***At the* breast is best? A corpus-informed feminist critical discourse analysis of the marginalisation of expressing human milk in online infant feeding promotional discourse**

Abstract:

Existing feminist analyses of infant feeding practices have examined the promotion of long-term exclusive direct breastfeeding (DBF) as symbolic of "total motherhood" (Wolf 2011), where formula feeding is framed in contrast as "risky" (Murphy 1999, 2000; Brookes et al. 2016; Woollard 2018). Discourses of expressing human milk (EHM), and their discriminatory potential, are currently under-researched. However, researchers note that rhetorical strategies that exclude EHM as a form of breastfeeding can reinforce the perceived normalcy of feeding at the breast and relegate breastmilk expression and formula feeding as "deviant" practices (Murphy 1999; Hunt and Thomson 2017; Rasmussen et al. 2017; [author] 2020; Anders et al. 2022).

To that end, this study integrates Feminist Critical Discourse Analysis (Lazar 2005, 2007, 2014) and corpus linguistics (e.g. Baker 2014) to examine discourses of breastmilk expression (EHM) in a corpus of online infant feeding promotional literature taken from seven organisations, with a particular focus on the largest two organisations in the corpus: La Leche League Great Britain (LLLGB) and the UK National Health Service (NHS). The analysis reveals language choices that marginalise EHM in servitude of "breast is best" (Murphy 1999), and specifically reinforce the message that '*at the* breast is best'. We show how EHM is marginalised in the texts via representations of exclusive DBF as the 'gold standard' of infant feeding, recirculating discourses of "total motherhood" (Wolf 2011), "natural mothering" (Bobel 2003) and "intensive motherhood" (Hays 1996).

Keywords: infant feeding, breastmilk expression, feminist critical discourse analysis, corpus linguistics

1. Introduction: The expression of human milk in UK infant feeding policy

The World Health Organisation recommends "exclusive breastfeeding" for the first six months of life as "the normal way of providing young infants with the nutrients they need for healthy growth and development" (WHO 2021). Despite this, less than half of the world's infant population are "exclusively breastfed" according to the WHO guidance (e.g. Rollins et al. 2023: 486). This, it is claimed, is because women face various structural, sociocultural and economic barriers to breastfeeding, such as lack of support from employers; the 'normalization' of formula feeding in popular culture and the (assumed) influence of commercial marketing of infant formula (e.g. Baker 2023; Patil et al. 2020; Rollins et al. 2023; Victora et al. 2016).

The UK is reported to have one of the lowest breastfeeding rates in Europe (Victora et al. 2016), and the last UK-wide Infant Feeding Survey in 2010 showed that while 81% of mothers initiated some form of breastfeeding at birth (either at the breast or by expressing breastmilk), only 34% were still breastfeeding after six months (McAndrew et al. 2012). "Exclusive breastfeeding" in this context refers to feeding human milk without any other foods or liquids. However, there is often some ambiguity in exactly what counts as

"exclusive breastfeeding" from public health bodies, including how the expression of human milk fits into these definitions (see e.g., Braimoh and Davies 2014; Rasmussen et al. 2017). The expression of human milk (EHM) involves removing milk either manually by hand, or using a breast pump, which can be done in combination with feeding at the breast, sometimes termed 'direct breastfeeding' (DBF), and/or the use of infant formula. These distinctions between DBF and EHM are not fully represented in the Infant Feeding survey. For example, while figures are provided for the number of women either 'exclusively breastfeeding' at the breast or formula feeding, it fails to provide figures for the number of parents who were exclusively feeding human milk via bottle. While the survey explores reasons women initiate breastfeeding, it neglects the experiences of women who cease at-breast feeding in favour of bottle-feeding human milk, either exclusively or in combination with infant formula.

The lack of nuance in how different modes of infant feeding are treated in research instruments like the Infant Feeding Survey has implications for how the findings of these tools are subsequently utilised in infant feeding policies such as UNICEF's Baby Friendly Initiative (2018), and therefore how they become reflected in the guidance that new parents receive from public health bodies like the NHS, and large, influential independent organisations such as La Leche League (LLLBG). This is problematic, since there is evidence elsewhere that rates of EHM are on the rise (Geraghty et al. 2013; Jiang et al. 2015; Wei Pang et al. 2017).

The lack of representation of EHM in infant feeding policy is partly an issue of nomenclature. Attention to language in infant feeding health communication is important, however, since language choices have the power to legitimise different feeding practices, as well as provide a more accurate picture of the current infant feeding landscape (Rasmussen et al. 2017). To begin to address this issue, this study provides a corpus-informed Feminist Critical Discourse Analysis (FCDA) of representations of the expression of human milk (EHM) in a contemporary set of publicly available online infant feeding advice materials, with a particular focus on literature produced by the two largest organisations in the corpus: La Leche League Great Britain (LLLGB) and the UK National Health Service (NHS).

We begin with a survey of the existing feminist critical literature on infant feeding, illustrating where there are gaps in research specifically looking at EHM in infant feeding advice materials (section 2). We then outline our procedure for data collection and approach to the analysis in section 3, before presenting our corpus-informed FCDA of the corpus in section 4. The analysis first reveals overarching lexical patterns across these seven organisations, to present an overview of the infant feeding advice landscape in the UK, before focusing on the two largest organisations in our study, LLLGB and NHS. Our analysis highlights how representations of EHM in these texts simultaneously invoke, but have the potential to contest, discourses of "total motherhood" (Wolf 2011); Hays' (1996) related conceptualisation of "intensive motherhood"; and Bobel's (2003) notion of "natural mothering". In section 5, we discuss our interpretations of the data, and consider limitations of the study. We finish with a discussion of the implications of the findings of our study and provide some brief recommendations for promoting more inclusive infant feeding support in healthcare policy and practice (section 6).

2. Literature review: Feminist responses to infant feeding

In this section, we explore key feminist perspectives on breastfeeding (section 2.1), before turning to research which has examined representations and discursive constructions of different infant feeding practices in parent-facing babyfeeding advice, focusing on the existing work on EHM (section 2.2).

2.1 Breastfeeding as part of feminist praxis

Breastfeeding (in all its forms) is an interesting site of enquiry from a critical feminist perspective, since it can be viewed as both constraining and liberating (Anders 2022: 2; Benoit et al. 2016; McCarter-Spaulding 2008; Weiner 1994: 383). For example, breastfeeding has been observed by some feminist commentators as an expression of women's 'natural power': a way of reclaiming the nutritive function of breasts away from the 'male gaze', in response to the cultural sexualisation of women's bodies (Faircloth 2021: 92). Feminist theorists have also observed how breastfeeding promotion often centres on the needs of the infant rather than recognising breastfeeding as an act of "embodied labor", reducing women's bodily autonomy (Stearns 2010: 17).

Wolf's (2007, 2011) critique of the social constraints of breastfeeding have also been particularly influential in the feminist critical literature on infant feeding. Wolf argues that the promotion of long-term exclusive DBF is symbolic of "total motherhood": "a moral code in which mothers are exhorted to optimize every dimension of children's lives, beginning with the womb" (Wolf 2007: 615). The child-centred nature of breastfeeding promotion also reflects what Hays (1996) refers to as "intensive motherhood." In this view, the benefits of human milk are extolled to instil in parents an obligation to provide the 'best' nutrition for their child to demonstrate the parents' worth as caregivers. As well as child-centredness, feminist scholars have observed how 'intensive' or 'total' approaches to parenting have become associated with "natural mothering" (Bobel 2003). The concept of 'natural mothering' combines a rejection of materiality and consumption with 'attachment parenting' (where proximity between parent and child is prioritised). This philosophy is entirely in keeping with the notion of 'full' or 'complete' breast/chest-feeding.

Other feminist commentators have observed how formula feeding is often framed in contrast as entailing 'risk' or even harm to babies (Murphy 1999, 2000; Brookes et al. 2016; Woollard 2018). This work acknowledges the importance of examining how the promotion of breastfeeding and marginalisation of formula feeding can serve feminist and anti-feminist agendas and lead to discriminatory practices (Artis 2009; Stearns 2010; Wolf 2011; Benoit et al. 2016; Brookes et al. 2016).

