Index for Areas Instrumental: ††vaginal delivery by forceps or ventouse. †Caesarean: combined emergency and elective caesarean delivery! #Multiple birth =x6 twin x1 triplet.

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Table 2. Characteristics of the children (n=133) whose mother participated in 22 FGs and 19 interviews. Values are in n (%) mean ± standard deviation (SD).

Child Characteristics	*n*	(%)	Mean ± SD
Initiated breastfeeding at birth	129	97.0	
Gender			
Male	67	50.8	
Age groups (to completed months)			12.2 ± 8.6
0-6	35	26.3	
7-12	45	33.8	
13 -18	28	21.1	
19≥	25	18.8	
Birth weight (grams)			3284 ± 689.2
≤2499g	18	13.5	
≥2500g	115	86.5	
Gestational age at birth (weeks)			38.7 ± 2.4
+Preterm	23	17.3	
++Term	110	82.7	
Place of birth			
Public hospital	84	63.2	
Private hospital	49	36.8	
Type of birth			
Vaginal	70	52.6	
†† Instrumental	19	14.3	
†Caesarean	44	33.1	
Singletons	120	90.2	
$Multiples (twin/triplet)	13	9.8	
*Current feeding method			
**Exclusive breastfeeding	17	12.8	
Infant formula milk	14	10.5	
Breast milk & infant formula milk (includes ***EBM)	7	5.3	
Family foods & breast milk (includes EBM)	37	27.8	
Family foods & other milk/fluids (includes infant formula)	58	43.6	

+Preterm: born at less than 36 6/7 completed weeks gestation ++Term: born on or greater than 37 0/7 completed weeks gestation.25 †† Instrumental: vaginal delivery by forceps or ventouse. †Caesarean: combined emergency and elective caesarean delivery! $ sets of; twins =5 / triplet =1

*Self-reported data at the time of the FG/interview; based on the previous 24 hours. Initiated breastfeeding: breastfed at the breast or received colostrum. **Exclusive breastfeeding: breast milk only no other foods or fluids with the exception of vitamins, oral rehydration solutions. ***EBM: expressed breast milk 24

Valuing breastfeeding

In this study 94% of women reported that they had intended to breastfeed prior to birth, with the majority (97%) initiating breastfeeding at and around the time of birth. Women expressed their desire to "just breastfeed" because it was "more natural" and conceptualized this as feeding directly

from the breast. Overall, irrespective of age and socio-economic status, women valued breastfeeding and breastmilk above other milks or methods (expressing, bottle/formula milks):

> Well, I'm obviously breastfeeding and picked it because of everything that I've read about it being healthy, economical, the bonding, the portability, "have boob, will travel" and it will stay warm and clean, and all those sorts of things, so it just seemed like the natural thing to do. (Elinore, 30, FG 6)

Throughout the study participants often used normative language when talking about breastfeeding, formula and cessation; for example, "healthy", "unhealthy", "best", "natural", "a god given right" (Pricilla, 27, FG 3) and "the right thing to do," (Sally, 34), "unnatural", "failure", "wrong" and "bad mother". The participants did not spontaneously use the term or discuss exclusive breastfeeding as a distinct way to feed their infants. The notion of exclusivity was rarely, if at all, talked about by the women without prompting from the researcher. When completing the questionnaire and during the FGs/interviews women often asked, "what does exclusive mean . . . isn't that just breastfeeding?" (Anthia, 30 FG 8) Prompts such as "how does exclusive breastfeeding fit in?" or "what are your thoughts about exclusive breastfeeding?" produced responses such as "isn't it recommended that you feed them [babies] to 6 months?" (Lucy, 29)

Women did not question the value of breastfeeding or their choice to breastfeed, instead they accepted breastfeeding as their biological and personal right. Chelsea (26) mused "I don't know where that [need to breastfeed] comes from, but that's the kind of expectation you have… it's what we are made to do." For the small number of women who were reluctant to breastfeed like Jane

