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Research

An exploratory analysis of enablers of exclusive breastfeeding in England: Positive deviance in practice

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Background

Breastfeeding is an impactful public health intervention, playing an important role in short and long-term infant health, cognitive development and maternal health, and reducing strain on health services. Worldwide, we are approaching the Global Nutrition Target of 50 percent of infants exclusively breastfed at six months. However, the rate in the United Kingdom is only one percent.

Objective

This research explored exclusive breastfeeding in England, through interviews with mothers who practiced positive deviance by exclusively breastfeeding, alongside midwives and breastfeeding advocates, who facilitated the practice, to inform future policy and practice change.

Methods

A qualitative study was undertaken to explore exclusive breastfeeding practices and perceptions. Semi-structured face-to-face interviews took place with twelve mothers who had exclusively breastfed and two advocates; additionally, a focus group using participatory reflection tools was conducted with six midwives. Data were analysed using Reflexive Thematic Analysis, generating three themes and nine subthemes. Findings were analysed through a power lens.

Results

Breastfeeding does not have a prominent position in society, and an improved breastfeeding culture is essential. Support from professionals, peers and partners is instrumental in successful breastfeeding, as are the time and financial resources required. Maternal agency, a breastfeeding mindset and the ability to self-advocate are contributing factors, alongside transparent information on infant feeding.

Conclusions

Robust maternity protection and increased marketing restrictions for the breast milk substitute industry are vital for increasing exclusive breastfeeding rates. Systemic support mechanisms and appropriate resourcing give power to the mother. Promotion of breastfeeding and availability of transparent information on infant feeding allows informed choices to be made and supports a breastfeeding mindset, enabling power within. A societal commitment to breastfeeding and an integrated breastfeeding culture is required to facilitate these changes, utilising the collective power of multiple actors and enabling factors. These elements are necessary for displacing commercial power and tackling ineffectual governance and leadership.

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INTRODUCTION

Breastfeeding is one of the most impactful practices available for optimal public health, supporting the health of infants and children and the prevention of obesity and non-communicable diseases (NCDs) like cardiovascular disease and type two diabetes (Bhutta et al. 2013; Gura, 2019; Rollins et al. 2016; WHO, 2024). It is important for the health of the gut microbiome and immune system and the prevention of and recovery from infection and inflammation. Breast milk adapts to different stages of infant development and is the optimum source of energy, nutrients and hydration. Breastfeeding supports cognitive development, social skills and maternal-child bonding (Chalifour et al. 2023; Victora et al. 2016). It supports maternal health, birth-spacing and reduces risk of NCDs like breast cancer (Victora et al. 2016).

However, despite widespread knowledge of its importance, exclusive breastfeeding (EBF) - defined as only breastmilk, with no other food or fluids for the first six months of life (World Health Organization, 2024) - is not always implemented, due to numerous challenges, barriers and a lack of effective or timely support: globally, rates have reached 48 percent of infants EBF, a ten percent increase in the last decade (Global Breastfeeding Collective, 2023) - approaching the related 2025 Global Nutrition Target (GNT) of 50 percent and supporting the achievement of Sustainable Development Goals (SDGs) Two, Three and Ten. Many high-income countries (HICs), however, have low EBF rates (Victora et al. 2016), with breastfeeding initiation and continuation rates linked to socio-demographic inequalities (Simpson et al. 2021). The United Kingdom (UK) has one of the lowest global rates, at one percent, based on the national infant feeding survey of 2010, despite initiation rates of 81 percent (UNICEF UK, 2022). We await the results of a 2023 national survey (Office for Health Improvement and Disparities, 2023).

A range of legislative frameworks, declarations, voluntary measures and guidance materials have been designed to facilitate breastfeeding worldwide (Appendix 1). Standards like the Baby Friendly Initiative (BFI), launched by the World Health Organization (WHO) and UNICEF to protect, promote and support breastfeeding and increase initiation and duration rates globally (UNICEF UK, 2016), have been endorsed for use in the UK (Public Health England, 2021), but have had limited impact here. Similarly, the International Code of Marketing of Breastmilk Substitutes (‘the Code’), aimed at regulating the aggressive marketing tactics of the $55 billion breastmilk substitute (BMS) industry, is not fully implemented (Baker et al. 2023). Frameworks like the Breastfeeding Gear Model (Pérez-Escamilla et al. 2012) demonstrate the significance and interdependence of multiple conditions for breastfeeding and how they work together to create an enabling environment for the practice, but this is not fully recognised by decision-makers (Figure 1). Governance for breastfeeding is not prioritised in the UK (Appendix 2); the World Breastfeeding Trends Initiative (WBTi) 2024 scored England 3/10 for Indicator 10, *National Policy, Governance and Funding* (WBTi, 2025). With a resolution agreed at the 78th World Health Assembly that 60 percent of infants globally be exclusively breastfed by 2030, appropriate measures must be instituted and meaningful action taken (World Health Organization, 2025).

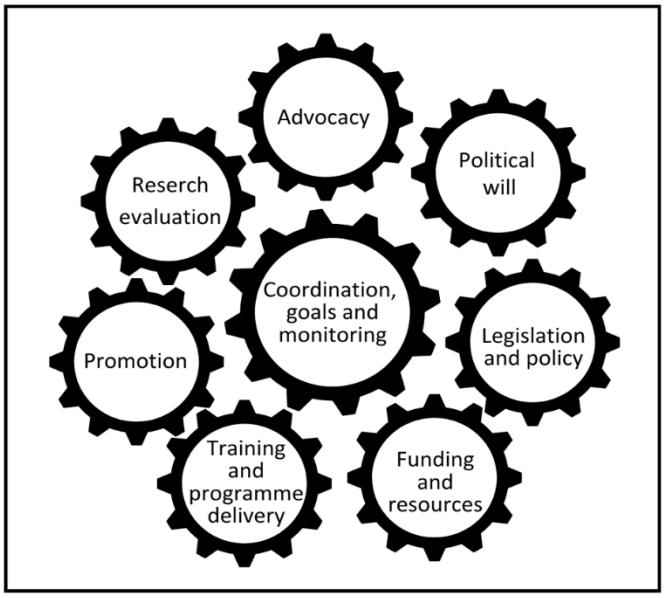

Figure 1. The Breastfeeding Gear Model (Pérez-Escamilla et al. 2012)

RATIONALE

The focus here is England as infant health within the UK is devolved, and England has not seen improvements in breastfeeding the other nations, especially Scotland, have (Kendall et al. 2022, McFadden et al. 2022). England has a total WBTi score of 44.5/100; just 53 percent of hospitals registered as Baby Friendly; no infant and young child feeding (IYCF) strategy, multimedia communications plan, or lead, coordinator and committee; and limited implementation of the Code (Kendall et al. 2022; WBTi, 2016; WBTi, 2025). Additional research could contribute to the evidence for improved protection, promotion and support of breastfeeding.