For example, Artis (2009) observes a rhetoric of 'risk' in the U.S. Department of Health's television ad campaign to promote breastfeeding, which they assert encourages a culture of blame. Benoit et al. also recognise the "medical paternalism" (2016: 59) of the Canadian healthcare system, which favours breastfeeding as the medically and socially approved 'best' option and downplays the viability for women to choose to feed infants with formula. They state that "breast feeding promotion as it is currently practiced oppresses maternal

choice and voice in infant feeding decisions, thus acting to instil perceived feelings of guilt" (Benoit et al. 2016: 62). To address this, the authors consider that breastfeeding support must be approached as a "collaborative partnership" between parents and healthcare providers, focusing on women's experiences of breastfeeding and not solely on communicating infants' needs. The infant-centred nature of current healthcare, they argue, is underpinned by an underlying discourse that a "good mother" would meet these needs by breastfeeding, which is what leads to maternal guilt and is therefore disempowering (see also e.g., Fenwick et al. 2013, Sheehan et al. 2013).

Promoting peer-sharing of knowledge about breastfeeding (such as that which takes place in organisations like LLLGB and the Association of Breastfeeding Mothers in the UK) can also be viewed as a way of putting women, rather than medical practitioners, in the role of the 'expert' in childrearing. Foss (2010) argues that the prevalence of expert voices in popular breastfeeding guidance (such as in popular parenting magazines), can delegitimize women's personal experiences and peer-sharing of knowledge about infant feeding. She asserts that this facilitates an ideology of "scientific motherhood": the reliance on expert voices and scientific innovation for guidance in childrearing. She argues that this over-reliance on expert voices assumes that "women are incapable of nourishing their own children without assistance", effectively defying women's agency (Foss 2010: 307). It is in this sense that breastfeeding cultures can be understood as promoting women's autonomy and challenging the power dynamics between healthcare professionals and parents.

On the other hand, Wolf (2011) observes how an assumption that women *are* the experts in how to feed their babies also often results in women being held fully accountable for their child's health outcomes, leading to apportionment of blame when women and parents are perceived to have made the 'wrong' decisions for their child, which is experienced as "maternal guilt" (Hausman 2012; Fenwick et al. 2013; Benoit et al. 2016). Being positioned as an 'expert' in babyrearing can therefore serve both feminist and anti-feminist agendas. The child-centred nature of 'complete' DBF, with its associations with 'attachment parenting' philosophies, also places the burden of feeding heavily on one parent. This often results in women's limited re-entry to the labour force, since 'complete' or 'extended' breastfeeding results in women taking longer career breaks than their male counterparts, and employers are often not well equipped to support women returning to work after having a baby (Costa Dias 2020; Del Bono 2022; Carter 1995).

2.2 'Marginalised milk': Representations of breastmilk expression in health promotion materials

Infant feeding research, particularly into EHM, has tended to focus on parental experience rather than parent-facing health promotion material (see e.g. Anders et al. 2022; Stearns 2010). Researchers recognise that EHM is less well understood from a biomedical perspective than DBF (see e.g., McInnes et al. 2015). Furthermore, investigations into representations and cultural practices associated with EHM are less prevalent than for DBF and formula feeding, although a few studies addressing this deficit have been published over the last decade or so. Foss (2010, 2013), for example, undertook content analysis of popular advice texts and Sheehan and Bowcher (2016) explored breast pump adverts using multimodal techniques.

Whilst there remains a lacuna of research into the language of EHM, McInnes et al.'s (2015) qualitative content analysis of ten (purposively selected) UK commercial, NHS and third sector EHM websites identifies three main themes in EHM advice:

1. Depictions of expressing (involving comparisons to breastfeeding, expressing as a learned skill, and the need to make expressing a discrete act);
2. Reasons for women to express (linked to the nutritional value of breastmilk for improved infant health, enabling separation of mother and baby and solving breastfeeding difficulties); and
3. Recommendations for expressing (advice on methods of expressing and feeding, and recommendations on when to start expressing).

The authors concluded that information about EHM across the sites analysed is "inconsistent and incomplete" (2015: 10), and a lack of available clinical research evidence on expressing has enabled the "commercialisation of breastfeeding" in these online spaces to flourish (2015: 10). Significantly, they also recognise that the cost of breast pumps can be a source of health and social inequalities, and that there are links between socioeconomic status and breastfeeding duration. The authors also contest assumptions found in their dataset that DBF enhances parental bonding, which non-breast/chest-feeding partners (usually fathers) miss out on. They argue that 'bonding' has never been satisfactorily defined, and therefore it is remiss to relate positive emotional connection between parents and their infants to feeding practices alone (2015: 9). The assumption that mode of feeding correlates with degree of attachment is also reflected in the language choices of the LLLGB and NHS materials under examination in the present study, and this comes across more strongly in the LLLGB subcorpus (see section 4.2.2). McInnes et al. conclude that more research is needed on expressing, including how parents navigate the information and advice they access (2015: 10).

Aside from content analyses of babyfeeding advice discourse, one notable study analysed the discursive mechanisms used to construct normative ideas about breastfeeding. Brookes et al. (2016) conducted a multimodal critical discourse analysis of two key pamphlets from the NHS' Start4Life health promotion campaign, covering 'breastfeeding' and 'bottle feeding'. The authors analyse multimodal strategies used to influence parents' feeding decisions by constructing breastfeeding as the 'natural' and 'morally responsible' method of infant feeding, in line with neoliberal approaches to public health education more broadly. Of the social actors included in the pamphlets, mothers are prioritised and personalised, while other people involved in childcare are heavily backgrounded in the texts. Breastmilk is categorically evaluated as superior, via superlative constructions like "the best start for your baby" and "the healthiest way to feed your baby". This valorisation of breastmilk is similarly evident in our Babyfeeding Advice Corpus, where expressing milk is framed as mitigating against the risks of using formula and as a way of 'protecting' women's breast milk supply (see section 4.2.2 below).

The existing research on DBF and EHM indicates a need for further work on the discursive construction of expressing, to more closely examine the extent to which it is framed as a 'deviant practice' in public-facing advice and its discriminatory potential. We argue that a specifically feminist exploration of EHM is fruitful for understanding the discourses

surrounding this important dimension of infant feeding, particularly to consider whether and how it is currently marginalised in support materials through languages choices, and therefore how midwives and other healthcare professionals might adopt more inclusive language practices in working towards a 'collaborative partnership' (Benoit et al. 2016) with new parents.

In operationalising these aims, this study seeks to answer the following research questions:

1. How much coverage is given to different modes of infant feeding in UK public health and third sector web-based advice materials (the Babyfeeding Advice Corpus)?
    a. Is there any textual evidence for the marginalisation of EHM in the Babyfeeding Advice Corpus?
    b. How is EHM evaluated in the corpus, in relation to DBF and formula feeding?
2. How is EHM evaluated in the LLLGB and NHS subcorpora, in comparison with DBF?
3. To what extent do these representations of infant feeding reflect existing gendered discourses (such as the assumption that there are two genders based on two sexes; and that women are the primary caregivers)

In the next section, we outline our corpus-informed feminist critical approach to infant feeding discourse for addressing these questions.

3. Methodology: Corpus-informed Feminist Critical Discourse Analysis of infant feeding

This paper combines tools and concepts from corpus linguistics (Baker 2006, 2014) and feminist critical discourse analysis (Lazar 2005, 2007, 2014) to analyse dominant messages of infant feeding in an online corpus of babyfeeding advice discourse (the Babyfeeding Advice Corpus). In this section, we first describe the data collection process (3.1); we then outline the key tenets of feminist critical discourse analysis and explain how our objectives and research questions align with these principles (3.2); finally, we discuss how corpus linguistics techniques facilitated our feminist critical discourse analysis approach (3.3).

3.1 Data

As a key aim of this paper is to investigate how EHM is represented in parent-facing advice, we selected the organisations to which new parents are most referred and which provide advice directly to new parents. To build the Babyfeeding Advice Corpus, we manually scraped headings and main text on HTML articles from the following organisations:

Organisation (Abbreviation) Website	Number of texts	Proportion of corpus	Number of words	Proportion of words in the corpus
Association of Breastfeeding Mothers (ABM) www.abm.me.uk/	23	11%	32123	11%
Bliss (Bliss) www.bliss.org.uk/	8	4%	9019	3%

Le Leche League GB (LLLGB) www.laleche.org.uk/	88	42%	160005	54%
National Breastfeeding Network (NBN) www.breastfeedingnetwork.org.uk/	15	7%	20392	7%
NCT (NCT) www.nct.org.uk/	21	10%	23883	8%
NHS including Start4Life (NHS) www.nhs.uk	47	18%	36605	13%
UNICEF Baby Friendly Initiative (BFI) www.unicef.org.uk/babyfriendly	10	5%	14314	5%
TOTAL	212		296,341	

Figure 1. Organisations in the Babyfeeding Advice Corpus

As the Start4Life website is an NHS initiative and is branded as such, data from the Start4Life and NHS websites was combined. The majority of the advice data comes from LLLGB and the NHS (including Start4Life), which is perhaps unsurprising, given the size and scope of both organisations. Both play a key role in disseminating dominant messaging on infant feeding, but they also arguably represent different philosophies on feeding, as our analysis in section 4.2 below will show.

