

Marketing of infant milk in the UK: what do parents see and believe?

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1. Executive summary

1.1. Introduction

In 2019 First Steps Nutrition Trust commissioned Swansea University to undertake an evaluation of parents' perceptions of marketing of infant milks from a UK perspective. Research in other countries such as Australia has already identified misconceptions in the use and benefits of infant milks based on different marketing techniques. We wanted to establish whether similar patterns were occurring in the UK, how this affected purchasing behaviour, and the support that parents needed in formula feeding their baby. To do this we explored the experiences of new parents in relation to the infant milk adverts they had encountered, perceptions of these adverts and infant feeding needs and decisions.

1.2. Context

Breastfeeding is established as protecting infant and maternal health. However, use of infant milks, either exclusively or alongside breastfeeding is commonplace in the UK. The production and sale of infant milks is a valuable global market, and a range of different products are marketed to replace or complement breastmilk in the first year of life and beyond. It is vital that parents receive accurate and consistent information around these products and for feeding their baby that is free from this commercial interest.

We know that exposure to promotional samples and literature from the infant milk industry has been shown to reduce breastfeeding duration and exclusivity. Thus, to protect families from inappropriate marketing, in 1981 the World Health Organisation (WHO) established the International Code of Marketing of Breastmilk Substitutes (known as 'the WHO Code'). This code prohibited the advertising and promotion of infant formula alongside associated bottle-feeding products. However, the Code is not legally binding. In the UK, while promotion of infant formula is prohibited, meaning that you cannot advertise products for infants under 6 months of age, advertising of infant milks marketed for babies over 6 months of age is allowed. These adverts allow brand recognition and misconceptions of what is being advertised to indirectly promote infant formula.

There is however an additional issue in the promotion of milks designed for older infants. Infant formula milk, designed for infants up to 12 months of age, is widely recognised by public health bodies as the only suitable breastmilk substitute. Follow on formulas differ slightly in composition, often including added and unnecessary ingredients. Infant formula can provide the energy and nutrients an infant needs until 12 months when infant milks are no longer necessary. Parents do not need to move their baby through a series of 'stages' of milk. However, advertising slogans and implied imagery in adverts for these milks can be highly misleading in terms of implied superior content over other milks or breastmilk. Research in other countries shows that these messages are often believed by parents.

Finally, there are a number of issues arise around pricing of infant milks as a marketing strategy. A large variation is seen in price of infant formula by brand, despite little difference in their nutritional composition which is regulated by UK law. Despite this, different brands pitch their product at different markets, with significant price variations seen. This is based on a marketing technique known as 'increased value perception', where customers have a tendency to perceive a product as having better quality if it is more expensive. This is misleading to new parents, particularly those experiencing financial difficulties.

1.3. Aims of this study

It is established that infant milk marketing increases infant milk sales across a brands range. However, despite research in other countries exploring the impact of such promotion upon parent perceptions, purchasing decisions and infant milk use, little research has examined this in a UK setting. The aims of the current research were therefore to ask:

- How often do parents in the UK see infant milk adverts and where?
- Do parents perceive they are seeing adverts for infant formula or for other infant milks?
- Do parents recall infant milk advert messaging? Do they believe it is scientific and factual?
- What factors drive infant milk brand choices?
- What types of infant milks are parents using and how are they preparing milk feeds?
- Do parents feel confident using infant milks?

1.4. Methodology

The methodology for this study consisted of an online survey of 1307 mothers with a baby 0 – 12 months old. Parents were based in the UK and were either breast, formula or mixed feeding their baby. The survey explored:

- Exposure to infant milk adverts (including frequency and location)
- Recall of advert messaging (e.g. proposed impact on infant sleep, content of milks)
- Perceptions of infant milk adverts (e.g. factual, useful)
- Infant feeding decisions (use of infant milks, breastfeeding duration)

Participants who were giving infant milks completed further sections examining:

- What infant milks they used and why they chose these specific types / brands
- Preparation of infant milks (e.g. type of milk, preparation of bottles)
- Confidence in giving infant milks

1.5. Key findings

Almost all participants reported seeing a wide range of adverts for infant milks across different formats and locations. Specifically, two thirds believed they had seen an advert for infant formula, suggesting significant cross promotion through marketing of follow on and toddler milk products. Little difference in exposure was seen between those using infant milks or not, although those who did use infant milks were more likely to report seeing infant formula adverts.

Specific highlights included:

Exposure to adverts

- Parents saw adverts in numerous locations including on TV, billboards, magazines, social media and in the cinema. Some reported seeing adverts in healthcare settings or through promotion by a health professional. Reported promotions included direct promotion of products, product placement and promotional materials e.g. free toys.

- A range of advertising slogans were recalled, the most common being ‘most advanced formula yet’, ‘developed by scientists’ and ‘being closer than ever to breastmilk’. Slogans based around added ingredients and their impact on babies’ health and development were also common.

Perceptions of adverts

- In terms of perceptions of the adverts, three quarters of participants found them emotive. Those who used infant milks were more likely to perceive adverts positively e.g. clear, scientific and helpful than mothers who did not. Younger mothers also rated the adverts more positively than older mothers.
- When explored in more detail, many mothers who did not use infant milks expressed anger at frequent exposure and misleading messaging. Whilst some of those who used infant milks welcomed the adverts, others found them confusing or concerning if they promoted products that they could not afford.

Product beliefs

- Most parents perceived that all formula milks had similar ingredients. However, around a third also believed specific milks to have better ingredients, or ones that would affect sleep or development. Younger mothers were more likely to believe this.
- Beliefs about the benefits of certain products drove purchasing decisions; mothers chose milks based on added ingredients, perceived impact on sleep, development or behaviour, and perception that certain milks were more scientifically advanced.

Purchasing decisions

- Alongside marketing slogans, participants chose milks based on family recommendation or previous use, price and availability, input from health professionals and perceptions of the company e.g. as ethical. Higher priced formulas were seen as more advanced.
- Brand loyalty was common; most parents stuck to one brand, which was often the chosen family brand used over generations.

Use of follow on milks

- Around a third of parents used follow on milks; two thirds of whom had a baby over six months old. Almost all parents who used follow on milks stated they did so because it was suitable for their infants age, despite some babies being younger than six months.
- Other reasons for use included cost, special offers and marketing, perceptions of impact on health and development, and inclusion of added ingredients. Follow on milks were often viewed as more advanced, particularly amongst younger mothers.

Experience of using infant milks

- Liquid, ready to feed milks were common as was use of formula preparation machines. Most followed instructions on preparing bottle safely, although some were using outdated methods of boiling and cooling water before adding it to formula powder.
- Although some parents felt confident using infant milks, around a third wanted further support with choosing milks, preparation and knowing how much milk to give. Almost half of parents did not feel confident combining breast and formula feeding. Younger mothers had lower confidence levels than older mothers.

1.6 Key Conclusions

Exposure to infant milk adverts and promotions is common amongst mothers who are both using infant milks or exclusively breastfeeding. Often these adverts are mistaken for promotion of infant formula products, particularly by younger mothers, suggesting cross promotion and brand recognition. Themes in marketing literature such as impact upon behaviour or added ingredients drove purchasing decisions. In particular, follow on formula is perceived as a more advanced product, suitable for use over six months of age.

Given these perceptions are in part driving purchasing decisions, including selection of higher cost formulas due to belief in superiority of the product, there is an urgent need to ensure that parents receive accurate information about different infant milks. This information must be free from industry bias. Parents would also benefit from further support and information regarding safe bottle preparation and responsive feeding, alongside aspects such as mixed feeding and knowing how much milk their baby needs.