A number of studies have demonstrated a lack of enabling environments for breastfeeding in England, and an evident power imbalance, with limited financial and human resources for promotion and support (Fox et al. 2015; Gura, 2014; Kendall, 2022; Lavender et al. 2006; McFadden et al. 2017; Pérez-Escamilla et al. 2017; Prentice, 2022; Rollins et al. 2016; Ryan et al. 2016; WHO, 2017). This is alongside an established formula-feeding culture, underpinned by the power of the BMS industry and lack of protection for breastfeeding (Baker et al. 2023).

There is, however, limited research on the practices and perceptions of women who did exclusively breastfeed. This research investigates why positive deviance - which Marsh et al. (2004) characterise as the practice of uncommon, beneficial health behaviours – occurs and what facilitates EBF. A positive deviance approach – focused on a sample of mothers who exclusively breastfed – informed recruitment, to allow insight into the process to EBF, based on real-life scenarios (Foster et al, 2022) Avenues of support; maternity protection; protection from industry; availability of information for IYCF decision-making; and prioritisation of breastfeeding in society will be explored (Arendt and Sterken, 2019; Baker et al. 2023; Bartle and Harvey, 2017; Griswold and Palmquist, 2019; Keith et al. 2019). So too will the role of intention and determination, and of agency, which Moore (2016) defines as a feeling of control,

incorporating core beliefs and contextual knowledge. The findings are analysed through a power lens (Gaventa, 2006; Gibson, 1991; Keith 2021).

Existing literature largely concentrates on barriers to breastfeeding. This research focuses on mothers in England who exclusively breastfed – a demonstration of so-called positive deviance – exploring what or who enabled them, and examining social and political influences on the practice.

METHODOLOGY

APPROACH

A qualitative approach was chosen to gain insight into the subjective experience of each participant and address the study's aim and objectives, which are concerned with human experience (Draper, 2004). The positive deviance demonstrated in the mothers selected to participate gives insight into what strategies work for increasing EBF rates, utilising solutions already shown to be feasible in this context (Rose and McCullough, 2017).

SAMPLING AND RECRUITMENT

Purposeful sampling was used for recruitment, and the positive deviance concept informed the recruitment of mothers who had exclusively breastfed in the preceding four years ('mothers'). Key informants supplemented the interviews with mothers; these were registered midwives and final-year midwifery students ('midwives') and recognized breastfeeding advocates ('advocates'). This supported breadth of understanding and showed varied perspectives and awareness of the connectivity between different actors in the breastfeeding arena, alongside triangulation of data. Midwives and advocates were also considered to have insight into political, structural, and commercial contexts affecting EBF.

The timeframe for mothers was chosen to support accurate recall, adding validity. Furthermore, Covid-19 mitigating measures may have impacted breastfeeding experiences, so the study focused on 2020 and beyond (von Rieben et al. 2022). Participants included those who had delivered vaginally or by caesarean section. Those with depression, pregnant, or with children under six months were excluded for ethical reasons.

Insider status facilitated recruitment: mothers located in London, the East and Southeast of England were approached directly or recruited via an advertisement to parents at a pre-school in North East Essex - an area with a predominantly White population (Essex County Council, 2024) - with which the researcher was connected. Advocates living and working in England and beyond were approached directly. Midwives from across two English counties were recruited via a gatekeeper, who hosted a focus group. Twelve mothers, six midwives and two advocates participated. Interviews continued until no new codes were identified, which Saunders et al. (2017) call inductive thematic saturation.

QUALITY ASSURANCE

Ethical approval was obtained from the University of Westminster (eth2324-2588). The first author acknowledges the bias that may have come from her connections to some participants, and from her positionality as a White woman with an educated background who exclusively breastfed her own children.

Health and safety concerns were considered minimal and were mitigated via a risk assessment. Participants were provided with an information sheet, consent was sought, and findings after completing the research were shared.

DATA COLLECTION AND ANALYSIS

Most data were collected via semi-structured, lived-experience, face-to-face interviews. Open questions supported in-depth exploration. The midwife focus group was framed around i) a day in the life and ii) exploration of BFI standards, as participatory reflection tools to support depth and accuracy. The group dynamic contributed to understanding experiences and gathering rich data. The processes were inductive, shaped by participants and reflexive: the researcher was an experienced and recent breast feeder, which supported connection, trust and empathy, facilitating insight into perceptions and experiences. Thus, the researcher was an active participant in the data gathering process (Braun and Clarke, 2019).

Audio recordings of all interactions took place (except one, where permission was denied for privacy reasons), allowing the researcher to be fully present, enabling meaningful conversation and supporting reliability. A topic guide supported focus but allowed flexibility to explore new areas (Green and Thoroughgood, 2018). A pilot interview improved appropriateness. Transcription of interviews followed, providing the opportunity for revisiting data. All data were managed in accordance with GDPR legislation, confidentiality maintained, and findings anonymised.

Reflexive Thematic Analysis was undertaken (Braun and Clarke, 2019). Manual pattern coding provided intimacy with the data. Summaries were collated around central organising concepts, and themes generated (Table 1) to find meaning (Braun and Clarke, 2006). An adapted version of Gaventa's Expressions of Power (Gaventa, 2006; Keith, 2021) was used as an analysis tool, as different forms of power were considered important in IYCF practices, from the literature review and research findings (Figure 2). Positive deviance principles were used for recruitment only; a positive deviance framework was not applied to data analysis or interpretation as the research was not seeking out the voice of those who did not exclusively breastfeed as a point of comparison (Rose and McCollough 2027).