3.2 Principles of Feminist Critical Discourse Analysis

Feminist critical discourse analysis is a critical perspective on unequal gender relations, concerned with "demystifying the interrelationships of gender, power and ideology in discourse" (Lazar 2005: 5). As a model for political praxis, feminist critical discourse analysis is underpinned by the following principles: (1): Feminist analytical resistance (seeking to challenge patriarchal arrangements); (2): Gender as an ideological structure (where the prevalence of the gender binary goes unquestioned); (3): Complexity of power relations (recognising that power is not a monolithic construct, but multifaceted and fluid); (4): the importance of analysing discourse in the deconstruction of gender; and (5): Critical reflexivity as praxis (observing both the reflexivity of institutions and being reflexive as feminist analysts).

Our study of infant feeding is underpinned by these principles in the following ways:

1. **Feminist analytical resistance**: Our aims in this paper are overtly emancipatory, in that we view the marginalisation of EHM in the advice that is currently available to new parents to place limits on women and parents' choices.
2. **Gender as an ideological structure**: Our research also aims to unpick the gendered nature of infant feeding as a sociocultural practice by paying attention to the assumed 'naturalness' of biological sex in infant feeding discourse.
3. **Complexity of power relations:** We recognise that as a social practice, infant feeding is replete with complex power relations: the inherent cultural assumption of 'mother

as expert' in early child-rearing presents a challenge to the institutional authority of healthcare professionals and medical experts who provide advice and support to new parents, but the legitimacy of these claims to expertise can become undermined when parents' infant feeding decisions are not supported.

4. **Analysing discourse in the deconstruction of gender:** Understanding babyfeeding discourse informs how we understand the relationship between parents and their babies and the different gendered subject positions entailed by this relationship. If infant feeding discourse can be viewed as part of the performative work of gender identity, then uncovering the discourses used by the organisations viewed as authorities on infant feeding is one way of deconstructing the "rigid, regulatory frames" (Butler 1990: 33) that police acceptable performances of motherhood and parenthood.
5. **Critical reflexivity as praxis:** In taking a reflexive approach to infant feeding, we want to make it clear that it is not our intention to denigrate the feeding choices of any individual parent in this paper, but to reflect on the various ways that infant feeding is moralised, and how DBF with human milk is valorised above all others as symbolic of being a 'good mother'. This position, we argue, is anti-feminist because it marginalises the experiences of those who choose to use expressed breastmilk, formula, or a combination of modes.

These five key tenets underpin the quantitative and qualitative corpus-based analysis presented in section 4 below. We now turn to a discussion of how we have operationalised the key principles of feminist critical discourse analysis in order to answer these central research questions, through our corpus-based approach.

3.3 Corpus-assisted Feminist Critical Discourse Analysis of babyfeeding advice

Corpus linguistics is a method for analysing patterns in large collections of texts (corpora), to make generalisations about a wider population or genre (Baker 2014: 7). Baker (2014) argues that corpus linguistics tools are useful to language and gender scholars for identifying gendered discourses, because they focus on empirical evidence and can help to lend support to more fine-grained, qualitative observations about how gendered subjectivities are produced through language choices in texts. Corpus approaches also arguably help to demonstrate the workings of gender as a discursive construct. Social constructionist and post-structuralist accounts theorise that gender is accomplished through discourse via repetition and active engagement (e.g. Butler 1990), meaning that gender is an iterative process. Looking at lexico-grammatical patterns across textual datasets therefore allows the analyst to observe the "repeated acts" (Butler 1990: 33) of language that solidify into coherent "performances" of gender norms in texts. For example, if gendered terms like *woman* consistently co-occur with lexis relating to childcare or infant feeding, then this implies that child-rearing is a fundamental part of womanhood, thereby solidifying the ideology that women should be the primary caregivers of children.

Feminist critical discourse analysis (as with other forms of Critical Discourse Analysis) is concerned with the interrelatedness of the complex workings of power and ideology in specific contexts where asymmetries are (re)produced in discourse. It is therefore crucial when adopting corpus tools for analysing gender to pay attention to the particular contexts

of use that sit behind quantitative results. To that end, in this article, we employ keyword analysis (words which occur statistically frequently in one dataset compared with another (see Scott 1997)) as a starting point for identifying thematic trends, before delving into more fine-grained analyses of samples of concordance lines (keywords in context). The analysis of keywords facilitates the establishment of dominant discourses and gendered subject positions in the texts on the basis of frequency (FCDA principles 2 and 4). The more qualitative analysis of infant feeding lexis is informed by a critically reflexive approach to culturally-dominant gendered discourses and ideologies of parenthood (principles 1, 3 and 5). This allows us to maintain a focus on overarching patterns while taking into account the importance of discursive, social and ideological context.

To perform the keyword analysis, we used Sketch Engine (Kilgarriff et al. 2014). Sketch Engine identifies keywords by, by comparing frequencies in the target corpus (in this case the Babyfeeding Advice Corpus) with the reference corpus (in this case the enTenTen20 corpus, a 38-billion-word collection of the English web collected between 2019 and 2021). Each word is assigned a 'keyness' score, calculated using the 'simple maths' method (Kilgariff 2009), where a keyness score of 20, for example, indicates that a word is 20 times more frequent in the target than reference corpus. Keywords are useful for identifying salient concepts in a dataset, which in our case was helpful in establishing the prevalence of different forms of infant feeding. We conducted thematic analysis of the keywords using a randomly generated sample of 20 concordance lines for each word. Grouping keywords into salient themes enabled us to identify repeated ideological framings of EHM (and infant feeding more generally) in a way that focusing solely on frequency of individual lexical items would neglect: here, we are primarily interested in salient *concepts*, which is demonstrated more readily through vocabulary domains, rather than the repetition of individual words. Manually coding keywords also helped to establish a more nuanced account of the different referential functions of infant feeding terms than would be achieved via analysis of individual lexical items.

In moving from higher-level lexico-semantic patterns to more detailed analysis of the LLLGB and NHS subcorpora, we examined concordance lines to analyse attitudinal and epistemic framing of EHM for each organisation, which reveals the different stances taken in relation to EHM by each organisation. In identifying evidence for positive/negative stances, we looked at how DBF and EHM are evaluated through attitudinal and affective lexis (such as pre- and post-modifying adjectives expressing positive/negative evaluation), as well as expressions of modality (such as modal verbs, adverbs, and conditional structures). These are aspects of discourse that are frequently cited in the literature on evaluation and stance-taking (Du Bois 2007; Thompson and Hunston 2000). In examining these features of stance-taking, we were interested in how particular framings index 'intensive' and 'natural' (Hays 1996; Bobel 2003) or more 'scientific' (Faircloth 2021) ideologies of parenting.

4. Analysis: Discourses of infant feeding in the Babyfeeding Advice Corpus

In this section we analyse linguistic features of the Babyfeeding Advice Corpus to investigate key discourses. We begin by using keyword analysis to uncover patterns and themes across the organisations included in the corpus, before turning to focus on two subcorpora: LLLGB and NHS. We then explore emergent discourses in these subcorpora qualitatively, focusing on attitudinal framings of EHM.

4.1 The lexical marginalisation of EHM across the corpus

To better understand and characterise the lexical profile of the corpus, and point to dominant discourses of infant feeding, we conducted keyword analysis in Sketch Engine (see 3.3 above). The top 150 keywords were initially ranked by 'keyness'. The top 25 keywords are shown in Figure 2, for illustration purposes.

	Item	Score
1	breastfeed	1779.21
2	breastmilk	998.222
3	ill	476.343
4	skin-to-skin	450.316
5	mastitis	369.535
6	colostrum	344.394
7	nipple	340.24
8	teat	291.947
9	milk	269.312
10	nappy	253.84
11	engorgement	250.045
12	baby	237.992
13	wean	226.808
14	sterilise	214.801
15	feeding	200.115
16	poo	196.263
17	nct	181.654
18	breast	180.296
19	supplementer	172.024
20	midwife	164.939
21	thrush	164.774
22	Leche	154.234
23	Caesarean	151.336
24	let-down	143.82
25	Latch	137.868

Figure 2. Top 25 keywords in the Babyfeeding Advice Corpus

Using randomly generated samples of 20 concordances for each of the top 150 keywords, we then coded these keywords thematically. Initially, this involved attributing a theme to each keyword based on a deductive interpretation of its semantic field and referential function. These codes were then revisited twice by both authors as we refined our recognition of patterns in the data and the relationship between different lexical items (see

e.g., Braun and Clarke 2022, Jones et al. 2022). Figure 3 shows the number of keywords occurring within each theme.