2. Background

The protection of breastfeeding for maternal and infant health is well established⁽¹⁾. Therefore, guidelines are in place globally to ensure the greatest chance of infants receiving breastmilk throughout the first year and beyond⁽²⁾. Despite this, rates of breastfeeding in many countries fall below recommendations, with the UK in particular experiencing some of the lowest levels of breastfeeding in the world. Just one per cent of mothers exclusively breastfeed for the first six months with more than half of mothers giving some infant formula by the end of the first week of life⁽³⁾.

The production and sale of products which replace breastmilk is a valuable global market, and a range of different infant milks are marketed to replace or complement breastmilk in the first year of life and beyond. The terminology for different products can be confusing as some breastmilk substitutes must comply with specific compositional, labelling and marketing regulations (infant formula, follow-on formula, infant milks marketed as foods for special medical purposes) whilst others such as toddler milks only have to comply with general food law. The term breastmilk substitutes when considered in relation to global recommendations also covers bottles and teats, so in this report we are calling any milk marketed as a replacement for breastmilk in the first three years of life 'infant milks' unless a specific named product is under discussion. In the questionnaire the term 'formula milk' was also used as this is how many people describe the range of products available.

2.1. Protecting families from inappropriate marketing of infant milks

Supporting more mothers to breastfeed is a complex challenge but at the core of this is the importance that new families are given accurate and consistent information and support for breastfeeding that is free from commercial interest, particularly from those whose interests may be in opposition of continued exclusive breastfeeding.

Exposure to promotional samples and literature from the infant milk industry has been shown to reduce breastfeeding duration. For example, in 2012 a Cochrane review found

that mothers who received samples of infant formula stopped breastfeeding sooner than those who did not ⁽⁴⁾. Likewise, a trial conducted in the USA found that when new mothers received a hospital discharge pack that had any advertising material related to infant formula milk removed, they were 58% more likely to breastfeed exclusively for six months compared to those who received standard discharge packs including such material ⁽⁵⁾. Similarly, in another study new mothers who received free formula samples in their hospital discharge packs were 1.4 times less likely to be breastfeeding at ten weeks compared to those who did not receive them ⁽⁶⁾.

At the same time, it is important that when mothers do make a decision to give infant formula, they receive information that is accurate, consistent and as free from commercial bias as possible. If an infant is not breastfed or is partially breastfed, infant formula is the recommended alternative for the first year of life in the UK, but follow-on formula for infants from six months of age can be marketed despite public health guidance that this is not needed. However, a significant conflict of interest exists between the needs of families who are seeking to use infant milks and that of an industry seeking to make profit and to secure a greater market share.

Thus, to protect families from inappropriate marketing, in 1981 the World Health Organisation (WHO) established the International Code of Marketing of Breastmilk Substitutes (known as 'the WHO Code'). This code prohibited the advertising and promotion of infant formula alongside associated bottle-feeding products ⁽⁷⁾. Additional provisions have been added to the Code by the World Health Assembly over the past (nearly) 40 years to update and extend provisions, and the Code currently covers all infant milks marketed for children up to three years of age. The WHO Code is not legally binding, and whilst most countries have signed up to the principles of the Code, few have all elements of it in law. In the UK (where we have EU regulations put into UK law), the advertising and promotion of infant formula only is prohibited, which means that you cannot advertise products for infants under six months of age. However, advertising of infant milks marketed for babies over six months of age is allowed, so that 'follow on formula' (marketed for infants aged 6 – 12 months) and 'toddler milks' (marketed for children over the age of 12 months+).

Because EU law allows the marketing of follow on formula and toddler milks, which can share branding and 'cross promotion' with infant formula, there has been a rapidly increasing product range of infant milks as companies seek to expand markets ⁽⁸⁾. The similar branding across infant milk product lines acts as a tool to boost sales of infant formula; in the US, where infant formula milk promotion is allowed, adverts for other infant milks make up just 20% of sales as their impact as a marketing tool is reduced ⁽⁹⁾. Likewise, tracking of infant milk adverts in an Australian women's magazine saw a high number of adverts for infant formula until a voluntary agreement to limit advertising was introduced. Once a voluntary Code was in place to limit advertising of infant milks for children 0-12 months they were replaced with an increase in adverts for other infant milks ⁽¹⁰⁾.

2.2. Unnecessary promotion of infant milks

It is widely recognised by public health bodies that any infant milk other than infant formula, which is suitable for babies aged 0 – 12 months old, is an unnecessary product ^(11, 12). While follow-on formula differs slightly in composition to infant formula, current compositional regulations for energy and all nutrients except iron are the same, and infant formula contain enough iron for an infants' needs in the first year. The scientific consensus is that infants do not need to change to a different milk at six months; infant formula, alongside complementary foods after 6 months can provide the energy and nutrients an infant needs until 12 months. However, the production of a series of 'stages' of milk suggests that it is necessary for parents to 'move their infant on' through each stage ⁽¹³⁾.

A second issue is the misleading way in which follow-on formula is advertised. We know from data in other countries that adverts for follow-on formula are frequently misinterpreted by parents and the public as being adverts for infant formula suitable from birth. Although it is stipulated in UK law that follow-on formula advertising must not risk confusion with infant formula e.g. by making the type of milk text bigger than the brand name and using different colour schemes for products ⁽¹⁴⁾, manufacturers ignore this and it is easy for mis-identification to occur. Research in Australia ⁽¹⁵⁾ and Italy ⁽¹⁶⁾ has found that parents often mistake adverts for follow-on formula as being for infant formula.

Additionally, despite regulations there is often not a distinct difference between infant and follow-on formula packaging, especially not one recognisable to busy and exhausted parents making decisions in the supermarket ⁽¹³⁾. This misinterpretation means that adverts can appear to promote infant formula to parents of younger babies, even if they state in small letters at the bottom of adverts that the product is for older babies.

A further issue lies in the content of the adverts. Information, slogans and implied imagery in infant milk adverts can be highly misleading in terms of implied superior content over other infant milks (or implied over breastmilk which does not 'advertise' as being a good source of specific nutrients), proposed impact upon infant development, or suggested impact upon infant behaviour. In terms of content, the strategy of some infant milk brands is to promote added or specialist ingredients.

For example, in one US study, analysis of infant milk adverts found that over half of the 173 adverts examined contained at least one health statement. These most commonly focused on ability of the product to improve or support brain development, eye or vision development and immune system development⁽¹⁷⁾. Likewise, analysis of Australian websites that advertised infant formula found that every advert had at least one health claim, with 72% also including a nutritional content claim ⁽¹⁸⁾.

However, there is little to no empirical evidence of the impact of these added ingredients, with concern that too many additional ingredients in a product might place a strain on the infant's digestive system ⁽¹⁹⁾. For example, claims made for Danone's 'Immunofortis' prebiotic ingredient, was rejected by the European Food Standards Agency, who stated that there was insufficient evidence that it enhanced a baby's immune system as the company claimed ^(20, 21). No independent scientific committee in the UK has agreed that there is any benefit from adding prebiotics (GOS/FOS) to infant formula.

Likewise, a review of infant formula product labels in the US found that more than half made reference to their formulation reducing colic or gastrointestinal symptoms despite no consistent evidence that these claims are true ⁽¹⁹⁾. A recent paper in the British Medical Journal demonstrated that health claims made for infant formula can be misleading ⁽²²⁾ and

in analysis of adverts for a range of infant milks many of the promotional claims and statements made have been found to be based on inadequate or misleading data ^(23, 24).