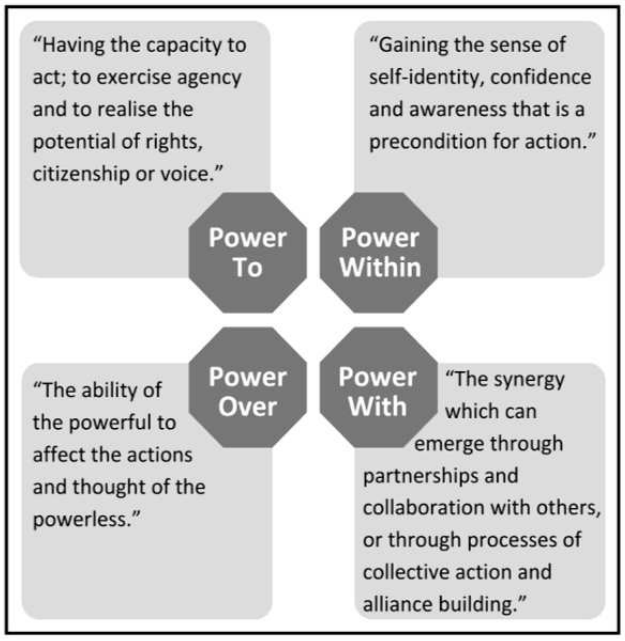

Figure 2. Gaventa's Expressions of Power

RESULTS

Through analysis of the data, three themes and nine subthemes were generated (Table 1).

Table 1. Themes and subthemes generated from the data collected

Themes	Subthemes
The position of breastfeeding in society	▪ Sources of support for breastfeeding ▪ An enabling environment for breastfeeding ▪ An enabling breastfeeding culture
The role of agency in breastfeeding outcomes	▪ A breastfeeding mindset ▪ An informed choice ▪ The ability to advocate for self
Navigating a way forward	▪ Protect ▪ Promote ▪ Support

THEME 1: THE POSITION OF BREASTFEEDING IN SOCIETY

This theme relates to how breastfeeding is positioned and prioritised in society.

SOURCES OF SUPPORT FOR BREASTFEEDING

Midwifery support was frequently mentioned. In hospital, midwives were considered essential support for latching-on, positioning and expressing colostrum. One mother was able to access a specialist breastfeeding team when struggling. Another had follow-up phone calls from a midwife, specifically on breastfeeding. The role of midwives in enabling confidence featured highly. Participating midwives talked with pride of their role in breastfeeding success: their prioritisation of skin-to-skin, troubleshooting anatomical issues like inverted nipples, or introducing alternative techniques when needed, like cup feeding.

The role of the father was considered key. Having time and space to breastfeed was an enabler, with supportive partners leading on older-child care and domestic duties whilst breastfeeding was established, providing water and snacks, and setting boundaries with visitors. Respect for the mother-child feeding relationship was important, with fathers completing other caregiver tasks. For the one mother whose partner was not supportive, her own mother took this role.

A community of peers supported EBF, from anonymous support online to breastfeeding friends. Sisters were frequently seen as role-modelling breastfeeding success. Informal support was often linked to solidarity and combating loneliness: several mothers cited the value of chatting online during night feeds.

> "The midwife said, 'don't worry, we're going to get you sorted. I'm an absolute breastfeeding expert; you're going to be absolutely fine.' And just her saying that gave me so much confidence and the moment I was skin-to-skin, it just started working. And I've never had any problems since." Mother 10

> "[An acquaintance] reached out and said, 'I've heard you've had a baby; I'd really love to come and help you.' And she knew of my struggles with the breastfeeding, and she came over, and she sat with me… and helped me and showed me more techniques. 'Well, I know what you're doing is great, but have you tried this?' And she spent two hours with me." Mother 11

AN ENABLING ENVIRONMENT FOR BREASTFEEDING

Time and resources for breastfeeding – or capacity - were important for all groups. One advocate noted that lobbying for systemic change was predominantly left to women, often in addition to existing workloads. For mothers, time for breastfeeding was key; an unexpected source being the Covid-19 pandemic, with fewer opportunities to go out, limited visitors, and partners working from home or on furlough. All participating mothers either did not have to return to work or had sufficient maternity leave to enable EBF.

Lack of time, brought about by staff under-resourcing, was a significant barrier to midwives in hospital and community settings. They spoke of the pressures of 'bed blocking' and how introducing BMS sped up the discharging process. Seven mother-baby dyads per midwife on the postnatal ward, or ten community visits per day, meant breastfeeding was not prioritised over other duties. Some processes were deemed a hindrance to breastfeeding support, including significant time recording and duplicating information, and excessive mandatory training. Staffing resources were considered inadequate by many mothers, with a lack of staff continuity.

Financial resources were instrumental in EBF. In addition to not needing to immediately return to work, some mothers paid for services to enable breastfeeding, including classes and tongue-tie or lactation specialists. The advocates talked of underfunding, including statutory maternity pay at less than half the minimum wage and a 'postcode lottery' for support. Competition for limited funding affected synergy between different advocacy groups. Available resources were considered underutilised, from the Healthy Start allowance, to much BFI literature unfamiliar to mothers and midwives or not adapted suitably to specific contexts. Midwives were not aware of their Trust's official feeding policy.

AN ENABLING BREASTFEEDING CULTURE

The breastfeeding culture in England was considered, by all groups, to be lacking in integration and prominence.

However, there were some enabling elements. Midwives advocated for practices that support breast milk production, like rooming-in - implemented by all mothers interviewed. The perception of breastfeeding as normal was important, with mothers feeling at ease around those comfortable with breastfeeding. Indeed, ten of the mothers or their siblings had been breastfed. EBF was enabled by a lack of safety nets in the house, like bottles. Many mothers provided peer support to others, enabling breastfeeding through advice, solidarity or practical gifts. In wider society, cafés and shops with encouraging signage and spaces for breastfeeding were considered empowering.

There were clear perceptions on what prevents the development of a breastfeeding culture, with the advocates most concerned about the lack of resources for breastfeeding promotion and support, and limited protection from the BMS industry, particularly the marketing of follow-on milks and misuse of free samples. Many mothers saw BMS as the default in healthcare settings and more available in supermarkets than products to support breastfeeding.

All groups commented on a divisive two camps mentality to IYCF in England. Advocates were frustrated by organisations undermining already weak legislation. Midwives spoke about how triggered colleagues could feel supporting breastfeeding if they did not breastfeed their own children. Many mothers attributed an apparent societal fear of offending or upsetting formula-feeding mothers for the silence around breastfeeding. There was consensus on the need for more breastfeeding-friendly environments, to support feeling comfortable and dignified in public. A default formula-feeding culture was perceived, with society-wide perceptions of breastfeeding as the harder option, BMS a lifeline for stressed mothers, sexualised views of breasts, and expectations for mothers to quickly return to their former selves.