(20), the nutritional and social value attached to breastfeeding and breastmilk was a powerful motivator in directing feeding practices; "I didn't really want to, but I intended to breastfeed anyway because I knew the benefits of it." These values and beliefs appeared to underpin women's deep desire to feed directly from the breast and perceived need to avoid formula milks.[26]

Endurance

In our analysis the theme endurance refers to the pressure women felt and put themselves under to breastfeed and avoid formula milk, and the resources they employed to mitigate this burden. These resources include social and physical capital; resources that can be exchanged and used for personal or social benefit.[27]

Across the socio-economic spectrum and irrespective of their feeding intention when women referred to using formula, they described having to "give in" and use formula milk. Fiona (28), a mother of two who had used a combination of breast and formula milk to feed both her children until they were four months of age, recalled that "it's harder than it looks…you think it's just going to happen, that you will just pop the baby on, but breastfeeding is bloody hard work." Similarly, Harper (29) stated:

> Everybody before, when you're pregnant, only tells you all the good things about breastfeeding and why you should breastfeed but nobody actually, well, I didn't find anyone [who] talked about how hard and how painful it was going to be. And then the only advice I could get from people was "just keep going, just keep going, just keep going."

The participants often described desperate sounding accounts of personal endurance "to get through it [breastfeeding]" (Sue, 36). These included narratives about facing physical, personal

and social battles. As previously reported elsewhere[16] women in this study described suffering through multiple breastfeeding issues such as pain, low supply, feelings of immorality, failure, loneliness and isolation in the effort to keep breastfeeding. Mothers breastfed through torn and bleeding nipples, or expressed for 4, 6, 9 months to "just keep going a little longer and give him a little breast milk."(Wendy, 31) Some also breastfed despite being socially shamed, for example, being told that breastfeeding was "dirty" and "disgusting" and that they "should do that [breastfeed] in private or cover up". (Tammie, 23)

Conversely, some mothers spoke about times when they had used a bottle to feed with breastmilk and strangers had asked them why they were not breastfeeding. In the following example Mary (30) describes her distress at not being able to do what she felt was "natural and right" demonstrating the stigma felt by many participants because they were not breastfeeding:

> I just wanted to always breastfeed, and I'm devastated that I can't and now I'm a bad mother because I can't do something that is natural.

Infant feeding is a complex moral and physical enterprise that places a variety of demands on mothers.[28] In response mothers appeared to employ multiple forms of social (kin, family, social groups) and physical (embodied skills and material) capital/resources.[27] These included consumables[26] such as bottles and teats, dummies, expressing pumps, and medications including natural therapies to help them negotiate breastfeeding and avoid formula milk. For example, Selina (21) used a combination of resources:

> She [the baby] would want to feed some days all day, sometimes use my breast like a dummy, and sometimes you needed a little break from it but she would just want to be on

it all the time, so I put her on the dummy at three or four months, and sometimes used a bottle so my partner could help just to give myself a break.

Many women simultaneously deployed trusted social capital[27 29] such as the father of the infant as emotional and physical supports. Women spoke about their feelings of relief that "he [the father of the child] could sometimes feed the baby with expressed breastmilk so I could rest and make milk." (Lee, 28) These forms of social capital allowed women to exchange[27] their physical labour[30] of making milk and breastfeeding. Indeed, having the father of the child at hand to take over, to encourage "tell me keep going," "just be there to keep me sane" (Tara, 23) or to offer unwavering support and reassurance "when it [breastfeeding] got too much" (Jenna, 32) seemed to be the most important resource available to many participants. For the 19% of women who did not have a partner in their lives, other family members, and female friends at times provided similar support. For women in this study using dummies, teats, bottles and intimate partners (father of the child) as social and physical capital was described as being essential in helping them to negotiate the complex processes of infant feeding/breastfeeding. Despite wanting to breastfeed and using social and physical capital, young (<24 years) and older mothers struggled to avoid formula milk while breastfeeding.