Related to this is the suggestion that a product is 'close' or 'closer than ever' to breastmilk, including labelling added ingredients in a way that could suggest they are similar or even made from breast milk. Despite regulations making it against the law to suggest infant formula is close to breastmilk or humanised in any way, qualitative studies with mothers who formula feed in the UK have shown that parents perceive formula to be 'almost as good' as breastmilk ⁽²⁵⁾. This perception may be supported by health claims made by formula manufacturers in their adverts.

For example, the use of the term 'human milk oligosaccharides' in advertising in 2019 could have been interpreted as the product containing an ingredient that has come from human milk rather than being a synthesised ingredient. The term 'human milk oligosaccharide' is not permitted under EU labelling law as it could mislead consumers, but companies use statements for marketing until they are challenged, knowing in this case that they can move to the term 'HMO' with consumer understanding.

Another tactic is to use a 'probabiological' approach by making reference to a beneficial component found in breastmilk to illogically infer something about the formula product being advertised ⁽²⁶⁾. For example, by presenting evidence that probiotics and prebiotics in breastmilk support babies' health ⁽²⁷⁾, and then following that statement by referring to unspecified probiotics or prebiotics which are included in the formula preparation and which have not been clearly proven to be beneficial it may be inferred that the pro/prebiotics in the formula protects babies' health system in a similar way to breastmilk.

Finally, many adverts for follow-on formula, and indeed the packaging of infant formula, makes reference to proposed benefits of the product for infant behaviour. For example, adverts may promote the idea of their product helping with feeding challenges, or suggest that they help with infants sleep e.g. "hungry-baby' or 'good-night' preparations ⁽²⁸⁾. This promotion is not limited to infant formula or follow-on formula; such messages, although not directly found in product adverts, can be found on the product label, either directly or

more subtly. For example, the label may display an animal sleeping soundly, suggesting an impact of the product upon sleep.

These messages do influence parental beliefs. Recent research with parents in the USA (where infant formula can be advertised) found that these marketing slogans were often believed by parents. In a survey of 1645 caregivers, over half believed that infant formula can be better for babies' digestion and brain development than breastmilk, with nearly two thirds believing infant formula could deliver nutrition not found in breastmilk. Those who believed the claims were more likely to purchase infant milk products ⁽²⁹⁾.

This is problematic not only in terms of suggesting the product may impact upon infant behaviour or development over and above a different brand of milk, but also in acting as a solution to common maternal concerns around her baby's feeding and behaviour. For example, a common concern of breastfeeding mothers is that their baby feeds too often, doesn't sleep well, or is generally unsettled. These concerns often lead to mothers offering infant formula or stopping breastfeeding, likely driven by promises around the impact of infant formula upon these behaviours ^(30, 31).

2.3 Impact of price and discounting of infant milks

Related to this is the issue of variable pricing of infant milks as a marketing strategy. One issue is the large variation in price of infant formula by brand, despite little difference in their nutritional composition which is regulated by UK law. Despite this, different brands pitch their product at different markets, with significant price variations. This is based on a marketing technique known as 'increased value perception', where customers have a tendency to perceive a product as having better quality if it is more expensive ⁽³²⁾.

There is also the issue that while infant formula marketing regulations mean that it cannot be discounted, highlighted with shelf-talkers and displays, placed on offer or given as free samples, there are not similar regulations when it comes to sales of follow-on formula. These tactics can be used to attract customers, not only to increase sales of follow-on

formula but also across the brand range thus marketing infant formula without directly creating adverts for it.

Finally, all this promotion of infant milks has a significant financial cost. The infant milk industry is highly profitable; on average the industry makes around 23 cents of profit on every dollar of sales and it is estimated that formula companies spend around 10-15% of their profits on marketing, indicating that is worthwhile for them despite the restrictions that exist ⁽³³⁾. This cost is absorbed into the product price, or in other words, is directly passed onto parents in how much they pay for their infant milk.

2.4. Maternal knowledge and confidence in safely giving infant milks

It is also important to understand where mothers get their information from when it comes to choosing, preparing and giving infant milk feeds. The majority of the main infant milk brands also offer 'baby clubs' where families can get information on pregnancy, birth and infant feeding. This can give companies the illusion of being caring and supportive which can be in contrast to some mothers' perceptions of support from health professionals. Some mothers report, or perceive, that they receive little information on introducing infant formula to their baby ^(34, 35). A study in Australia found that 38% of mothers received no information from their health professionals ⁽³⁶⁾ whilst in another study 20% of those formula feeding stated they received no professional support ⁽³⁷⁾.

It has been argued that this is due to a 'fixation' on providing only breastfeeding support ⁽³⁸⁾ including a lack of information about mixed feeding ⁽³⁹⁾. However, in the UK there is clear guidance that mothers should be given factual information and support around introducing infant formula ⁽⁴⁰⁾. Perceived lack of support around bottle feeding may be due to a lack of time and resources in general for supporting all mothers ⁽⁴¹⁾ or perhaps misconceptions by parents as to the information that should be provided. For example, one of the problems may be that parents may expect more information on differences between brands and types of milk and may think that the simple messages that health professionals rightly provide are inadequate or restricted ⁽⁴²⁾. Marketing strategies for different milks, including unsubstantiated inference about the impact of different ingredients, plays into this.

A lack of health professional support, perceived or otherwise, may increase the risk of mothers following unsafe feeding practices (such as incorrectly preparing powdered infant formula). Indeed, many new mothers report feeling unsure as to how to prepare powdered infant formula safely, how to combine breast and formula feeding or to know how much milk their baby needs ^(35, 43-45). It also means that mothers turn to other sources for information and support. This can include family and friends, who may not give accurate information ^(45, 46) or indeed commercial sources. A number of previous studies have shown that mothers, in doubt, turn to packaging and advertising for information ^(37, 47-49). This is despite a wealth of freely available information from mother to mother support groups in the UK.

2.5 Aims of this study

It is established that infant milk marketing increases infant milk sales across a brands range. However, despite research in other countries exploring the impact of such promotion upon parent perceptions, purchasing decisions and infant milk use, little research has examined this in a UK setting. The aims of the current research were therefore to ask:

- How often do mothers in the UK see infant milk adverts and where? Do mothers perceive they are seeing adverts for infant formula or for other infant milks?
- Do mothers recall infant milk advert messaging? Do they believe it is scientific and factual?
- What factors drive infant milk brand choices?
- What types of infant milks are mothers using and how are they preparing milk feeds?
- Do mothers feel confident using infant milks?

3. Methodology

3.1 Definitions

For the purpose of this report the following definitions will be used

- Infant milks as an umbrella term for all infant milk products marketed for infants and young children 0-3 years.
- Infant formula: First stage milk designed for infants aged 0 – 12 months
- Follow-on formula: Infant milks marketed for infants aged 6 – 12 months
- Toddler milk: milks marketed for children aged 12 months+
- Formula feeding: Giving infant milks in a bottle or cup

3.2 Design

The study used an online, self-report questionnaire consisting of both open and closed questions.

3.3 Participants

Participants were parents aged 18+ of a baby aged 0 – 12 months old, living in the UK and ROI (as indicated by postcode). Participants could be exclusively breastfeeding, exclusively formula feeding or giving both breast and formula milk.

To take part participants needed to be able to complete the survey in the English language and be capable of giving consent. Approval for this study was granted by Swansea University College of Human and Health Sciences Research Ethics Committee. All participants gave informed consent and all aspects of this study have been performed in accordance with the ethical standards set out in the 1964 Declaration of Helsinki.