> "They had a room at the top, it had a really beautiful, comfortable chair, it had a changing area, it had even a little box of toys for if you were with a toddler as well, some newspapers and magazines... And I just remember going up and seeing that there was a breastfeeding room and thinking, oh, this is wonderful!" Mother 11

> "It's just about perseverance and time. And I recognise that there was a certain amount of privilege and that I did actually just have the time to persevere. I didn't have to rush back to work; I had supportive people around me which meant I could just sit there and breastfeed all day." Mum 3

> "Midwives are relieved if they're formula feeding, always. It's less work; you haven't got to do much. I'm guilty of it, because I don't have time, and a baby takes ages to latch on... I'm a massive advocate for breastfeeding, but I don't have the time." Midwife 2

THEME 2: THE ROLE OF AGENCY IN BREASTFEEDING OUTCOMES

This theme relates to the perceived significance of agency in allowing mothers to decide and take a course of action in IYCF.

A BREASTFEEDING MINDSET

The importance of breastfeeding as the primary feeding method was clear in discussions with all mothers. Some talked of breastfeeding as the only option, whilst others had previously used BMS, often for reasons perceived as beyond their control, and were therefore intent on exclusively breastfeeding this time. In all cases, breastfeeding was a pre-planned choice. Mothers and midwives talked of the importance of determination: all mothers experienced challenges that had to be overcome to exclusively breastfeed, including problems with latch or mastitis; funding cuts or Covid-19 causing a lack of support or absence of services; and/or unhelpful comments or negative language around breastfeeding. Despite this, each mother spoke of finding solutions and of an ultimately positive breastfeeding experience. Determination was also evident when mothers were told to stop breastfeeding by healthcare professionals but continued.

> "I just got on with it, because it *was* going to work. It was a completely different mindset this time. I knew what I was doing, I had read up a bit more since having [older child] and since the issues there." Mother 8

> "The mum needs to be sure of her feeding choice. If there is even one percent of doubt, I think the woman will ultimately formula feed." Midwife 4

AN INFORMED CHOICE

Feeding choice was partly informed by transparent information. The benefits of breastfeeding to infant health were important to mothers; and fewer illnesses, the prevention of obesity, and the healing properties of breastmilk were cited by all groups, although only the advocates group spoke of the maternal benefits. Mothers said that honest accounts of breastfeeding were useful, like difficulties encountered, different feeding positions, or reassurance that it does get easier. Mothers were frustrated by messages like, 'if you're doing it right, it shouldn't hurt', as it did not offer solutions.

Only four mothers spoke of the health disadvantages of BMS, alongside personal observations such as formula tasting off-puttingly sweet, and none had found substantial information on BMS via their own research. The advocates warned of the tactics and impact of BMS marketing and considered the industry to have excessive power in governance settings.

Many participants were avid researchers on breastfeeding, so feeding choices were considered. Mothers gave examples of established best-practice, like responsive feeding. Many felt that breastfeeding was not prioritised antenatally during midwife appointments or classes (NHS or private), with insufficient signposting to resources; nor was practical, skills-based advice given. An ability to disregard misinformation was apparent; examples included insufficient milk supply, breastmilk damaging to teeth, or a defensive 'fed is best' stance. Mothers also had to navigate mixed messages in healthcare settings.

> "I read a lot of reports... I would just sit there and research things or listen to books or listen to podcasts and I'm kind of trying to understand everything because that's the way I say my brain works, that I need to know everything and then I can go in and I'm like, yeah okay, I got this." Mother 12

> "[Marketing] is rampant, pervasive, in-your-face and it has made it seem like [formula] is normal and that it's appropriate. And that's on social media when mothers are looking for anything related to infant feeding. Adverts come up and digital marketing has just kind of proliferated and we've got evidence to show that it also kind of normalises formula feeding and bottle feeding, but it also influences women's ability to make informed choices." Advocate 2

THE ABILITY TO ADVOCATE FOR SELF

Several mothers had to push to continue EBF. All mothers who engaged with health services for the baby, due to prematurity, jaundice, weight loss, or allergies, had BMS recommended. One was asked to leave her newborn at home when readmitted to hospital and had to advocate for them to stay together. In wider society, mothers spoke of the importance of self-advocacy for feeding in public, refusing social invitations, or a return to work that would interfere with breastfeeding. The impetus for self-advocacy included knowing one's rights, confidence to state preferences, or feeling able to ask for help.

> "They kept calling it breastfeeding jaundice. And it was horrible because, you know, I always have this notion that obviously breast milk is best. And then on the other hand, they were telling me that basically it's because I was breastfeeding that she had jaundice. So, I felt so caught in-between. So, I did feel a bit of pressure to then give her formula. But then I had so much milk that was coming out, it just felt silly to do that." Mother 10

THEME 3: NAVIGATING A WAY FORWARD

The participants spoke about enablers, barriers, and their perceptions on what would increase EBF. This was categorised in line with the Innocenti Declaration's protect, promote, support model (Appendix 1):

PROTECT

All mothers had a minimum of six months maternity leave, enabling EBF. The advocates spoke of the importance of widening maternity policies in relation to pay, leave, and spaces for breastfeeding, with policies to shift from 'benefits' to 'entitlements'.

The midwives talked of a move to plain packaging of BMS in their Foundation Trust (public healthcare services, regulated by NHS England). The advocates spoke of the need for increased marketing restrictions to limit the power of the BMS industry.

> "What we must do is stop misleading parents that [breastmilk substitutes] are safe.... We should really address that [and] about why breastfeeding is so important." Advocate 1

> "I would love to know who decided that when you have a baby, you only need 2/3 of your salary... There's a lot of research to show that breastfeeding rates reduce when women go back to work and that paid maternity leave has other benefits besides supporting breastfeeding. So, things like child health, increasing immunisation, women's health, maternal mental health... It should be six months of fully paid maternity leave, because that's what the public health recommendation is." Advocate 2

PROMOTE

The BFI standards in perinatal hospital care were considered important for promoting breastfeeding by midwives and advocates, but implementation was perceived as inconsistent. Innovation in breastfeeding promotion was regarded as key, with digital, political and celebrity avenues suggested, and normalising the practice by seeing it more online and on television. Greater societal awareness of the benefits to mother, baby and public purse were considered necessary. Midwives spoke of barriers encountered through the lack of general promotion of breastfeeding, with women favouring familiar feeding approaches. However, midwives considered it their role to support the mother's feeding choice rather than engaging in advocacy explicitly relating to breastfeeding.