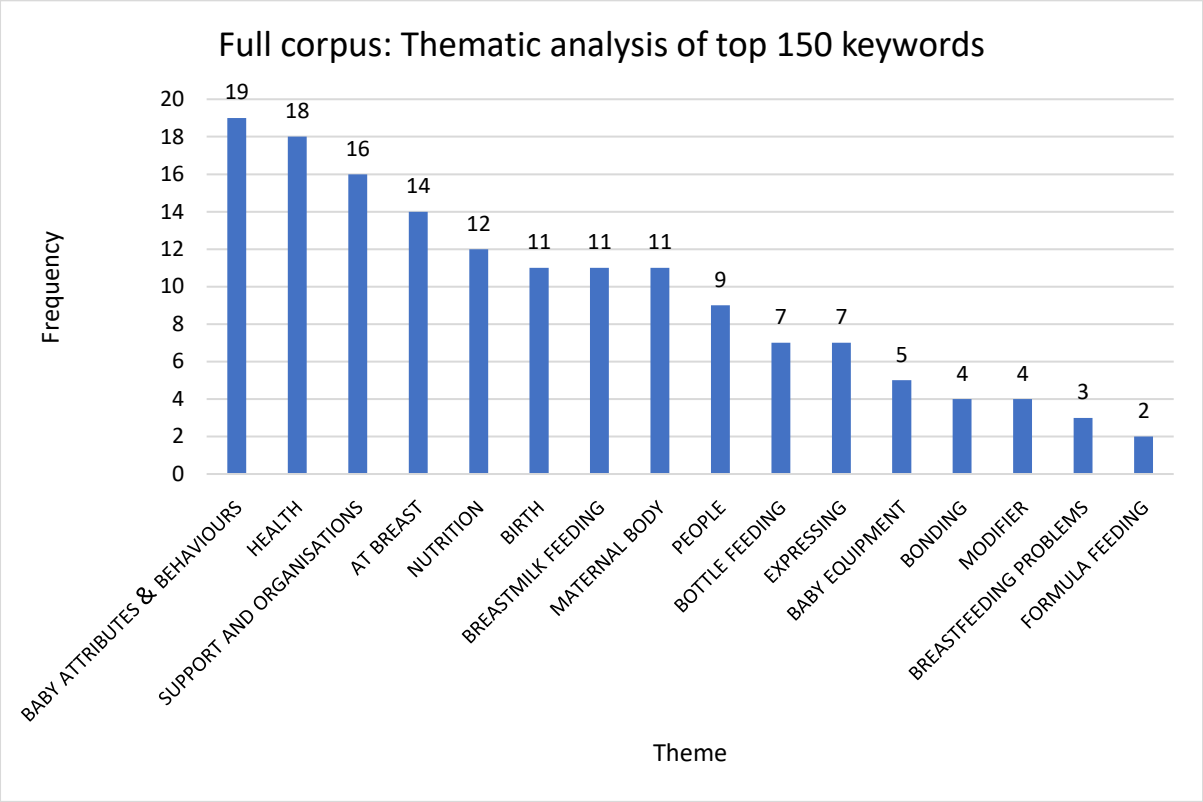

Figure 3. Keywords coded with each theme in the Babyfeeding Advice Corpus

The themes that occurred most frequently were BABY ATTRIBUTES AND BEHAVIOURS, HEALTH and SUPPORT AND ORGANISATIONS, which is unsurprising for a corpus of infant feeding advice. However, our focus is on the five themes relating to infant feeding: BOTTLEFEEDING, BREASTMILK FEEDING, DBF, EBM (expression of breastmilk) and FF (formula feeding). Figure 4 shows the keywords included within each of these themes and their keyness scores.

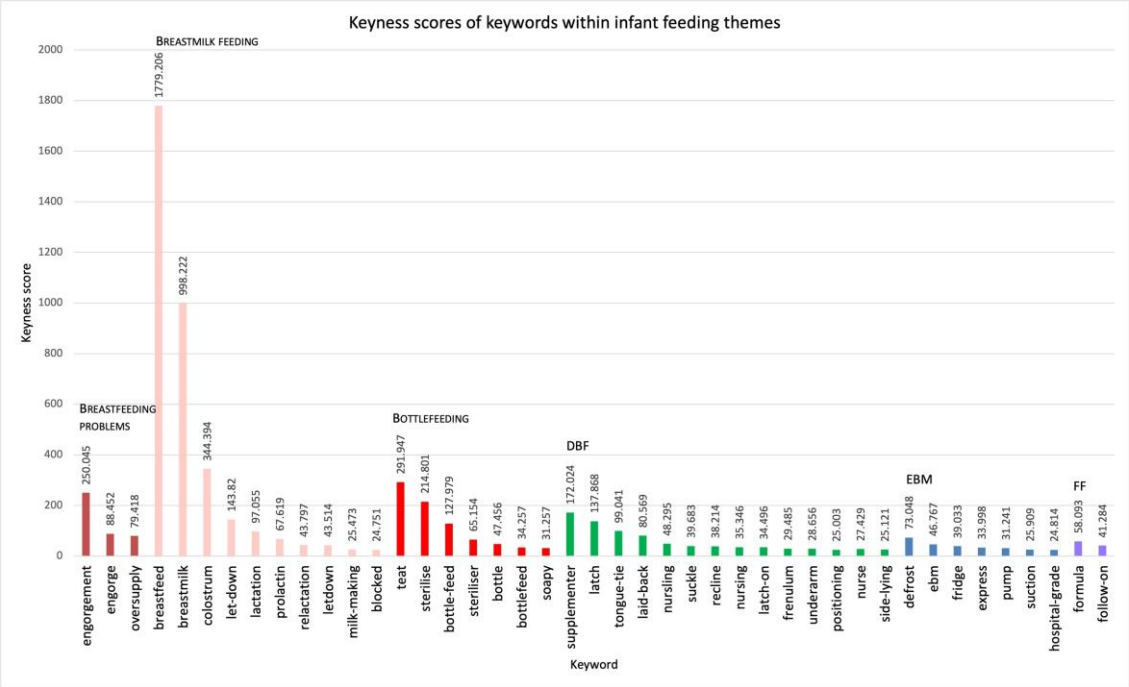

Figure 4. Keyness scores of keywords within each infant feeding THEME

Keywords associated with BREASTMILK FEEDING had the highest keyness scores ('breastfeed', 1779; 'breastmilk', 998 and 'colostrum', 334) indicating that breastmilk is the dominant form of infant nutrition addressed in the Babyfeeding Advice Corpus. More keywords were associated with the DBF theme (14, shown green in Fig. 4) than the EBM theme (7, shown blue in Fig. 4). Keywords in the EBM theme also have lower keyness scores than in the DBF theme (e.g., 'supplementer', 172; 'latch', 138 compared with 'defrost', 73; 'EBM', 47). This indicates that where lexis in the Babyfeeding Advice Corpus specifies how human milk is delivered, it tends to privilege DBF. Seven keywords fall within the BOTTLEFEEDING theme, none of which indicate type of milk, formula, breast or otherwise, is fed via a bottle ('teat', 292; 'bottle', 47) and safe preparation ('sterilise', 215; 'steriliser', 65; 'soapy', 31). Formula feeding is the mode of feeding which is least represented in the Babyfeeding Advice Corpus: only 'formula' (58) and 'follow-on' (41) fall within the FF theme.

Keywords in the thematic categories of 'maternal body' and 'people' also shows a predominance of feminine-gendered terms, such as 'breast' (2060), 'nipple' (609) and 'mother' (1196). In addition, feminine-gendered social actor parent terms *mother* (1139) and *mum* (352) occur thirty-three times more frequently than masculine-gendered term *father* (11) and *dad* (33) in the corpus. There is also a relative under-representation of gender-neutral terms such as 'partner' (169), 'parent' (271) and 'co-parent' (2). Multi-word terms like 'breastfeeding mother' (98) are also salient, while 'chestfeeding' occurs just 5 times in the corpus, appearing in one single article from LLLGB which includes a section on support for transgender and non-binary parents. All this frames infant feeding as almost exclusively a (cisgendered) women's issue.