Other forms of support such as consulting with health professionals (midwives, doctors, nurses) were frequently described as being less important. They were commonly experienced as either being instructed to try various techniques (expressing, positioning and attachment, medications including homeopathic remedies) or as confusing. Many women in the study described health professionals as "annoying because they kept telling me what to do…like grabbing my boob and telling me something different all the time." (Peta, 25). This narrative was particularly noticeable

amongst women aged <24 years who felt that they were not trusted to feed their babies by health professionals. These younger mothers also seemed less likely to describe trusting health professionals. Women throughout the study repeatedly voiced their anger at being asked by health professionals if they were breastfeeding and the frequency of confusing and conflicting advice:

> Everyone kept asked me are you breastfeeding? I wanted to breastfeed...I initially started with breastfeeding, but I had the worst delivery, and I got problems, I saw loads different health professionals—doctors, midwives, nurses, which was really confusing. They didn't trust me and I didn't trust them. I wasn't able to breastfeed her, so I put her on formula, and now she's on solids and bottles. (Clare, 22, FG 19)

Grief

The theme grief explores the way mothers spoke about the cessation of exclusive breastfeeding and their prolonged sense of failure, loss, shame and anguish. Throughout the study women described their deeply felt desire to breastfeed and the ensuing shock and sadness associated with cessation though the use of formula milk. Overwhelmingly women described feeling as though they had failed themselves, were judged as "bad" "dirty" or "naughty" mothers who put their baby at risk because they could not—as Elizabeth (30) reflected "do what women have been doing . . . for so long: breastfeed."

Throughout the study participants across the age groups struggled to resolve the inner conflict between what was "meant to be so natural" and "not being able to feed my own baby." (Sophie, 30). Women acknowledged the practical need for formula "to feed him so he wouldn't starve." (Caitlyn, 21). However, there was a strong sense of failure and immorality associated with formula use which was likened by Kate (24, FG 22) as "doing something wrong like unprotected sex". It

was clear from the data that formula had a strong physical and social presence in the mother's lives: referred to as "always in the back-ground" the use of formula was felt to physically replace their milk and breasts and in turn replace their role as a mother by making them as Anna (30) said "redundant—and now I'm no longer a good mother."

Women struggled to make sense of this tension and mourned the loss of being necessary. Petra (30, FG 1) told us that "I'm just not needed anymore." Evie (24) from the same FG who had been "struggling with breastfeeding," reflected on her experience of introducing one bottle of formula to her baby who was 4 weeks of age. She had been advised by a health professional that she "didn't have to endure it [breastfeeding] or do this to herself:"

> I felt a bit redundant. You [the baby] don't need me anymore . . . it's your milk in there and stuff but it's just, I don't know. I don't think you can put it into words really because you just don't have that, I guess it's that closeness that you're missing out on, that precious little time that you have where they're feeding and they can look at you and when someone else is doing it it's like, "well, no, that's my little thing with them," I think, and it's that sort of 'someone else is taking over that role.

Coupled with a loss was a deep and penetrating sense of guilt and shame. Elisa (28), shared that after attempting to breastfeed each of her three children and then stopping at three weeks due to intense pain and low milk supply "the guilt is huge, and I live with it each day especially when I look at them." Similarly, in the following quote, Samantha (30) a mother of two who had been persevering with breastfeeding through mastitis, and cracked and painful nipples described her feelings of her grief:

> I think there was a whole grieving process for me around that, around letting go of that

dream of this lovely relationship that's going to happen. So then when she was about six weeks old it got to the point, we were just doing breastfeeding in the morning and it just got to the point where she'd just latch on and just look at me like "what are we doing?" There's not enough going on here, so I just stopped. I think by the time it came to actually stopping I had grieved and grieved about the whole process and I was actually quite relieved in the end just to go OK, that whole entire thing is just over… I had six months to mourn the whole thing by that point so I was quite relieved actually when that last breastfeed ended.