> "I think it needs more exposure, like seeing people on TV breastfeeding. Just imagery of it which diffuses the taboo and demystifies it a little bit, because it's actually a pretty straightforward thing. But I think it's almost pitched as the harder option... I think there's something about it not being very visible and it's almost like the whole of society colludes to make [breastfeeding] this taboo thing." Mother 3

> "I think the information about what it actually offers is important, rather than generic 'breast is best'. What does that even mean? Like the specific information about what it can offer them and how it changes as they get older. I found that really interesting." Mother 4

SUPPORT

Whilst support was universally agreed to be fundamental for EBF, it was not always available, accessible, or affordable, and increased capacity was needed for professional breastfeeding support after discharge from hospital. Midwives spoke of a mismatch between midwife and health visitor prioritisation of breastfeeding and that increased synergy was required. No NHS antenatal classes took place in the midwives' Trust.

Mums spoke of the absence of supportive environments for breastfeeding and how more safe spaces were needed. All groups wanted a cultural shift on perceptions of breastfeeding, with allies from multiple sectors. Advocates spoke of a need for government-level strategy to move the burden from individuals and support women to achieve their feeding goals.

> "For me, it's like a societal shift. I mean when you suggested coming [to this cafe], I know there's a *breastfeeding friendly* sign here, and even those kind of things just makes it more normal and accepted... I went to a play park the other day and I walked in and there was a mum in the cafe feeding. I popped my head outside and there was a mum feeding out there and I think it's just seeing it more and more and I think it's more of the norm than the bottle then." Mother 7

DISCUSSION

EXPRESSIONS OF POWER

Throughout this study, the significance of power has been clearly apparent. The analysis was therefore conducted through a power lens, using an adaptation of Gaventa's power framework (Figure 3). Each theme demonstrates the importance of a different expression of power and how, utilised effectively and collaboratively, they could be instrumental in disrupting the current mechanisms of power over preventing England from reaching breastfeeding targets, including ineffectual governance and the BMS industry. The power framework has therefore been adapted as a continuum, with increasing impact on power over, and at its strongest together (Figure 4).

POWER TO

To understand the position of breastfeeding in England, a look at context is necessary. Appendix 2 shows factors that have created an environment for a formula-feeding culture, alongside the impact that budget cuts to health and social care have had on preventative health measures like breastfeeding. A societal shift to a breastfeeding culture is required, where breastfeeding is considered a right, as introduced in Scotland (McFadden et al. 2021), and enabling environments exist in public spaces.

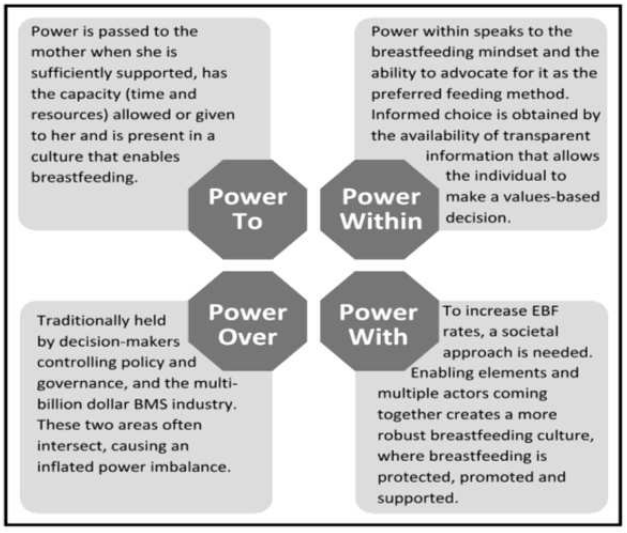

Figure 3. The findings of this research mapped to Gaventa's power framework

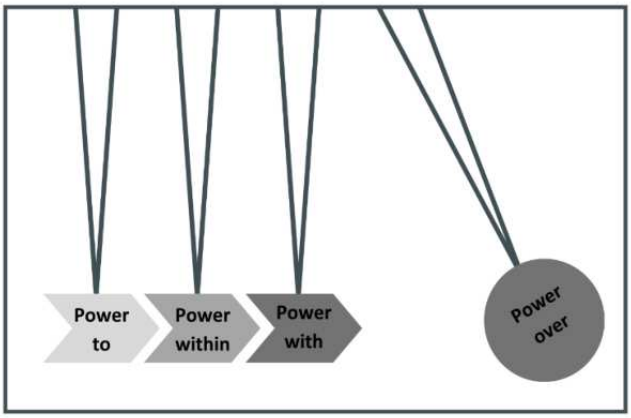

Figure 4. A power continuum, based on the stylised idea of gaining momentum to displace an object. Power framework adapted from Gaventa

Breastfeeding needs to be adequately resourced, ensuring appropriate capacity, within the health sector. This includes financial and human resources to allow for time to be dedicated to breastfeeding support and removing the reliance on the woman's own capacity, which supports equity (Keith, 2021). Evidence shows that interactions with appropriately trained healthcare professionals are vital for continuation rates, and this support must be face-to-face, predictable, and ongoing (McFadden et al. 2017). Capacity for breastfeeding prioritisation antenatally enables realistic rather than idealistic preparation for breastfeeding (Fox et al. 2015) and allows the involvement of partners, enabling effective informal support streams and contributing to a wider breastfeeding culture.

Support from multiple sources is valuable and research has found that interventions with a combination of professional and peer support sustained breastfeeding (Fox et al. 2015), with community-level modelling of positive deviance shown to be a mobilising factor (Marsh, 2004). However, a reliance on breastfeeding support from informal or volunteer sources indicates a lack of prioritisation nationally and relies on a sufficient breastfeeding culture to ensure informal routes are viable - herein lies the paradox.

Investment in breastfeeding is hindered by a siloed and reactive approach to healthcare that fails to consider the broader, long-term implications. To reposition breastfeeding, the developmental, food security and environmental benefits need to be acknowledged by political leaders, as well as health benefits (Baker et al. 2023; Zalmanovitch and Cohen, 2013). A shift to valuing breastfeeding as an economic contributor is necessary. This includes the significant savings it brings to the NHS (Renfrew et al. 2012). Thus, there are calls to include breastfeeding in GDP calculations (Baker et al. 2023).

A gendered look at power over (Figures 2,3) partly explains the lack of political commitment to breastfeeding in England, with ministerial maternity leave only formalised in 2021 (Rhodes et al. 2021). After all, if mechanisms needed to facilitate breastfeeding are not relatable to policymakers, their adequacy cannot be fully assessed.

It was evident that the positive deviance of the mothers in this study was reliant, in part, on the appropriate positioning of breastfeeding. Prioritisation, through the strengthening of the breastfeeding culture and a sufficiently resourced healthcare system, would contribute to an environment that gives power to more women (Figures 2,3). Power is passed to the mother when she is sufficiently supported and equipped with the necessary skills, has the capacity allowed or given, and is present in a culture that enables breastfeeding. This enabling environment at institutional or societal level gives power to the individual (Gibson, 1991) and fosters power within.