Our thematic analysis of keywords indicates that the feeding of human milk, especially by DBF, is privileged in the corpus, and framed in ways that uphold the gender binary. This comes across both in terms of statistical saliency and in the range of keywords associated

with at-breast milk feeding, which serve as textual 'traces' (Sunderland 2004) of a dominant discourse of 'breast is best'. The implications of this, in terms of the relative positioning of different modes of feeding, is explored in depth in section 4.2 in relation to the LLLGB and NHS subcorpora.

4.2 Case Study: LLLGB and NHS

In this section, we present a feminist critical account of discourses of EHM in parent-facing advice, using the LLLGB and NHS subcorpora as case studies. LLLGB is considered the foremost breastfeeding support charity: it is a large international organisation with a clear infrastructure, including a national network of leaders and local support groups, and is the most prominent organisation in the dataset. The NHS advice subcorpus was chosen for comparison as the official source of public health information and support for new parents in the UK. We focus specifically on EHM here because of its marginalised position in the corpus, and the LLLGB and NHS subcorpora were chosen for closer analysis since they are representative of the two different types of support – third sector and public health – available to new parents in the UK, and they are also the two largest organisations in our dataset.

4.2.1 The prevalence of breastmilk expression in LLLGB and NHS

The themes identified through the 150 LLLGB and NHS keywords are shown in Figure 5 below, differentiated by organisation.

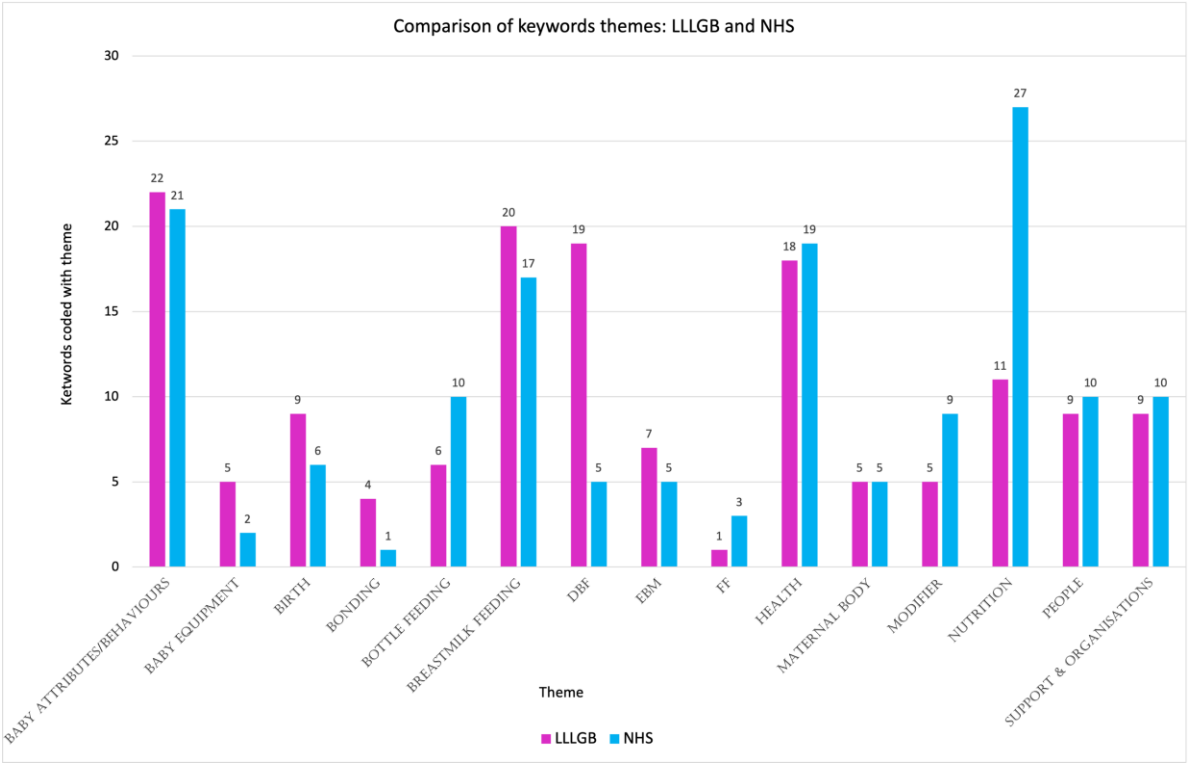

Figure 5. Comparison of THEMES in LLLGB and NHS keyword lists

There are similarities between the themes of these two keyword lists, most notably in the dominance of keywords coded as BABY ATTRIBUTES AND BEHAVIOURS, particularly those that might signify hunger or discomfort; BREASTMILK FEEDING in general; and HEALTH, including infections and medical conditions. There are, however, distinctions between the prevalence of the five feeding themes: BREASTMILK FEEDING, EBM and most starkly, DBF, are more common in LLLGB, whereas BOTTLEFEEDING and FF are more frequent in the NHS subcorpus. This suggests that the NHS might adopt an approach which is more inclusive of non-breast/chest-feeding methods of infant feeding. To further explore the balance of themes in the two subcorpora, the keywords within each of the five feeding themes and their keyness scores are shown in Figures 6 (LLLGB) and 7 (NHS).