Women struggled with the dissonance between their expectations of breastfeeding and the reality of cessation and the associated shift between two apparent mutually exclusive roles: a "breast-feeder" or "formula-feeder."

DISCUSSION

This paper draws on a large and diverse sample of women to provide in-depth, rich and highly personal accounts of their experiences of breastfeeding, formula feeding and ceasing to exclusively breastfeed. Our finding that the majority of women in this study intended to breastfeed yet frequently use formula milk whilst breastfeeding is consistent with national and global trends, revealing a high breastfeeding intention and initiation followed by cessation of exclusive and any breastfeeding through increasing formula use.[2 6 8] Mothers in our study struggled to reconcile their use of formula milk while breastfeeding[31 32] and were often left devastated with a prolonged "breastfeeding grief". We view 'breastfeeding grief" as a potential mental health issue for women.[33] In light of the high prevalence of infant formula use,[34] there is a need to explore the relationship between formula use during breastfeeding and maternal

emotional health more closely. Proactive breastfeeding counselling and debriefing, and further research to explore this phenomenon are needed.

The tension that is generated between the deeply held desire to breastfeed (to do what is best/natural) and the unforeseen reality of cessation (viewed as immoral/bad) is concerning. Consistent with previous research in this area we suggest the desire expressed by mothers in our study to "just breastfeed" (feed from the breast) is underpinned by an ideology that breastfeeding is equal to "good" and formula feeding "bad" mothering.[17 28 35-37] Consequently, when breastfeeding ceases through formula use, mothers may experience a sense of failure and even marginalise themselves as unnatural and immoral because they and their bodies do not conform to the social, public health and cultural ideals of "good" motherhood.[16 17 38-40] These ideals around motherhood are often embedded within public health campaigns and hospital practices that are perhaps out of step with what women do and understand as breastfeeding in their day to day.[38 41 42] Indeed, the mothers in our study did not understand the biomedical public health category "exclusive breastfeeding" as a way to feed their infants.[43] Instead they set out to "just breastfeed". This helps to understand that the desire to breastfeed is a deeply embodied social practice not simply a nutritional choice. There is an urgent need to re-evaluate the way exclusive breastfeeding is promoted and translated to women and their families via policy and clinical practice.

A limitation of the study is that many participants relied on memories of their experiences. To address this limitation future studies that engage with mothers at multiple time points over their infant feeding journey are recommended. Our purposive sampling allowed us to deliberately seek and include women who would normally not self-select for research studies such as younger

women <24 years who made up 50% of the sample. This data would lend itself to further comparative analysis with the older and more socioeconomically advantaged women, and follow up interviews. Inviting women to participate in either a FG or interview gave rich and highly complex perspectives through the use of method triangulation.[21] We used the same interview guide, coding framework and coding cross-checks to improve standardization and interpretation of our results.[18]

Understanding the forms of support that mothers use while negotiating breastfeeding and cessation is important. An key finding from this study was that women used their social and physical capital [27 44] to endure/persevere through common feeding problems (such as pain, public shaming, low milk supply) whilst trying to avoid formula milk and prolong breastfeeding. Women frequently talked of how they relied on the father of the child to help them navigate their breastfeeding and cessation. Consistent with other published research mothers often combined physical capital such as expressing breastmilk, bottles and dummies with social capital (fathers and other family/friends) to relieve them of the intensity of feeding and mothering.[45] Although problematic because of the association with cessation of exclusive breastfeeding[7] and breastfeeding problems[46] bottles and dummies appear to be everyday tools that mothers use to help them negotiate breastfeeding and cessation. Conversely, social capital such as fathers or other family/social supports have been shown to have a positive effect on prolonging breastfeeding[47] and supporting maternal wellbeing.[45 48 49 50 51] Indeed mothers are less likely to use formula at one and 6 months when fathers are provided with support and education about exclusive breastfeeding during the antenatal period.[52] Here lies an opportunity for health policy and clinicians to reframe breastfeeding as a family practice with fathers/intimate partners and extended family as collaborative partners and resources for mothers.[53] Robust studies are needed

to provide evidence to inform family centered infant feeding/breastfeeding support and education strategies.