POWER WITHIN

The second theme demonstrates the importance of agency in infant feeding (Moore, 2016). Agency here is part-fuelled by available and accessible information relating to the benefits of breastmilk, paired with transparency on the disadvantages of BMS and the significant role of the BMS industry in perceptions on IYCF (Baker et al. 2023). All mothers interviewed had investigated the beneficial properties of breastmilk before giving birth. Few, however, had come across information on the negatives of BMS, such as links to increased infant hospitalisation, infection, obesity and lower levels of docosahexaenoic acid connected to brain development (Chalifour et al. 2023). Some midwives in the study had not understood their Trust's decision to remove labels from BMS provided in hospitals, indicating limited recognition of the connection between medical settings and de facto brand promotion (Rollins et al. 2023).

A breastfeeding mindset was evident in the mothers intent on breastfeeding before having their baby (Bartle and Harvey, 2017), based on considerations like informed choice and, in most cases, having had breastfeeding modelled. Evidence suggests that a commitment to breastfeeding, including determination to overcome difficulties, or self-efficacy, turns intention into action and positively impacts duration (Lau et al. 2018; O'Reilly et al. 2023). This is important when looking at the disparity between initiation and continuation rates in the UK (UNICEF UK, 2022). Intention and determination appear core components of the breastfeeding mindset, but also confidence to control elements of the narrative when faced with differing views, such as risk-averse healthcare providers who want to monitor milk intake, or, at a later age, a baby being considered by wider society to be 'too old' to breastfeed (Victora et al.

2016). Here, demographic information proves useful (Appendix 3): socio-economic and relationship status, age and educational background of women are all determinants of EBF practice (Simpson et al. 2021), which is useful when assessing where to target additional breastfeeding promotion and support. The present study posits that the positive deviance evident in breastfeeding practice here is inherently linked to the ability to advocate for self. With an estimated 8/10 women in the UK stopping breastfeeding before they want to (UNICEF UK, 2022), the ability to self-advocate must be considered key in breastfeeding duration, and the determinants of self-advocacy need to be further explored.

The midwives spoke passionately of their role as advocates for mothers. This is supported by the research of Ryan et al. (2016) on health professionals as co-agents and important figures in maintaining, enhancing, or restoring a woman's ability for self-advocacy, bolstering power within; albeit the midwives here considered their advocacy role relating to the woman's right to choose a feeding method.

Power within (Figures 2,3) supports a breastfeeding mindset and the ability to advocate for it. Informed choice is necessary and is obtained through the availability of transparent information that allows individuals to make values-based decisions. When power within is identified, alliances can be formed and strengthened, and power with emerges (Keith, 2021).

POWER WITH - AND THE IMPLICATIONS FOR POWER OVER

A societal approach is necessary for a breastfeeding culture. The multiple contributors to a positive breastfeeding outcome shown in this research echo the Breastfeeding Gear Model (Figure 1) which demonstrates the importance of multiple elements, and actors from different areas, coming together to create power with; collectively increasing their impact (Figures 2,3).

This research demonstrates the importance of robust maternity protection. Time and financial resources to prioritise breastfeeding are linked with increased breastfeeding rates (Griswold and Palmquist, 2019). All mothers in this study had sufficient leave to facilitate breastfeeding and considered it key. With groups like IBFAN advocating for 26 weeks of maternity leave at 100 percent pay, paid for by the state (not employers), the role of advocacy groups in increasing maternity protection is a strong example of power with. A civil society voice in governance is paramount (Arendt and Sterken, 2019).

Breastfeeding promotion and support are sporadic in England (WBTi, 2016), which contributes to the low levels of EBF. Interestingly, the mothers in the study unaware of the UK's EBF statistics were shocked at the one percent rate, having not considered their experience quite so deviant. This indicates the role of subjective norms in breastfeeding (Bartle and Harvey, 2017). The consensus from participants was that breastfeeding needs to be more normalized through increased visibility, including online and on television, supporting its acceptability via its common presence in multiple arenas.

BFI standards are only implemented in 53 percent of hospitals in England (Kendall et al. 2022). The trust where the interviewed midwives work, and nine mothers in the sample gave birth, is BFI accredited. Generally, a 'dose-response' has been found between BFI interventions in a given area and increased breastfeeding initiation and duration (Perez- Escamilla et al. 2018). However, the disparity between initiation and continuation rates, impacted by limited ongoing professional support for breastfeeding and mixed messages in interactions with healthcare workers, must be addressed (Keith et al. 2019). The potential for impactful support from concurrent professional and informal routes can be seen in the Baby Café model (Fox et al. 2015), demonstrating again the power of collaboration for continued breastfeeding practice.

When considering power over (Figures 2,3), a lack of top-down commitment and commensurate policies is evident. The aforementioned WBTi score for National Policy, Governance, and Funding (3/10) was due to the lack of an IYCF strategy, committee or action plan, which inhibits coordinated, meaningful action (WBTi, 2025); indeed, Coordination, Goals and Monitoring is considered the central breastfeeding gear (Merrit et al. 2021). Appropriate monitoring and evaluation mechanisms are also vital to show change in coverage and effectiveness, for standardisation and to support funding bids (European Commission, 2008). The establishment or strengthening of these elements is imperative for improving England's EBF rates and will provide a framework and accountability mechanism for further advancement. Power over remains a significant barrier to instigating change, and utilising the collective power of coordinated lobbying for a breastfeeding strategy, adequate staffing, and improved protection, promotion and support of breastfeeding in the implementation of the Government's *10 Year Health Plan for England: Fit for the Future*, is vital (Department of Health and Social Care, 2025). So, we see the reinforced strength that is possible through power with.

The advocates echoed calls for further BMS marketing regulation, aligning with existing evidence on the power of the industry (Baker et al. 2023; Competition and Markets Authority, 2025). Follow-on milks and cross-promotion, the online environment, government lobbying, and sheer wealth gives commercial industry real power over IYCF. The importance of a strong, conflict-of-interest-free regulating environment to temper this power, including greater alignment with the Code, and a robust, independent system for enforcing legislation and for dealing with violations, is clear (Merritt et al. 2022). Industry impact lies somewhat outside the scope of a study exploring positive deviance, but research on what makes some individuals seemingly impervious to the marketing techniques of the BMS industry would be an interesting future study, for displacing its power. What is clear from the nuanced perceptions of those interviewed is that different actors are at their strongest when combining their different experiences and spheres of knowledge. Thus, we see the importance of power with for collaboration, synergy, strength of voice, and the broadest set of skills and perspectives, as well as for potential impact on the prevailing IYCF landscape.