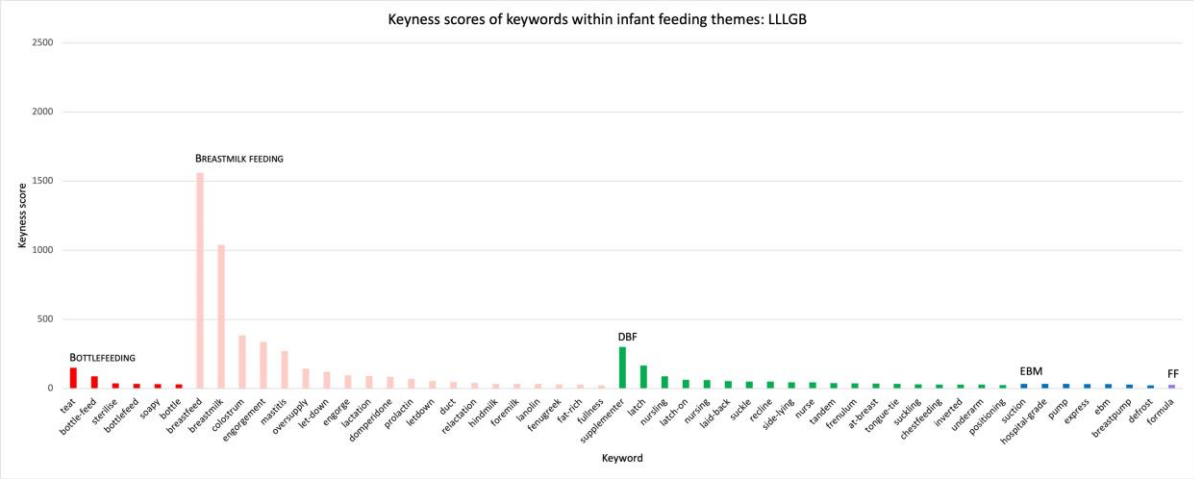

Figure 6. Keyness scores of keywords within each infant feeding THEME: LLLGB

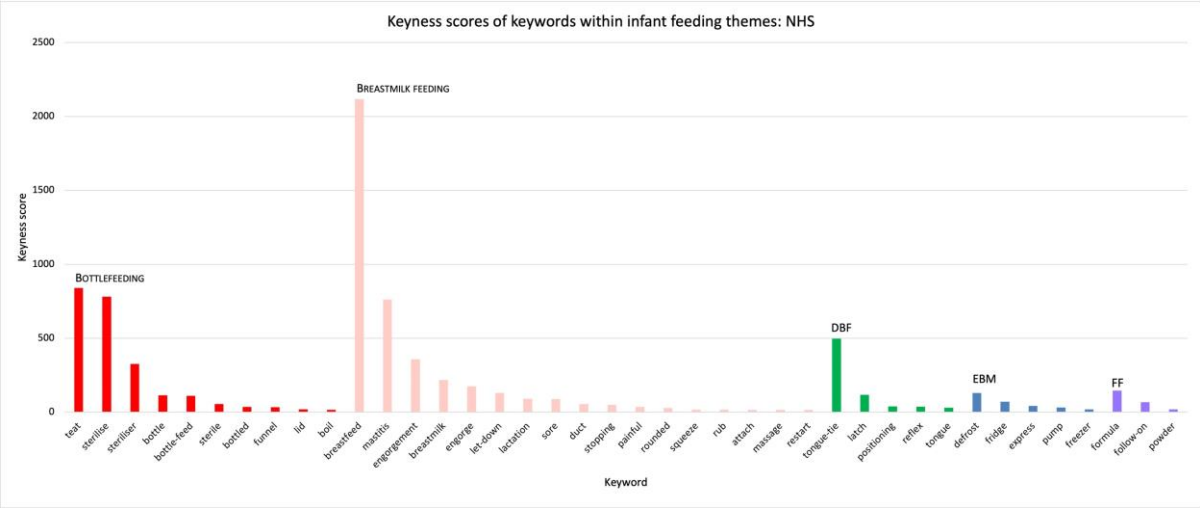

Figure 7. Keyness scores of keywords within each infant feeding theme: NHS

While keywords in the BREASTMILK FEEDING theme occur frequently in both subcorpora and with relatively high keyness, the DBF theme is considerably more common in the LLLGB subcorpus (LLLGB, 19; NHS, 5). Interestingly, the EBM theme is only slightly more prevalent in the LLLGB keyword list (LLLGB, 7; NHS, 5) and keywords within the BOTTLEFEEDING theme (where the bottle could contain formula or EHM) are less prevalent and occur with lower keyness in the LLLGB subcorpus (LLLGB, 6; NHS, 10). This indicates that although LLLGB is an organisation which supports breastfeeding, and keywords in the themes of BREASTMILK FEEDING and, particularly, DBF, are more prevalent and tend to have higher keyness, this does not lead to significantly more space being dedicated to EHM and the feeding of EHM via a bottle. This suggests that for LLLGB, breastfeeding tends to mean DBF and that other forms of human milk feeding are marginalised in comparison.

Furthermore, some keywords with relatively high keyness coded as DBF in the LLLGB subcorpus tend to carry semantic associations with traditional mothering and nurturing, closely aligning with Bobel's (2003) concept of "natural motherhood", including e.g., 'nursling' (89), 'nursing' (61) and 'suckle' (51) which indicate caring, bonding and longevity of practices. Indeed, where mode of feeding is signalled, DBF dominates, and is positioned as superior, through keywords which signal additional benefits of bonding and continuity

with age-old behaviours. This emotive language was infrequent within the FF, EBM, BOTTLEFEEDING and general BREASTMILK FEEDING thematic categories in LLLGB, nor was it evident in the NHS subcorpus. Five keywords in the NHS subcorpus were coded with each of the DBF and EBM themes, indicating greater parity in support (DBF: 'tongue-tie', 'latch', 'positioning', 'reflex', 'tongue'; EBM: 'defrost', 'fridge', 'express', 'pump', 'freezer'). Furthermore, those keywords coded as EBM also had higher keyness scores than in LLLGB, suggesting that they characterise the NHS subcorpus slightly more than in LLLGB (NHS: 'defrost', 130; 'fridge', 71; 'express', 42. LLLGB: 'suction', 34; 'hospital-grade', 34; 'pump', 34). Interestingly, the EBM lexis in both subcorpora emphasises the mechanics and processes involved in expressing and storing milk rather than bonding benefits or continuation of traditions. Although formula feeding remains the least represented mode of feeding, the NHS seems to adopt a slightly broader approach to infant feeding than LLLGB. Similarly, the prevalence of NUTRITION in the NHS keyword themes (NHS, 27; LLLGB, 11) suggests that more medically or scientifically-informed health benefits of infant feeding are prioritised, over any potential emotional benefits.

Investigating themes of keywords provides a useful indication of lexical patterns in the LLLGB and NHS subcorpora, which point to discourses of 'natural motherhood' (LLLBG) and 'scientific parenting' (NHS), as well as the amount of coverage devoted to different feeding modes. We now turn to a more qualitative consideration of discourses of EHM in the LLGB and NHS subcorpoa, illuminated by concepts from evaluation and stance (e.g. Du Bois 2007; Hunston 2007; Thompson and Hunston 2000). This will facilitate a more detailed consideration of epistemic and attitudinal positioning, including whether EHM is framed as a legitimate feeding mode, and whether it is presented positively or negatively by the organisations. The potential implications of this framing for parents' experiences of infant feeding are discussed in section 6 below.

4.2.2 Discourses of EHM in LLLGB and NHS subcorpora

This section provides a qualitative analysis of how LLLGB and NHS position EHM as a (il)legitimate form of infant feeding, implying an overarching discourse of DBF as the 'gold standard' of infant feeding (or '*at the* breast is best'). We show how this is achieved via the following discourses: (1) EHM as supporting DBF/mitigating a 'failure' to DBF; (2) EHM as 'unnatural'/DBF as 'natural'; (3) EHM as labour-intensive. The examples discussed in this section are derived from random samples generated in Sketch Engine of 20 concordance lines of the node items 'express' and 'pump' from each subcorpus. For context, these terms were identified with the following raw and normalised frequencies (per 1000,000 words) in each subcorpus:

	LLLGB	**NHS**
Express	559 (349.4)	167 (456.2)
Pump	268 (167.5)	58 (158.5)

Figure 8. Frequencies of terms in LLLGB and NHS sub-corpora

Both researchers analysed the samples individually, focusing on the language of evaluation and stance-taking evident in, particularly, modal choices, modifying adjectives and adverbs

signalling ideologically salient discourses. Each of the discourses identified can be seen as illustrative of a broader tension between 'scientific parenting' and 'natural motherhood' which our quantitative analysis points to, and which has been documented in the sociocultural research on infant feeding (e.g. Apple 1987, 2006; Hays 1996; Hausman 2003).

(1) *EHM as supporting DBF/mitigating a failure to DBF*

EHM is framed as primarily serving to support DBF in the two subcorpora, and as a way of mitigating a felt failure to DBF. This is particularly the case for LLLGB, as demonstrated by the following examples:

1. A baby's behaviour can change very quickly, especially in response to gentle repetition, so do persist. With time and patience, most babies will breastfeed well once more. **In the meantime**, hand express or pump your milk to **ensure** you **still make** plenty of milk. (LLLGB)
2. **When you can't be with your baby**, expressing **maintains** your milk production and **helps** you avoid engorged breasts during the separation. (LLLGB)
3. **Some** mothers feed their babies exclusively on expressed milk. You can read more about this in the book "Exclusively Pumping Breastmilk". (LLLGB)

In these extracts, EHM is relegated to the position of an adjunct activity structurally via temporal adverbials "in the meantime" (1) and "when you can't be with your baby" (2). EHM appears to be justified only where it supports DBF, via different verb choices: the commanding "ensure" in (1) and categorical promise invoked by "maintains" in (2) imply that pumping milk should be in service of production. There is also a sense of importance and urgency implied by the instruction to "ensure" you "still make" milk and the epistemically certain (categorical) assertion that pumping *will* keep up supply (but only when the baby – the only legitimate milk miner – isn't around).

LLLGB is the only organisation in the corpus to make explicit mention of the term 'exclusive pumping' (3) – the exclusive expression of milk for feeding (used in contrast to terms such as 'combination' or 'mixed' feeding). Exclusive pumping can in many ways be viewed as part and parcel of "intensive mothering" (Hays 1996), since it constitutes a 'whole approach' to expressing breastmilk, perhaps at the expense of convenience (via combining EHM with formula feeding, or just formula feeding).

Both LLLGB and the NHS data position EHM as mitigating problems with DBF, which also ultimately reveals an evaluation of EHM as in support of DBF:

4. **If he is not latching** at all, or is not feeding well and gaining weight, then expressing your milk will help establish milk production. (LLLGB)
5. **If** your baby is not feeding properly, expressing **can** be a good way to make sure they get the benefits of breast milk. (NHS)

The conditional structure "if he is not latching…" in (4) serves as a justification for expressing, which has similar effects to the examples in the previous section: you only need to express under specific conditions i.e. if DBF is not going well. The low levels of epistemic

certainty denoted by the conditional clause structure and auxiliary modal "can" in (5) implies that while EHM is a possible response to problems with feeding, it's not ideal. The hedging of these mitigating effects of EHM ultimately promotes the view that EHM is subservient to DBF, and therefore helps to construct a discourse of '*at the* breast is best'.