CONCLUSION

The cessation of exclusive breastfeeding through formula use often results in feelings of prolonged grief and failure, making it potentially harmful to women's emotional wellbeing. Supporting fathers/intimate partners to become collaborative breastfeeding/infant feeding partners and reframing breastfeeding as a family practice may support women and prolong breastfeeding duration. Proactive counselling and debriefing may assist those women who are experiencing feelings of loss and breastfeeding grief.

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Contributors

JA & EH designed the study. JA & LT conducted 90% of the FG/interviews/field notes with participants and collected the data. All authors had full access to all the data, were responsible for the integrity of the data and were involved in the analysis and interpretation of the data. JA took the lead in writing the manuscript. Both LT & EH provided critical feedback and editing to the final version of the manuscript.

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Conflict of Interest declaration:

There are no competing interests

Ethics approval

Ethics approval was obtained from the Tasmanian Social Science Ethics Committee (Ethics Ref No: H0011838).

A data sharing statement

Due to the nature of the data (audio recordings and transcripts), research ethics approvals and the demographics of the study population we are not able to share the data.

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Figure legends

Figure 1. Derivation of the themes that emerged from the thematic analysis.

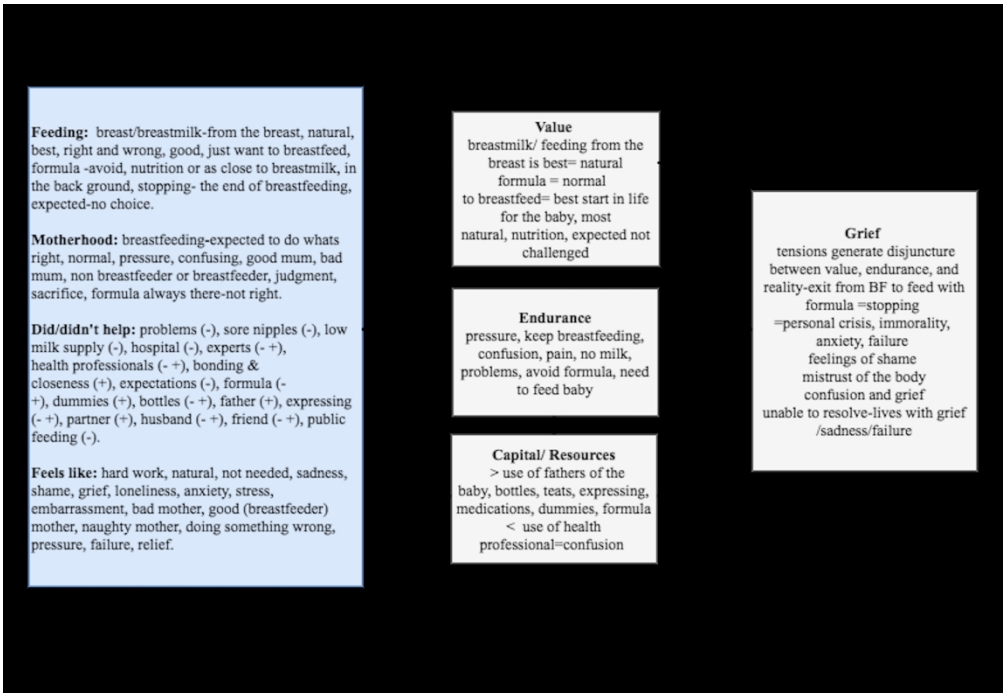

Figure 1. Derivation of Themes

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Table 1

Consolidated criteria for reporting qualitative studies (COREQ): 32-item checklist