LIMITATIONS

Participant mothers were educated, partnered, with professional backgrounds and a mean age of 31 at the birth

of their first child, clearly representing a positive deviant subset of the population (Appendix 2, Appendix 3). Of the mothers interviewed, 75 percent were White British, and all were located in London, the East or Southeast of England. Further research of positive deviance is warranted amongst other groups; it might also focus more on the role of midwives and other health professionals.

Based on the WHO definition of EBF (World Health Organization, 2024), discussion on the introduction of complementary foods was beyond the scope of this study.
Some mothers experienced challenges through the lens of COVID-19, which may indicate an atypical experience, particularly when emergency preparedness was lacking (WBTi, 2025).

Whilst, again, beyond the scope of this study, the ultimate goal of exploring positive deviance is to design, test, and implement effective strategies and interventions using the successful practices already deemed effective (O'Reilly et al, 2023, Rose and McCollough, 2017), which would be the next phase of this research.

CONCLUSION

This research has identified multiple, interconnecting components that facilitate EBF. The position and prioritisation of breastfeeding in society requires improvement to increase EBF rates, and the mothers interviewed provided insight into what contributed to their deviant experience. As expected, support for breastfeeding was considered key and came from various sources, including professionals, partners and peers. Elements of support were physical, emotional, financial, and practical, and were needed to varying degrees. The capacity for breastfeeding, for mother and supporter, was important, with success frequently attributed to time and, often, financial resources. A recurrent theme for the midwives and advocates was a lack of human resources or inadequate utilisation of provisions to support mothers to breastfeed, including underutilised governance mechanisms, like the Code. The importance of both mindset and agency for EBF - understanding the benefits, valuing breastfeeding, committing to undertaking it, and being able to advocate for it in a society where it is not always fully recognised and supported - indicates why positive deviance was possible. The solutions-focused third theme showed the importance of breastfeeding protection, with an emphasis on commercial and maternal protection; promotion, looking at new avenues and greater visibility; and support, emphasising the need for increased access to various types, with appropriate funding and systemic support, so that the sole burden does not fall on the individual mother. A multifaceted approach is required to establish an enabling breastfeeding culture in England, where the practice is valued. Looking for solutions - inspired by an examination of positive deviance - to feed into future policy and strategic planning in England, and to support the achievement of global and national EBF targets, has informed the following recommendations:

RECOMMENDATIONS

1. All hospitals in England to become BFI accredited, supporting successful breastfeeding initiation and helping to position it as the default feeding method. A coordinated campaign from different civil society groups and activists would support this.
2. A renewed focus on advocating for an IYCF strategy and action plan to support breastfeeding in England. This would earmark sufficient financial and human resources for breastfeeding, including beyond the perinatal period; support the availability of transparent information on both breastfeeding (including maternal benefits) and BMS; build foundations for a more enabling and visible breastfeeding culture; and improve monitoring and accountability for increased EBF rates.
3. An advocacy strategy aimed at the entertainment and content creation industries as a new and impactful way of making breastfeeding more visible and valued.
4. Visibility of breastfeeding antenatally, including the lived experience of breastfeeding shown in antenatal care from peers; messaging around the disadvantages of BMS; and mechanisms to target ambivalence towards breastfeeding.

AUTHOR CONTRIBUTIONS

MOL: Conceptualization, methodology, investigation, data curation, formal analysis, writing - original draft, writing - review and editing, project administration. RMK: Supervision, writing - review and editing. All the authors read and approved the final version for publication.

CONFLICT OF INTEREST

The authors declare that they have no other potential conflicts of interest.

DECLARATION OF GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES IN SCIENTIFIC WRITING

Nothing to disclose.

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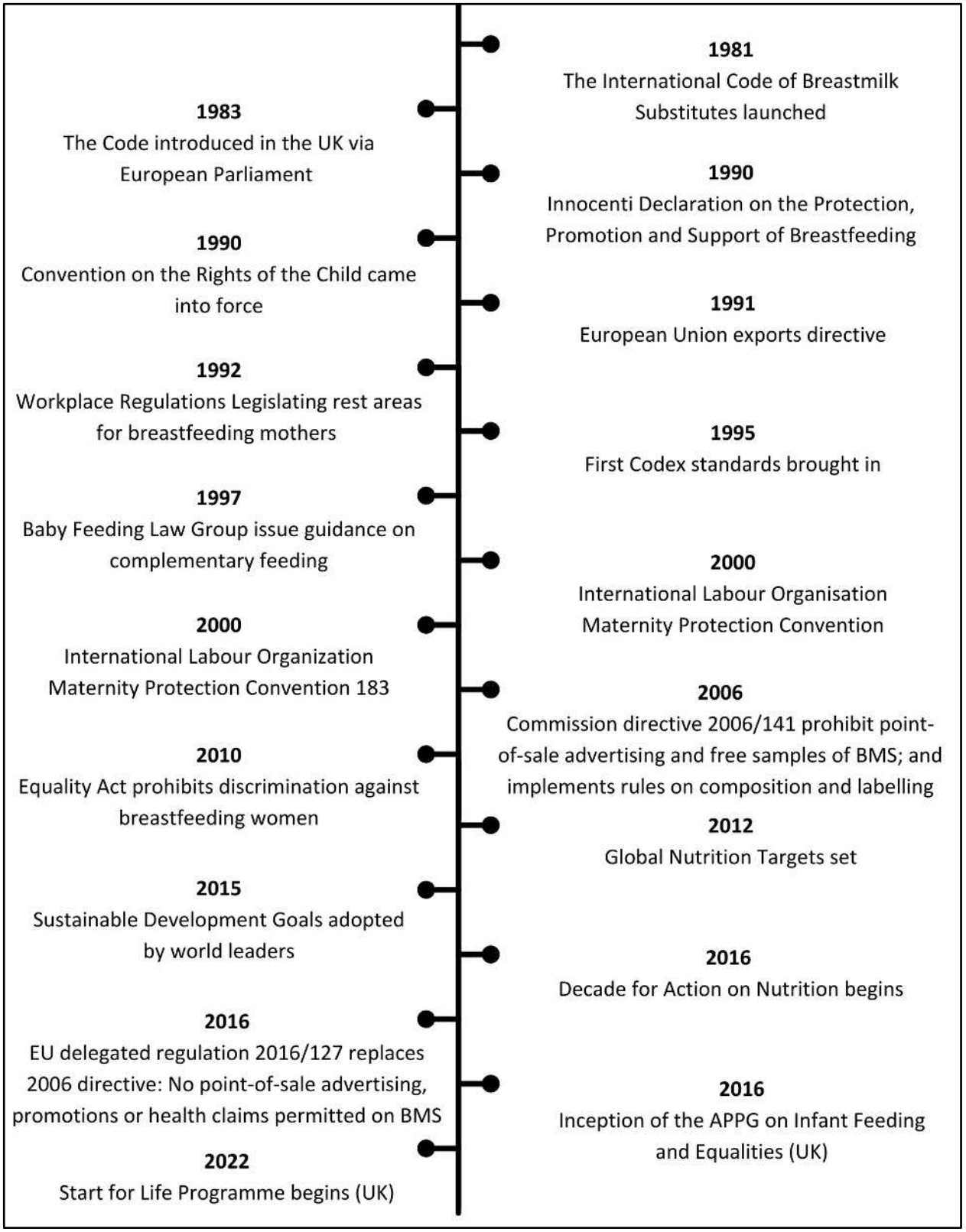
Appendix 1. Timeline of measures to support infant feeding practices, 1981 – 2022 (based on Baby Feeding Law Group nd; Department of Health and Social Care, 2021; Haydon and Brinsden, 2024)