3.4 Measures

Data were collected between October – December 2019. All data were collected via an online survey link, hosted by Qualtrics UK, which could be completed on a mobile phone, computer/ laptop or other electronic device. A paper copy of the questionnaire was available on request. This method of data collection has increased in popularity in recent

years, given the high proportion of internet usage via a variety of devices, particularly amongst the target population. However, its limitations in reaching the most deprived samples are recognised and discussed later on.

The questionnaire consisted of both closed and open-ended questions. All participants completed sections examining:

- Participant demographic background
- Exposure to infant milk adverts (including frequency and location)
- Recall of advert messaging (e.g. proposed impact on infant sleep, content of milks)
- Perceptions of infant milk adverts (e.g. factual, useful)
- Infant feeding decisions (use of infant milks, breastfeeding duration)

Participants who were giving infant milks completed further sections examining:

- What infant milks they used and why they chose these specific types / brands
- Preparation of infant milks (e.g. type of milk, preparation of bottles)
- Confidence in giving infant milks

3.5 Procedure

Online adverts were placed on social media describing the aim of the study. These adverts were initially shared by the research team, with encouragement for the advert to be shared. During the data collection period, the study advert was shared at least 400 times from the original posts. Organisations who shared the post included those working in infant feeding, parenting support and broader public health organisations.

On reading the advert, if a participant was interested in finding out more information, they clicked on the questionnaire link and a study information sheet loaded, explaining the aims of the study, inclusion criteria, and study procedures, including researcher contact details for further questions. Participants were also given details on how to request a paper copy of the questions if preferred. A series of consent questions were presented, and the remainder of the questionnaire only loaded once consent items were completed. A debrief at the end

of the questionnaire encouraged participants to seek advice from a healthcare provider if the survey had raised any concerns or questions.

3.6 Data analysis

Quantitative data were analysed using SPSS version 26. Frequencies of responses were computed and compared, where relevant, for infants age (0 - 26 weeks versus 27 – 52 weeks), maternal age (18 – 24 years, 25 – 34 years and 35 years+), and for infant feeding decisions (any infant milk given versus exclusive breastfeeding).

For the open-ended data, a thematic analysis was performed to identify themes and subthemes. A simple qualitative descriptive technique was used to summarise themes that participants presented in the data. A sample of scripts were checked by a second coder, and discussion held if disagreement occurred.

As is typically the case with online research, some participants started the survey and did not complete it. To remain in the data analysis participants had to have completed the full survey (as relevant to their feeding decisions). Responses that had clearly not been completed in full were deleted. In terms of specific questions, participants must have completed items related to infant feeding decisions, infant age and maternal age to remain in the analysis (due to key sub analyses). Participants could remain in the sample if occasional items were not completed and therefore not every table represents the full participant sample. This typically occurred for only a small number of participants for any one item, with most items fully completed.

4. Results

4.1 Participant background

1307 parents with a baby aged 0 – 12 months took part. All identified as the mother of their baby, so are referred to as such in the report. Demographic details are shown in table one.

Table One: Participant demographic background

Demographic	Group	n	%
Parity	One child	606	46.3
	Two or more children	701	53.7
Maternal age	≤ 24 years	73	5.6
	25 – 34 years	837	64.1
	≥ 35 years	395	30.3
Education	High school	239	18.4
	Degree / postgraduate degree	1065	81.6
Marital status	Married / cohabiting	1252	96.2
	Single / divorced / widowed	45	3.8
Employment	Full time	605	46.5
	Part time	424	32.6
	No formal employment	270	20.7
Ethnicity	White/White British/ White Irish	1233	94.9
	Gypsy/Traveller	1	0.1
	Asian or Asian British: Pakistani	1	0.1
	Asian or Asian British: Bangladeshi	1	0.1
	Asian or Asian British: Indian	27	2.1
	Asian or Asian British: Chinese	1	0.1
	Asian or Asian British: Other	2	0.2
	Black or Black British	1	0.1
	Mixed or Multiple	17	1.3
	Other	11	0.8
Country	England	906	69.6
	Wales	148	11.4
	Scotland	154	11.8
	Northern Ireland	73	5.6
	Ireland	21	1.6
Infant gender	Male	672	51.7
	Female	629	48.3
Infant age	0 – 26 weeks	740	56.6
	27 – 52 weeks	567	43.4

[Note: Not all categories add up to 1307 due to missing / declined demographic data]

4.1.1 Infant feeding decisions

In the sample 94.7 % of participants had breastfed their baby at birth and 5.3 % had formula fed from birth. At the time the questionnaire was completed, 45.2% of families were using some infant milk. For those who breastfed at birth, the mean age of first giving formula to their baby was 3.8 weeks (SD:8.4) and the mean age of stopping breastfeeding was 13.3 weeks (SD: 13.5). Further details are shown in table two, split by infants aged six months and younger, or older than six months old.

Table two: Infant milk feeding decisions at the time the questionnaire was completed

Age of baby	Breastmilk only		Breast and formula milk		Formula milk only	
	N	%	n	%	N	%
0 – 26 weeks	406	54.9	218	29.5	116	15.7
27 – 52 weeks	310	54.7	158	27.9	99	17.5
Whole sample	716	54.8	376	28.8	215	16.4

4.2 Exposure to adverts for infant milks

This section explores how often participants were exposed to adverts for different types of infant milks, where they saw them and the messages they contain.

4.2.1. Frequency of exposure to adverts for infant milks

Participants were asked how frequently they typically saw adverts for different types of infant milks. This included whether they felt they had seen adverts for any infant milk marketed for babies including infant formula, follow-on formula or toddler milk. Overall 97.8% of participants reported that they had ever seen an infant milk advert, 67.4% an advert for infant formula, 96.0% an advert for follow on formula and 90.3% an advert for toddler formula.

Table three shows the number of participants who felt they saw adverts for each type of milk frequently (often or very often), for the whole sample and split by maternal age group. Over two thirds of participants frequently saw adverts for any type of infant milk, with around a third stating they frequently saw infant formula advertised, despite prohibition of

such adverts. For each type of infant milk mothers aged 18 – 24 years reported the most frequent exposure, followed by those aged 25 – 34 years old, and those aged 35 years and older the lowest.

Table three: Frequent exposure to different types of infant milk advertising, split by maternal age

	Whole sample		≤ 24 years		25 - 34 years		35 ≥ years	
	N	%	N	%	n	%	N	%
Any infant milk	903	69.5	63	86.3	594	71.1	249	63.2
Infant formula	413	31.9	41	56.9	279	33.5	94	24.0
Follow-on formula	881	67.7	60	82.2	581	69.4	242	61.3
Toddler milks	668	51.5	49	67.2	450	53.9	171	43.6

Exposure was explored for infant feeding method and infant age (Table 4) to understand whether infant milk adverts were reaching audiences with a baby under six months old or who were exclusively breastfeeding (i.e. not users of the advertised products). Little difference was found in exposure between those who used infant milks or not, apart from perceived exposure to infant formula adverts. Almost twice as many mothers who used infant milks reported seeing these adverts compared to those who did not use infant milks.

Table four: Frequent exposure to different types of formula milk advertising by infant feeding method and infant age

	Any formula use				Baby age			
	Yes		No		≤ 6 months		> 6 months	
	n	%	N	%	N	%	n	%
Any infant milk	373	69.1	523	70.5	414	65.5	483	73.1
Infant formula	240	44.5	170	23.0	189	30.1	222	33.6
Follow-on formula	347	65.8	518	69.8	406	64.2	470	70.8
Toddler milks	305	56.5	360	48.6	307	48.7	356	53.9

4.2.2. Where adverts for infant milks have been seen

Participants were asked where they had seen adverts for infant milks. Table five shows the number of participants who had ever seen an infant milk advert in different locations, alongside those who had seen adverts in these locations 'lots of times'.