(2) *EHM as disrupting 'natural' processes of feeding*

LLLGB in particular uses language that positions DBF as the 'natural' way to feed your baby; in turn framing EHM as 'unnatural', and thereby disrupting 'innate' biological processes. This can be traced through advice that focuses on the stimulation of particular hormones, and where expressing is discussed, foregrounding manual expression, rather than the use of high-powered electric pumps. For example:

6. **When hand expressing**, the **skin-to-skin contact helps stimulate** the let-down reflex. And **your hands can remove** milk from parts of your breast which the pump can't. (LLLGB)
7. Research also shows that, overall, breastfeeding mothers get more sleep than mixed- and formula-feeding mothers. This is for a number of reasons, including the **impact of natural hormones and chemicals** released for baby and mother when breastfeeding at night. (LLLGB)

The logical presupposition in (6), triggered by temporal adverb "when", assumes that the primary mode of expressing would be manual hand expression. The pump is framed as inferior to hands in removing milk from the breasts, with advice claiming that hands can manipulate the breast with more nuance than a breast pump, which neglects the fact that electric pumps are able to extract milk at much higher speeds than can be achieved by hand. This has the effect of emphasising hand expression as closer to DBF than the technologization of using a breast pump, preserving a discourse of 'natural' as superior to 'scientific' approaches to babyfeeding. Example (7) similarly aligns breastfeeding with the advantage for mothers of "get[ting] more sleep" and purports to support this assertion with an unarticulated "number of reasons" from unspecified "research" including that both mother and baby benefit from "*natural* hormones and chemicals" (emphasis added). Again, breastfeeding as a natural activity is positioned here as optimum.

The evaluation of DBF as the 'natural' way to feed one's baby is also connected to an assumption that DBF facilitates emotional bonding, and that, alternatively, other forms of feeding (including EHM) prohibit emotional closeness. Again, this is much more emphasised in LLLGB than in the NHS advice, as the following extracts exemplify:

8. Breastmilk is not **just** about getting food into a baby, it is **part of the mothering relationship**. It is **the natural way** to be **close** to a baby and helps with **bonding**. (LLL)
9. Often family members sometimes express a desire to bottle-feed a breastfed baby as a way of **"bonding"** with them. They may be impressed by **the powerful connection you are making with your breastfeeding baby**, and want the same kind of closeness. It can be helpful to know that what strengthens attachment is touch

(especially **skin-to-skin holding**) and **gaze** (looking into each other's eyes) – not the **transfer of milk**. (LLLGB)

10. In this video, a midwife talks about how you use the time you spend bottle feeding to **bond** with your baby. (NHS)
11. Some of the benefits of breastfeeding are:
    - […] breastfeeding **can build a strong emotional bond** between you and your baby […] (NHS)

Excerpt (8) reflects LLLGB's preoccupation with DBF as a form of 'mothering' – this is arguably a very loaded term, with connotations of emotional care, framing feeding in particularly gendered ways and evoking traditional ideas about mothering as a vocation (Gorham and Andrews 1990). This positioning of breastfeeding as a form of emotional care for the child serves as a justification for DBF, with the negated stance adverbial "not just" implying that where other modes of feeding are merely functional, DBF is "special" and "unique". The definite article *the* determines that breastfeeding is the only "natural way" to bond. Extract (9) reveals an interesting tension between promoting the idea of a loving family unit (driven by a commitment to child-centred care) and LLLGB's philosophy of protecting the mother-child dyad (exemplified most pertinently by their philosophy of "mothering through breastfeeding"; La Leche League International, 2010). The idea that other family members can bond with the baby through bottle-feeding (presumably whatever the contents of the bottle may be) is undermined via the inclusion of scare quotes on the word "bonding". The emotional connection associated with DBF is hyperbolically presupposed as "powerful" in the definite clause structure "the powerful connection you are making", and family members are positioned here as jealous witnesses to this "powerful" attachment. But the idea that it is the uniqueness of DBF which determines closeness is then somewhat undermined by the assertion that it is actually physical interaction with the baby (via touch and gaze) that facilitates emotional bonding, not the rather clinical sounding "transfer" of milk. Indeed, the NHS data appears more sympathetic to the idea that the physical closeness associated with DBF can be emulated via bottle-feeding, demonstrated by example (10), which appears in an introduction to a video of a male partner bottle-feeding. The claim that DBF promotes bonding is also qualified in (11) with the use of modal "can", which expresses a mere *possibility,* rather than the cast-iron guarantee implied by LLLGB's more categorical phrasing in (8) and (9). Arguably, the NHS' more neutral claims about the connection between mode of feeding and bonding go some way to mitigate this "moral minefield" (Murphy 1999: 205) that can lead to feelings of maternal guilt (see e.g. Anders et al. 2022; Benoit et al. 2016; Hunt and Thompson 2017).

(3) *EHM as labour-intensive*

EHM is evaluated as labour-intensive and time-consuming by both organisations. For LLLGB, the time commitment of expressing is viewed both positively and negatively, illustrated in examples (12) and (13) below:

12. Breastfeeding directly is also **less time consuming** – as any EP mother can tell you! There are no pump parts to wash, **a skilled breastfeeding baby** can remove milk **faster** than any pump, and the mother doesn't need **to spend extra time** pumping **and then** feeding the expressed milk to her baby. (LLLGB)

13. You might find the decision to exclusively express **feels difficult**, and that you don't **feel** you fit with breastfeeding mothers or with those using formula. Please be sure that you will receive **a warm welcome and support** at LLL meetings and from your local Leader, and that we understand **the lengths you're going to**, to **make sure** your baby has your milk. (LLLGB)

These extracts seem to betray conflicting positions on EHM. In (12), DBF is framed as the more efficient option via evaluations as "less time consuming" than expressing, and the claim that a "skilled" baby can rival the extraction speed of breast pumps. It is notable that breastfeeding is presupposed to be a skill in the noun phrase "a skilled breastfeeding baby", as opposed to a natural process – this reveals some of the tensions in the way that breastfeeding is often represented as both natural and learned behaviour in infant feeding discourse. The idea that DBF is more efficient than EHM is also implied via the assumption that expressing takes longer than DBF, and also constitutes a mediating step in between milk production and feeding, emphasised grammatically through the conjunctive phrase "and then". Alternatively, in extract (13), the "effort" associated with EHM, and particularly long-term exclusive pumping (EP) is evaluated much more positively via assurances that EPing mothers will be "welcomed" by the LLLGB community, and a more sympathetic alignment with the potential for EHM parents to feel marginalised ("…that you don't feel you fit with breastfeeding mothers or those who use formula"). The repetition of affective stance verb "feel" is testament to this more sympathetic perspective. In the case of EP, this is because the commitment to feeding breastmilk overshadows the more negative 'unnatural' scientific interventions usually associated with expressing. This kind of heroic positioning of those who EHM/EP is therefore more in line with the organisation's accordance with "intensive" forms of parenting, including "attachment" philosophies (Faircloth 2021).

For the NHS, the labour associated with EHM is communicated via much less affective language:

14. Some parents choose to combine breastfeeding, expressing and formula feeding. This means that your baby benefits from having breastmilk, you are more likely to produce enough milk because you're expressing between feeds and your partner or other family member can help out with feeds when you use formula. **However, it can be very complicated**, **time consuming** and **tiring** to combine all 3 methods and you will **have to buy equipment** such as sterilisers, bottles and pumps (if you decide not to hand express). (NHS)
15. Sometimes it takes a little while for your milk to start flowing. Try to choose a time when you feel relaxed. Having your baby (or a photo of them) nearby **may** help your milk to flow. You **may** find it easier to express if you cover your breasts with a warm towel first, or after you have a shower or bath. (NHS)

Extract (14) refers to combining DBF with EHM and formula feeding. It begins with some potential benefits of this approach, which are then tempered via the concessive clause "However…". This signals a shift to negative evaluations of mixed feeding methods based on time commitment, complexity, physical exertion, and expense. This is effectively a list of reasons not to EHM or formula feed based on practical implications.

When it comes to advice on how to EHM, as shown in example (15), the NHS hedges its commitment to the certainty of positive outcomes with modal auxiliary "may" ("may help your milk flow" and "you may find it easier…" and softened verbal command "try to". Both the NHS and LLLGB emphasise that expressing only 'works' when it is done under the right conditions: when the person expressing feels relaxed enough for the milk producing hormones to come into effect, or with the application of heat.

5. Discussion and limitations of the study

Our analysis has demonstrated, through corpus-informed feminist critical discourse analysis, how current UK public health and third sector organisations marginalise EHM in the advice they provide to new parents on how to feed their babies. This marginalisation can be traced through keywords analysis, highlighting the underlexicalisation of EHM in the Babyfeeding Advice Corpus, and a privileging of lexical patterns relating to DBF, as well as more discursively via examples of statistically key feeding terms in context.