No	Item	Guide questions/description
Domain 1: Research team and reflexivity		
Personal Characteristics		
1.	Interviewer/facilitator	Which author/s conducted the interview or focus group? yes p 4,5
2.	Credentials	What were the researcher's credentials? *E.g. PhD, MD* yes title page
3.	Occupation	What was their occupation at the time of the study? yes p 5
4.	Gender	Was the researcher male or female? yes p 5 yes p 5
5.	Experience and training	What experience or training did the researcher have? Author 1, 2, 3 are all experienced in qualitative methods and published qualitative research
Relationship with participants		
6.	Relationship established	Was a relationship established prior to study commencement? no relationships established
7.	Participant knowledge of the interviewer	What did the participants know about the researcher? e.*g. personal goals, reasons for doing the research* the participants were informed about the purpose/ reasons for the research as per ethics approaval
8.	Interviewer characteristics	What characteristics were reported about the interviewer/facilitator? e.g. *Bias, assumptions, reasons and interests in the research topic* page 5, researchers experience / occupations
Domain 2: study design		
Theoretical framework		

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No	Item	Guide questions/description
9.	Methodological orientation and Theory	What methodological orientation was stated to underpin the study? *e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis* **Yes P7 Interpretivist methodology**
Participant selection		
10.	Sampling	How were participants selected? *e.g. purposive, convenience, consecutive, snowball* **p 3,4**
11.	Method of approach	How were participants approached? e.*g. face-to-face, telephone, mail, email* **p 3,4**
12.	Sample size	How many participants were in the study? **N=127 p 3-4 & 6**
13.	Non-participation	How many people refused to participate or dropped out? Reasons? **no drop outs and no refusals**
Setting		
14.	Setting of data collection	Where was the data collected? e.*g. home, clinic, workplace* **Multiple sites; community, homes- p 4-5**
15.	Presence of non-participants	Was anyone else present besides the participants and researchers? **the mothers child/children**
16.	Description of sample	What are the important characteristics of the sample? *e.g. demographic data, date* **Listed in tables 1, 2; . P 7, 8.**
Data collection		
17.	Interview guide	Were questions, prompts, guides provided by the authors? Was it pilot tested? **Yes; p 4,5**
18.	Repeat interviews	Were repeat interviews carried out? If yes, how many? **no repeat interviews .**
19.	Audio/visual recording	Did the research use audio or visual recording to collect the data? **Yes audio recorder**
20.	Field notes	Were field notes made during and/or after the interview or focus group? **Yes; p 5**
21.	Duration	What was the duration of the interviews or focus group? **1-2 hours**

No	Item	Guide questions/description
22.	Data saturation	Was data saturation discussed? Yes p 4
23.	Transcripts returned	Were transcripts returned to participants for comment and/or correction? No
Domain 3: analysis and findingsz		
Data analysis		
24.	Number of data coders	How many data coders coded the data? Three; all authors
25.	Description of the coding tree	Did authors provide a description of the coding tree? Yes; p 5
26.	Derivation of themes	Were themes identified in advance or derived from the data? Derived from the data Figure 1.
27.	Software	What software, if applicable, was used to manage the data? NVivo . P 5
28.	Participant checking	Did participants provide feedback on the findings? no
Reporting		
29.	Quotations presented	Were participant quotations presented to illustrate the themes / findings? Was each quotation identified? e.*g. participant number* Yes; p 9-14
30.	Data and findings consistent	Was there consistency between the data presented and the findings? themes underpin the data and findings presented . Figure 1 for the derivation and from p-9>
31.	Clarity of major themes	Were major themes clearly presented in the findings? Yes
32.	Clarity of minor themes	Is there a description of diverse cases or discussion of minor themes? Some description of age related diversity