Table five: Where do mothers see infant milk adverts?

Location	Ever seen		Seen lots of times	
	n	%	n	%
On the television	1208	92.7	804	61.6
In a pregnancy or baby magazine	1082	83.2	589	45.1
In a shop	1000	76.8	390	28.4
In the street e.g. a billboard or on a bus stop	705	73.3	250	19.1
Facebook	953	73.2	435	33.4
In an online shop	923	70.9	370	28.4
By email	650	57.6	312	24.0
Search engine results for baby related products	686	52.6	308	23.6
At a baby show / event	663	50.9	405	31.2
Information given by a healthcare professional	645	49.5	245	18.8
In the post	633	48.7	265	20.3
Instagram	581	44.7	274	21.1
In a healthcare setting e.g. in a clinic / hospital	740	39.5	225	17.3
In a children's centre or nursery	438	33.6	212	16.2
On the radio	426	32.7	220	16.9
Twitter	369	28.3	233	18.0
In the cinema	290	22.3	196	15.0
In a magazine unrelated to babies	633	20.5	258	19.8

Participants were also asked what format they have seen adverts in, such as a direct advert, product placement or marketing material in the post or in an email:

- For product adverts (i.e. advert on the television, in a magazine or a pop up on a computer), 94.3% had ever seen an advert via this format, with 61.3% reporting seeing this type of advert often or very often.
- For product placement (i.e. inclusion of a tin of formula in an Instagram or other social media post that was not directly talking about the product), 73.5% had ever seen this approach used with 28.2% reporting seeing this often or very often.
- Finally, 87.7% reported ever directly receiving promotional material such as that from a baby club or baby show e.g. branded toys, photo mounts, calendars, diaries, height charts. Just over half (52.7%) reported receiving this marketing often or very often.

Of those who had ever received promotional material, just 36.4% stated they had given permission to receive it. A significant difference was seen in the proportion of participants who gave permission to receive such marketing by maternal age group. While 53.4% of mothers aged 24 and younger had given permission, only 25.4% of those aged 25 – 34 and 16.7% of those aged 35 and over had given permission.

Next, participants were asked about the specific messaging around the content or impact of infant milks in the adverts they had seen. Table six shows how many participants have ever seen specific messages, alongside those who see them frequently (often or very often). It shows that statements around milks being 'advanced' or related to science were the most commonly seen, by almost all participants, with messaging around the proposed impact upon infant sleep and development also being very common.

The least commonly seen advert messages were for relatively more recent additions to advertising slogans, including those for milks lower in protein, those that contain human milk oligosaccharides or those that contain partially - hydrolysed proteins.

Notably, overall there was very little difference in the frequency of participants who had ‘ever seen’ or ‘frequently see’ an advertising slogan, suggesting widespread reach or repetition of such messages.

Table six: Frequency of viewing specific messaging in formula adverts:

	Ever seen		Frequently see	
	N	%	N	%
Being their ‘most advanced formula yet’	1227	94.5	1158	88.9
Developed by scientists	1201	92.3	1127	86.6
Being ‘closer than ever to breastmilk’	1167	89.7	1060	81.4
Helping development	1142	87.8	1012	77.8
For hungry babies	1127	86.6	959	73.6
Comfort milk for easier digestion	1078	82.8	894	68.7
For preventing reflux or spitting up milk	1060	81.4	877	67.4
Containing Vitamin D	1036	79.6	894	68.6
Containing iron	1026	79.1	905	69.5
Having added special ingredients	956	73.4	813	62.4
Boosting the immune system	925	71.1	799	61.4
Including prebiotics to help babies fight infections	731	56.4	592	45.5
Preventing allergies	500	38.6	365	28.0
Partially hydrolysed (protein broken into small pieces)	478	36.8	376	28.9
Including human milk oligosaccharides	426	32.7	366	28.2
For babies being brought up as vegetarians	321	24.7	247	19.0
Lower in protein	264	20.4	237	18.2

4.2.3. Perceptions of infant milk advertising

Participants were asked how they perceived the content of the adverts that they have seen, rating them along concepts such as whether they perceived them to be accurate, helpful and clear. Table seven presents those who strongly agree or agree with each of the items, split by those who use infant milks or not.

Participants who used formula were more likely to perceive the adverts as positive (e.g. scientific, clear and informative) although even in this group only around half of participants agreed that adverts had positive characteristics. Conversely, the majority perceived the adverts as emotive.

Table seven: Percentage of participants holding positive perceptions of formula milk advertising

	All participants		Use infant milks		Don't use infant milks	
	N	%	N	%	N	%
Emotive	999	76.8	396	73.0	594	80.1
Clear	519	40.0	324	59.8	190	25.6
Scientific	336	25.8	253	46.6	81	10.7
Informative	331	25.4	255	46.7	74	10.0
Accurate	296	22.8	260	47.9	96	12.9
Helpful	279	21.4	248	45.7	30	4.1

Responses were explored by maternal age group. Mothers aged 18 - 24 years old were more likely to rate the adverts as positive, followed by those aged 25 – 34 and finally those aged 35 and over. Perceptions of the adverts as emotive were more similar across groups.

Table eight: Percentage of participants holding positive perceptions of formula milk advertising by maternal age

	≤ 24 years		25 - 34		35 \geq	
	N	%	N	%	N	%
Clear	41	57.0	338	40.4	143	35.4
Accurate	33	45.2	205	24.5	60	15.2
Scientific	31	42.5	239	28.6	69	17.5
Emotive	50	68.5	649	77.7	303	76.7
Helpful	31	42.5	191	22.8	60	15.2
Informative	30	41.1	229	27.4	75	19.0

4.2.4. Do adverts impact upon purchasing decisions?

Participants were also asked whether after seeing adverts for infant milks they felt more inclined to buy the product. Two hundred and sixty-two (20.5%) participants stated that they were very likely or likely to feel more inclined to buy a formula product after seeing an advert. On the other hand, 499 (39%) strongly felt that they were not inclined to buy formula after seeing an advert.

A large difference was seen for maternal age. Of mothers aged 18 – 24, 43.8% agreed that adverts made them more inclined to purchase the product whereas only 22.8% of mothers aged 25 – 34 and 12.4% felt this way.

Unsurprisingly, those who used formula were much more inclined to buy an infant milk after seeing an advert, with 41.8% of formula feeding parents reporting that they were very likely or likely to feel inclined to buy a product after seeing an advert. Only 5.1% of mothers who were exclusively breastfeeding felt that seeing adverts for infant milks made them feel more inclined to buy a product.

4.2.5 How do adverts for infant milks make mothers feel?

Participants were asked to describe in an open-ended box how they felt when they saw adverts for infant milks. A thematic analysis was conducted to categorise common responses. Nine different types of reactions were identified and are described below

[Key: EBF = mother who is exclusively breastfeeding; IM = mother who is using infant milks either exclusively or in combination with breastfeeding].

a) Angry / upset

The most common reaction (22.3%) described by mothers was to feel angry or upset when they saw adverts for infant milks. There was a large difference dependent on how they were feeding their baby; whilst 9.8% of those using infant milks were angered by the adverts, 31.4% of those exclusively breastfeeding felt this way. Specifically, mothers were angry because they believed advertising regulation should be stricter, or they felt they were being led to believe that certain brands or types of formula milk (often the more expensive ones) were better than others:

“Annoyed because I know they are virtually all the same product” (IM, aged 27)

“Frustrated that advertising regulations on formula are not stricter” (EBF, aged 31)

b) Indifferent / neutral

The second most common reaction was to feel indifferent by advert content (21.9%), with mothers stating they paid little attention to the adverts. This was a more common reaction amongst mothers giving any infant milks (28.9%) compared to those exclusively breastfeeding (16.5%). Mothers described how they didn't really notice the adverts, or that they simply washed over them like adverts for other products.