Appendix 2. PESTLE analysis of factors affecting infant feeding practices in England

Political	Political factors greatly impact breastfeeding in England, from an ideological lack of political commitment from those in power (Rollins et al. 2016) to resource considerations. Child services were decentralised to local councils in 2012 without appropriate funding. A succession of Conservative policy decisions from austerity in 2010 to the mini budget in 2022 have impacted the British economy and services like antenatal support and children's centres. The neo-liberal sensibility around personal choice and accountability has disproportionately affected certain demographics and widened health inequalities. Brexit has affected recruitment of healthcare professionals and also undermined British infant feeding policy that was formerly framed around European Parliament directives. The role of the BMS industry in political lobbying on a global scale has undermined breastfeeding and allowed the promotion of BMS (Baker et al. 2023).
Economic	The BMS industry is worth $55 billion annually globally and spends $3 billion on marketing their products each year (Baker et al. 2023). Much funding for breastfeeding comes from charitable grants, donations, sponsorship or pro-bono support, with conflict of interest sometimes evident with funding from organisations not compliant with the Code. Competition occurs for limited funds. Local council funding cuts of £4 million has led to the reduction or cessation of maternity and baby groups, disproportionately affecting those who cannot afford to pay. Services are often subject to a 'postcode lottery' of funding (Haydon and Brinsden, 2024). Political factors negatively affecting economics are detailed above, but in 2022 the UK Government announced funding for infant feeding support services, to be deployed via the Start for Life scheme (Department for Health and Social Care, 2024). In 2023 it was announced that all first infant formulas are too expensive to be purchased with the Healthy Start allowance (Haydon and Brinsden, 2024).
Social	Social determinants of health are connected with breastfeeding rates. Breastfeeding rates are statistically lower in areas of deprivation and amongst certain demographic groups, such as those with low socioeconomic status and those with lower educational achievements. Mothers under 20 years are 1/3 less likely to initiate breastfeeding and are half as likely to be breastfeeding at six-eight weeks than those over 20 years (Public Health England, 2019) White women are less likely to breastfeed than other ethnic groups and subjective norms contribute to infant feeding decisions (Bartle and Harvey, 2017). The opportunity to learn practical skills like breastfeeding techniques and appropriate complementary feeding has been impacted by the reduction in antenatal services.
Technological	The impact of the Covid-19 pandemic on social structures has left its mark, with face-to-face services impacted, and many health and social care services remaining online (von Rieben, 2022). Social media influencers are used as a tool by the BMS industry to promote their products, circumnavigating the Code. Funding for infant feeding mostly relates to technical innovation and is profit-motivated, impacting funding for breastfeeding, which is not viewed in economic terms (Baker et al. 2023).
Legal	The National Implementation of the International Code Status Report 2022 gave the UK a score of 40/100 for implementation of the Code (Baby Feeding Law Group--UK, nd). Subpar legislation in the UK for the BMS industry or lack of penalties for non-compliance, have supported its growth and allowed it to take advantage of cross-promotion opportunities with its follow-on milks (Baker et al. 2023). The UK has some good elements of maternity protection enshrined in law, with Statutory Maternity Pay for up to 39 weeks for eligible employees. However, the payment is only 90 percent of a claimant's salary for six weeks and £184.03 per week thereafter, which is less than half the minimum wage (Department for Work and Pensions, 2013). Women working in the informal economy may not be eligible for any support.
Environmental	The local living environment is impacted greatly by a 'postcode lottery' of funding for local councils and this impacts greatly on services to support maternity education on breastfeeding and mechanisms to facilitate breastfeeding continuation for six months and beyond. In terms of the planetary environment, breastfeeding is undoubtedly the shortest food system in existence but is not promoted as such. The BMS industry contributes greatly to environmental degradation and climate change (Zalmanovitch and Cohen, 2013).

Appendix 3. Demographic information of the mothers participating in the study

Alias	Age when first child was born	Country of birth	Ethnicity	Highest education level	Occupation/sector prior to having children	Returned to work after first child?	Longest duration of breast feeding
Mum 1	32	England	British Indian	Undergrad degree	Human Resources	No	10 months
Mum 2	39	England	White British	Undergrad degree	Education sector	Yes	4 years
Mum 3	31	England	White British	Undergrad degree	Self- employed	No	3.5 years
Mum 4	30	England	White British	Masters degree	Social worker	Yes	6.5 months (ongoing)
Mum 5	29	Czech Republic	White European	Undergrad degree	Financial sector	No	18 months
Mum 6	31	England	White British	Postgrad diploma	Solicitor	Yes	10 months
Mum 7	30	England	White British	Undergrad degree	Retail manager	Yes	3.5 years
Mum 8	37	England	White British	PGCE	Teacher	No	3.5 years
Mum 9	28	England	White British	Undergrad degree	Bar manager	Yes	22 months
Mum 10	28	England	White British	Postgrad certificate	Teacher	No	18 months
Mum 11	35	England	Mixed black Caribbean and white	Undergrad degree	Education sector	Yes	10 months
Mum 12	29	Botswana	White British/ Irish	Masters degree	Education sector	No	12 months (ongoing)