We have also shown, via two case studies consisting of online advice from LLLGB and materials produced by the NHS, how EHM seems to strike at the heart of tensions between "natural" and "scientific" parenting. This is manifest through three ideologically salient discourses of EHM in the data: (1) EHM as supporting DBF/mitigating a failure to DBF; (2) EHM as disrupting 'natural' processes of feeding; and (3) EHM as labour-intensive. Some of these discursive representations chime with other work on online personal accounts of 'exclusive pumping' (Coffey-Glover 2020) where some women bloggers referred to feelings of failure at being 'unsuccessful' with DBF, and the commitment and dedication which is sometimes required to exclusively pump milk in place of DBF.

We argue that integrating tools from corpus linguistics within a broader feminist critical discourse analysis approach is fruitful for analysing infant feeding as a social practice, since it allows for the identification of language patterns that can contribute to the (de)construction of gender as an ideological structure. For example, conducting thematic analysis of keywords established a prevalence of breastmilk and maternal body terms, and feminine-gendered social actor parent terms outrank masculine-gendered equivalents (see section 4.1 above). There is also a relative under-representation of gender-neutral terms (such as *chestfeeding*, *parent* and *partner*). This points to a privileging of both cisgendered embodiment and assumptions that women are (still) represented as primary caregivers – corpus-informed FCDA therefore facilitates uncovering language structures that serve to reinforce gender norms in the Babyfeeding Advice Corpus.

The potential reach of our findings and research design in this study necessarily has some limitations: public babyfeeding advice messaging is only one aspect of infant feeding discourse, and the projected effects of this discourse on new parents' experiences of infant feeding remains speculative here. Further research is therefore needed to establish parents' perceptions of the impacts of language choices on parents' infant feeding decisions and experiences, for example through the analysis of social media narratives, or research interviews. However, the findings of the current study do point to some important

implications for infant feeding education policymakers and HCPs who support parents who choose to EHM. These are outlined in the following section.

6. Implications and future outlook: a call to promote more inclusive language in infant feeding education and policy

Our analysis of broad lexical patterns in online public health and third sector advice materials has demonstrated that EHM takes up a marginalised position in the broader babyfeeding landscape, and that the language choices currently used in parent-facing advice from major infant feeding organisations have a tendency to conflate human milk feeding with DBF and emphasise the bonding potential of DBF over other forms of feeding. This serves to uphold a discourse of 'breast is best', as well as normalising the message that '*at the* breast is best'.

Specifically, the language of LLLGB online advice materials reflects an ideology of "natural mothering" (Bobel 2003), in line with LLLGB's fundamental philosophy of "Mothering through breastfeeding" as "the most natural and effective way of understanding and satisfying the needs of the baby" (La Leche League International, cited in Faircloth 2021: 86). Their discussion of EHM reveals this preoccupation with the 'naturalness' of DBF. The sometimes contradictory advice from LLLGB on EHM in our data reveals tensions between a commitment to 'natural mothering' and the technological affordances of breast pumps, which can facilitate long-term human milk feeding (and so aligns with LLLGB's philosophy of 'full-term breastfeeding'), but is simultaneously seen as disrupting the 'parent-child dyad' which is central to attachment parenting philosophies (Sears and Sears 2001: 2). While the NHS' advice on infant feeding is arguably less emotive, there is still the implication that EHM is 'second best' to the 'ideal' of DBF, rather than recognising EHM as a legitimate feeding option with all the same nutritional benefits as DBF.

LLLGB's philosophy of 'mothering through breastfeeding' has the potential to impact negatively on the wellbeing of new parents, in a number of ways. Firstly, the assumption that mode of feeding determines degrees of emotional attachment (implying that those who choose not to DBF will not have the same close relationships to their children as those who do) is both reductive and marginalises other caregivers (such as fathers and non-chestfeeding parents). It also effectively promotes traditional gender roles, since placing the expectation of full-term DBF on women can significantly hinder their (re)entry into paid labour (Costa Dias et al. 2020). The focus on at-breast feeding and dissuading formula feeding or mixed methods neglects the fact that many breast/chest-feeding parents will likely need to express at some point if they wish to (return to) work, and this is partly what makes breastfeeding a privileged activity: it is for those who can *afford* not to worry about having to juggle childcare with paid labour. It is in these ways that the promotion of DBF becomes part of a broader policing of possible gender performances – Butler's (1990, 33) "rigid, regulatory frames" – which limits women's participation in the workforce and career progression, as well as the boundaries of motherhood, and thereby contributes to the patriarchal status quo.

The fact that LLLGB and the NHS publish these messages on publicly available websites, as a form of more traditional media technology, has implications for both the reach and perceived importance of this messaging: as relatively 'static' media (in that they are infrequently updated compared to more 'dynamic' forms of online content), the advice on these websites can be seen as relatively fossilised, and therefore, we would argue, reified. The greater accessibility of the advice materials (in comparison with, say, parent information apps or social networks requiring a membership or paid subscription), as well as the fact that LLLGB and the NHS are likely seen as trusted sources of information on infant feeding, also means that these discourses of EHM are likely to have high levels of influence on parents' attitudes and infant feeding decisions.

While some researchers have cautioned that more work needs to be done to identify issues specific to EHM, such as whether breastmilk degrades during storage or the potential for storage containers to 'leach' (Rasmussen et al. 2011), rates of EHM are increasing (Geraghty et al. 2013: 181), and there is evidence that women who make the decision to EHM (either partially or exclusively), often feel unsupported in this choice (e.g. Anders 2022; Wei Pang et al. 2017; Coffey-Glover 2020). The present study has also highlighted how EHM is often discursively constructed as in support of DBF, which means that EHM is delegitimised as a 'breastfeeding goal' in its own right. However, we would propose that for health practitioners involved in BF advocacy, what should matter is the substance, not the mode of feeding (and particularly when there is not substantial evidence that bottle feeding significantly impacts on infant-parent bonding – see Couch and Manderson 1995; McInnes et al. 2015).

Our data clearly indicates that there is currently a lack of support and education for EHM in UK infant feeding support, and we argue that this starts at the level of language. We would recommend that organisations involved in public education on breast/chest-feeding incorporate the following set of principles, as a first step in providing more inclusive support for parents, regardless of who they are of what mode of feeding they choose:

1. Rather than seeing EHM as a 'route' to or 'substitute' for DBF, use language which values EHM as a feeding method in its own right. This involves recognising EHM as a *form* of breastfeeding, with wider acknowledgement of both the distinctions and similarities between DBF and EHM. This can be achieved through the following:
    a. Wider adoption of 'DBF' and 'EHM', as well as phrasing which acknowledges that human milk can be delivered through multiple means e.g. 'at-breast feeding' as well as 'bottle-feeding' (see e.g. Rasmussen et al. 2017: 511).
    b. Relatedly, avoidance of feeding binomials such as *breastfeeding vs bottle-feeding* and *breastfeeding vs formula feeding* (as in, 'do you breastfeed or formula feed?'), since bottle-feeding is not synonymous with formula feeding, and breastfeeding is not in opposition to bottle-feeding (Anders et al. 2022; Rasmussen et al. 2017: 511).
2. Avoid language that over-emphasises the mechanical nature of expressing. For example, rather than verbs like 'extract', use 'express', and rather than 'transfer' or 'deliver', use 'feed'.

3. Avoid descriptions of DBF that over-emphasise the potential for emotional bonding at the expense of EHM or formula feeding. This will go some way to mitigating any feelings of guilt associated with parents who are not able to/do not wish to DBF.
4. Use gender-inclusive language to refer to parents, including non-breast/chest-feeding partners. This can be achieved through the following:
    a. Terms such as 'women and parents' to refer to breast/chest-feeding parents (see Green and Riddington 2020)
    b. Phraseology such as 'parents who produce milk', which avoids the assumption that the human production and feeding of milk are part of the same process (i.e. that one can produce milk via milk ducts, then feed via a bottle, cup or tube).

This list is non-exhaustive, but points to some ways that organisations can consider the impacts of language choices on how EHM as a feeding choice is currently communicated to new parents in UK infant feeding support. Aside from the biomedical aspects of EHM, what is also needed is a better understanding of the linguistic and cultural practices associated with EHM, including how discourses of EHM in current UK infant feeding advice is negotiated by healthcare professionals and new parents in community settings. Further studies with a wider scope could examine the relationship between maternal employment and EHM and EHM advice in diverse socio-political and cultural contexts, within and beyond the UK, to better understand how to support parents who EHM.

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