“Indifferent ... they just wash over me like most adverts for things I'm already aware of, but feel indifferent to, such as washing powder!” (EBF, aged 36)

“Not bothered. My baby, my choice as to how I feed” (IM, aged 23)

c) Manipulated / sceptical

The third most common response (17.4%) was from mothers who felt like they were being misled by the adverts. Mothers who were exclusively breastfeeding were more likely to feel this way (21.4%) compared to mothers who used infant milks (12.1%). Those in this group felt like the adverts were trying to trick them or were not truthful in the information presented. Some discussed the idea that they felt this topic was too important to be part of a sales pitch that might not have the wellbeing of mothers and babies as first priority.

“It feels a bit predatory; you have to choose the best based on buzzwords. They also try to sound to be the superior choice” (EBF aged 39)

“I would like the whole picture rather than the sales pitch” (IM, aged 31)

d) Adverts undermine breastfeeding

Another common reaction (10.7%) was for mothers to describe how they felt adverts for infant milks directly or undermined breastfeeding in the way they portrayed the content and impact of such milks. This again was more common amongst exclusively breastfeeding mothers (17.6%) compared to those giving infant milks (4.5%).

“I feel like they make breastfeeding look like it is dated” (IM, aged 28)

“As if they are saying formula is just as good as breastmilk” (EBF, aged 30)

e) Reassured / relieved

Overall, 7.0% of mothers described relief at seeing the adverts, feeling like they were getting good information and that someone was supporting them. This response was much more common amongst mothers who use infant milks (14.7%) compared to those exclusively breastfeeding (1.3%). A number of mothers in this group talked about how they felt reassured at the science going into milk production, the added ingredients and how close to breastmilk they now perceived formula milk to be.

“Like someone is on my side and helping me” (IM, aged 29)

“Relieved there is so little difference between breast and formula milk” (IM, aged 23)

f) Useful / informative

The sixth most common reaction (5.7%) again had a more positive slant upon the adverts, perceiving them to be useful in helping them learn about different milks and make decisions over which produce to use. Those in this group were predominantly mothers who used infant milks (11.5%), with just 1.3% of exclusively breastfeeding mothers feeling this way.

“Useful to see the differences between brands” (EBF, aged 33)

“Grateful that someone is taking the time to give me the information that is so hard to find” (IM, aged 35)

g) Worried / Confused

Another reaction was for mothers to talk about feeling worried or confused after seeing the adverts (4.9%). Some worried that they couldn't afford certain milks, or that they hadn't made the 'best' decision. Concern was similar amongst mothers who were exclusively breastfeeding (4.9%) and those using infant milks (5.1%), with some breastfeeding mothers worried their baby needed the 'added ingredient' found in infant milks.

“I worry about if I am making the right choice” (IM, aged 21)

“They make me doubtful I am doing the best for my baby” (EBF, aged 33)

h) Happy / impressed

A more positive reaction was for mothers to feel impressed at advert content (3.8%). All mothers who reported this emotion were using infant milks; no mother who was exclusively breastfeeding felt this way. Here mothers talked about being impressed at the perceived science and input behind the milks and felt that new ingredients were exciting additions.

“Really impressed that so much goes into making milks these days” (IM, aged 33)

“I love finding out about new things that are being added and the scale of development amazes me” (IM, aged 31)

i) Overwhelmed / bombarded

Finally, 3.3% of mothers discussed how they felt overwhelmed by adverts, specifically in relation to the sheer variety and volume that they saw, each trying to persuade her to buy their product. Mothers wanted to make the right choice but with so many supposed special ingredients, which should they choose? This feeling was more common amongst mothers who used infant milks (4.5%) compared to those exclusively breastfeeding (2.4%).

“Too many to choose from, which is the best?” (IM, aged 26)

“Too many ads- too often” (EBF, aged 34)

4.2.6 Knowledge and beliefs around infant milks

Participants were asked how strongly they agreed with a series of statements about the content and impact of infant milks. Table nine below shows the proportion of those who strongly agree or agree with each statement, split by those who use infant milks or not. Notably, although there was very high agreement across both groups that ‘all formula milks have very similar ingredients in them’, around a quarter of the sample still believed certain milks had superior content or impacts. This was much more common amongst those using infant milks than those who were exclusively breastfeeding.

Table nine: Perceptions of content and impact of infant milks

	All Participants		Use formula		Do not use formula	
	N	%	N	%	N	%
All formula milks have very similar ingredients in them	1121	86.1	487	89.9	620	83.5
Some formula milks help hungry babies feel fuller	598	46.0	311	57.4	280	37.8
Some formula milks will help your baby sleep	360	27.7	225	41.5	132	17.8
More expensive formula milks have better ingredients in them	312	24.0	218	40.2	92	12.4
Some formula milks are better than others as they have more ingredients	304	23.4	214	39.5	35	11.8

Again, perceptions were explored by maternal age (Table 10). Although mothers across each age group held similar views to the question ‘all formula milks have very similar ingredients in them’, mothers in the younger age group aged 18 – 24 were more likely to believe different milks had different ingredients and properties, followed by those aged 25 – 34, with those aged 35 and over least likely to believe this.

Table ten: Perceptions of content and impact of infant milks by maternal age

	≤ 24 years		25 - 34		35 ≥	
	n	%	n	%	n	%
All formula milks have very similar ingredients in them	64	87.7	721	85.2	337	85.3
Some formula milks help hungry babies feel fuller	43	60.3	294	47.1	163	41.3
Some formula milks will help your baby sleep	34	46.6	247	29.6	81	20.5
More expensive formula milks have better ingredients in them	32	43.8	226	25.8	67	17.0
Some formula milks are better than others as they have more ingredients	30	41.1	207	24.8	69	17.5

4.2.7. Knowledge of infant milk advertising and promotion regulations

Participants were asked a series of questions around their knowledge of infant milk advertising and promotion regulations. Overall:

- 866 (67.1%) of participants were aware that advertising infant formula was illegal. A difference was seen for maternal age; 46.5% of parents aged 24 or under, 67.0% of those aged 25 – 34 and 70.9% of those aged 35 or over were aware advertisements for infant formula were illegal.
- 501 (38.5%) felt that adverts always or mostly clearly stated that products being advertised were designed for babies older than 6 months old. When data was split by age of baby, 37.2% of parents of younger babies (≤26 weeks) felt that it was clear the products advertised were for older babies. Similarly, 39.9% of parents of older babies (> 27 weeks) knew that product adverts were for older babies.

- Little difference was seen for maternal age; 37.0% of those aged 24 or under, 38.8% of those aged 25 – 34 and 39.0% of those aged 35 or over believed adverts were clear in stating they were for older babies.
- 618 (47.5%) of participants felt that infant milk products advertised were suitable for babies of any age and this was the same regardless of the age of the baby. Little difference was found for age of baby; 47.5% of parents of younger babies (≤ 26 weeks) and 47.6 % of parents of older babies (> 27 weeks) felt that products advertised were suitable for babies of any age.
- For maternal age, 66.7% of those aged 24 or under, 49.6% of those aged 25 – 34 and 48.0% of those aged 35 or over felt that the adverts suggested they were suitable for any age.

4.3. Brand decisions

This next section explored women’s experiences of using infant milks including which brand and type they used and why, how they prepared bottles and any concerns they had.

Respondents in this section are predominantly those who were currently formula feeding, either partially or exclusively at the time of the survey (n = 550, 42.9 % of overall sample).

However, a further 77 mothers who were currently breastfeeding but planned to introduce formula milk at some point in the future also answered a series of questions around their planned choices.

4.3.1. Brand use and rationale

Parents were asked which brand of infant milks they currently used. Parents could give more than one brand if relevant, but only 17 parents (3.1%) said they bought a variety of brands, suggesting high brand loyalty. These brands were then coded into a ‘branded’ cows’ milk based milk, a supermarket own brand, goats’ milk-based formula, and prescription milks. Frequency of types of milk used is shown in descending order in table 11.

Table eleven: Current formula brands used by parents

Formula Brand	N	%
A branded cows' milk based formula	467	85.9
A supermarket 'own brand'	32	5.9
A goats' milk-based formula	8	1.7
A prescription formula	19	3.5
Brand used varies	17	3.1

To expand on this reasoning, parents were asked to describe how they chose the brand of infant milk that they gave their baby. Data was grouped into themes, with six main themes emerging. Although some parents simply stated they “*grabbed whichever was on the shelves at their local shop*”, the majority had specific reasons for buying a certain product.

a) Previous experience / influence of family and friends

The most common reason parents gave for choosing a particular brand was that a friend or family member had used it before or recommended it (25.1%). Family loyalty was strong, with many stating that this was the formula milk their family used. If a mother had used a certain milk with an older child, she would return to that milk for subsequent children.

“I had it when I was a baby and all my family have used the same brand for their children” (aged 30)

“I used this one with my older children” (aged 28)

The influence of partner preference was seen throughout responses. Partners were often the one to go and purchase the milk or have a preference over which one should be used.

“[Two brands] were on the hospital ward. Partner buys formula and thinks [specific brand] is the best because it costs more (I prefer to breastfeed)” (aged 28)

“My baby was starving, and the hospital told me she needed formula but we didn't have any as we were told it was important not to buy it in advance. It was Sunday night so my partner walked all around until he found one shop open and it had starter kits so he bought those ones as they were the only ones for sale”. (aged 35)

b) Price and availability

Price and availability were the next most common reasons (23.1%) but showed considerable variation in how price affected different mothers. Some purchased a certain brand because it was the most expensive, perceiving it to be the best. Conversely, others bought the least expensive either because it fitted their budget, or they understood that there was little difference in content due to price. Notably, those who chose a cheaper brand due to need often expressed guilt at doing so. In addition, some were swayed into making specific purchases because of money off vouchers, ability to collect points, or specific offers on a brand. Some noted that they would switch brands dependent on which was the best price, although as described previously, most participants showed brand loyalty.

“Whatever’s the cheapest since they’re basically all the same” (aged 32)

“I moved over because it was cheaper, and you can get clubcard points” (aged 27)

“Recommended as the best by my sister. It is more expensive so seemed better quality” (aged 24)

In terms of availability, many in this group recalled simply buying the one in their local shop, often in a panic at suddenly needing or deciding to use infant milk.

“It was all the nearest shop had at 3am on a Sunday morning when we were desperate” (aged 30)

“I could buy this one as part of the grocery shop” (aged 28)

c) Belief in the benefits of a specific brand

Around a fifth of mothers (23.1%) had clear beliefs that their brand of infant milk offered specific benefits to their baby. A large range of different perceived benefits were given based around perceptions of:

- The type of milk (*“Safer because it’s organic”*)
- The ingredients (*“This one has more ingredients than others”*)
- Comparison to breastmilk (*“This one is meant to be the closest to breastmilk”*)

- Ease of digestion (“It is gentle on their tummies”)
- Impact on baby’s behaviour (“I liked the fact it helps them sleep”)
- Impact on development (“Best for their brain development”)
- Ability to keep their baby full (“Helped him to go longer between feeds”)
- Scientific development (“It is advertised as being developed very scientifically”)
- Taste (“I got told it was the most similar tasting to breast milk because it’s sweet”)
- The most advanced formula (“It’s well known that this is the most advanced”)

d) Influence of health professionals

Despite guidance that health professionals should not give advice on specific brands of infant milks (outside of complex needs requiring a prescription milk), 18.0% of participants referred to influence of a health professional in making their decision. Predominantly this was either a straight suggestion from a health professional to use a certain brand (albeit often accompanied by the professional stating they were not ‘supposed to do this’) or a less direct influence such as their baby being given that brand in hospital, including in neonatal intensive care.

“My Health visitor from my second baby said [this brand] was closest to breastmilk and was superior to other brands” (age 32)

“Used what was provided in the hospital, and continued when we got home, because it seemed to suit the baby’ (age 39)

It was clear how strong and long lasting such a recommendation, or use of a particular labelled infant milk in a hospital setting could be:

“[This brand] was given to my first son in hospital. I was given some mini bottles to take away. We combination fed for a few weeks using [this brand]. When having our second son I used the same brand. Brand loyalty. Worked the first time etc etc.” (age 37)

e) Perceived characteristics of the company

A further reason given, that was particularly popular amongst older mothers, was the perceived characteristics of the company who made the milk (10.4%). This included aspects

such as being seen to be more ethical (including reliance of organic products), being based in the UK (and following 'UK regulations'), being seen to be a smaller company, or being a company that conducts lots of research.

"They are an ethical brand" (aged 35)

"I wanted packaging that was recyclable" (aged 34)

"I like the fact it is UK based, which also means less air miles" (aged 37)

"I know from friends that [this brand] has the biggest research budget" (aged 38)

f) Visibility of the product

Finally, a smaller group of participants referred to the visibility of the product, or advertising strategies affecting their choice. Here, mothers discussed seeing adverts on the television or in magazines, specifically describing seeing adverts rather than recalling specific advertising slogans. It is notable that this theme, where participants directly recalled being affected by advertising, rather than repeating advertising messages, is the smallest theme.

"It's the one you see the most" (aged 29)

"It was a familiar name from advertising" (aged 26)

However, a number of mothers throughout the research showed that it is possible to increase awareness of the milk content and advertising strategies. Several referred to the recent Channel 4 Dispatches programme 'the great formula milk scandal' describing how they had changed from more expensive brands to cheaper or more available products.

"I first chose [brand name] ready-made bottles as I had seen adverts on TV. However, I had no brand loyalty after seeing a Channel 4 documentary stating they all contain the same essential ingredients by law" (aged 34)

"I chose [brand name] as it's what my first child had. Switched to [supermarket] when I watched a programme saying they were all the same" (aged 32)

4.3.2. Decisions around infant milk type

The brand and type of infant milk parents reported using was categorised into infant formula, specialist formulas or follow-on formula. The proportion of the sample using each type is shown in table 12. It shows that around half the sample used infant formula, including 41.1% of those with a baby over six months old. Around a third were using follow-on formula, predominantly in the group with a baby over six months old, although 18.2% of mothers with a baby aged under six months were also using a follow-on formula.

Table twelve: Types of milks used, split by infant age in weeks

Milk		Whole sample (n = 536)	≤ 26 weeks (n = 307)	26 > weeks (n = 229)
Infant formula	n	280	186	94
	%	52.2	60.5	41.1
Hungry baby infant formula	n	22	18	4
	%	4.1	5.8	1.7
Comfort milk	n	19	13	6
	%	3.5	4.2	2.6
Soya based formula	n	4	3	1
	%	0.7	0.9	0.4
Anti-reflux milk	n	11	9	2
	%	2.1	2.9	0.8
Lactose free milk	n	18	12	6
	%	3.3	3.9	2.6
Specialist infant formula provided on prescription	n	24	10	14
	%	4.5	3.2	6.1
Follow-on formula	n	158	56	102
	%	29.5	18.2	44.5

4.3.3. Decisions around formula milk stage

Parents then responded to how strongly they agreed with a series of items for why they chose that specific infant milk. Parents were asked to complete different questions

depending on whether they used infant formula or follow-on formula, although a number of the statements were similar. In the following tables, the proportion of those who strongly agree or agree with the statements below are shown split by infant age.

For those using infant formula, the results are shown in table 13. It shows that the most common reasons for using infant formula are based around infant formula being suitable for babies up to twelve months, infant formula being complete and mothers not wanting to change milks once their baby was settled.

There was little difference in agreement with these reasons between mothers who used infant formula for babies aged over or under six months old. However, it also shows that other reasons such as having added ingredients or perceptions of impact upon infant behaviour were included by around a quarter to a third of participants. Notably, these reasons appear to be more prevalent in those with a baby aged under six months.

Finally, it shows that around a fifth of participants were persuaded to use an infant formula by a special offer in a shop. Given this is prohibited under law, it is possible these participants either misconstrued a display, or indeed a shop was breaking the law. A small proportion also claimed to have been given money off vouchers or free samples. Again, potentially violations of the law have happened, or perhaps such vouchers were for a different infant milk and cross marketing has occurred.

Table 14 displays the findings by maternal age. A similar pattern occurs in that agreement across the most common reasons of infant formula being suitable for babies up to twelve months, infant formula being complete and mothers not wanting to change milks once their baby was settled was similar across age groups.

However younger mothers (aged 18 – 24) were more likely to agree with reasons such as inclusion of added ingredients or impact on infant behaviour and showed much higher agreement with statements around instore offers, discount vouchers and free samples. Conversely, the older group of mothers aged 35 and over were least likely to agree with these statements.

Table thirteen: Reasons for using infant formula, split by infant age in weeks

	Whole sample (n =350)		≤ 26 weeks (n=239)		> 26 weeks (n=101)	
	n	%	n	%	n	%
It is suitable for babies up to 12 months	323	92.2	214	89.5	109	98.2
This formula has everything my baby needs	258	73.7	173	72.4	85	76.5
My baby is used to this formula, so I don't want to change it	243	69.8	171	71.8	72	64.5
This formula is easy to digest	136	39.0	102	42.7	34	30.6
Most people I know use this formula	131	37.6	97	40.8	34	30.6
A Health professional recommended it	127	36.4	101	42.3	26	24.4
Friends/family encouraged me to use it	122	35.2	91	38.2	31	28.1
This formula helps babies' physical development	105	30.3	84	35.3	21	19.3
This formula has better ingredients than other milks	99	28.4	78	32.6	21	18.9
This formula helps keep my baby fuller for longer	90	25.9	70	29.4	21	18.9
This formula boosts my baby's immune system	89	25.6	70	29.4	19	17.1
This formula helps babies brain development	88	25.2	71	29.7	17	15.3
This formula has an added ingredient I wanted my baby to have	86	24.6	70	29.3	16	14.4
I saw it promoted on social media	83	23.9	68	28.5	15	13.6
This formula helps babies to sleep	76	21.8	60	25.1	16	14.4
I didn't realise there were different stages of formula milk	76	21.8	62	28.0	14	12.7
It was on special offer in the shop	71	20.3	59	24.8	12	10.8
I had some discount vouchers	30	8.6	17	7.1	13	11.7
I had a free sample	14	5.4	8	5.2	6	7.8

Table fourteen: Reasons for using infant formula, split by maternal age

	≤ 24 years		25 – 34 years		35 ≥ years	
	(n = 23)		(n = 227)		(n = 100)	
	n	%	n	%	n	%
It is suitable for babies up to 12 months	22	94.7%	207	90.8	96	96.0
This formula has everything my baby needs	15	65.2	174	76.3	69	69.0
My baby is used to this formula, so I don't like to change it	18	73.2	162	71.1	63	63.0
This formula is easy to digest	13	56.5	97	42.5	26	26.0
Most people I know use this formula	15	65.2	96	42.3	20	20.0
A Health professional recommended it	13	56.5	94	41.5	20	20.0
Friends/family encouraged me to use it	14	60.9	91	41.3	17	17.0
This formula helps babies' physical development	15	65.2	81	35.8	10	10.1
This formula has better ingredients than other milks	14	60.8	71	31.1	14	14.0
This formula helps keep my baby fuller for longer	14	60.9	72	31.7	4	4.0
This formula boosts my baby's immune system	15	65.2	68	29.9	6	6.0
This formula helps babies brain development	15	65.4	69	30.3	5	5.0
This formula has an added ingredient I wanted my baby to have	16	69.5	65	28.5	5	5.0
I saw it promoted on social media	13	56.5	68	30.1	2	2.0
This formula helps babies to sleep	8	34.8	60	25.4	8	8.0
I didn't realise there were different stages of formula milk	13	56.3	61	26.7	3	3.0
It was on special offer in the shop	8	34.8	59	26.0	4	4.0
I had some discount vouchers	5	21.7	24	10.6	1	1.0
I had a free sample	3	13.0	11	4.8	0	0

Looking at those who chose to use follow-on formula, the percentage of those who agreed or strongly agreed with each statement is shown in table 15, split by infant age. The most common reason given was age related guidance on the packet, followed by many price related items (i.e. cost, discount vouchers, special offers) and reasons around added ingredients / impact on infant development. These reasons were given more frequently by mothers of babies aged under six months than of older babies.

Table fifteen: Reasons for using follow-on formula, split by infant age

	Whole sample (n= 163)		<6 months (n=59)		≥6 months (n=104)	
	N	%	n	%	n	%
This formula helps babies physical development	127	77.9	52	88.2	54	51.9
It was cheaper than first stage formula	123	75.5	48	81.3	75	72.1
It was on special offer in the shop	121	74.2	52	88.1	69	66.4
A Health professional recommended it	120	73.6	49	83.0	71	68.2
Most people I know use this formula	118	72.4	54	88.1	66	63.4
This formula has an added ingredient I wanted my baby to have	117	71.8	47	59.6	72	77.3
This formula is easy to digest	116	71.2	52	88.2	64	61.6
I had some discount vouchers	114	69.9	48	81.4	66	63.4
I saw it promoted on social media	113	69.8	50	84.7	63	61.2
I had a free sample	112	68.7	48	81.4	64	61.5
It is more advanced than first stage formula	111	68.1	50	84.8	61	58.7
It will help my baby sleep	111	68.1	48	81.3	63	60.5
The guidance on the package said it was suitable for my baby's age	105	64.4	7	11.8	98	94.2
Friends/family encouraged me to use it	91	55.8	34	57.6	57	54.8
This formula boosts the immune system	90	55.2	36	60.0	54	51.9
This formula has better ingredients in than first stage formula	77	47.2	34	57.6	43	41.2
This formula keeps my baby fuller for longer	71	43.6	28	46.5	42	41.4
It will help my baby's brain development	49	30.1	22	37.3	27	26.0

Table 16 shows agreement for different reasons for using follow-on formula split by maternal age. Mothers who were in the youngest age group (18 – 24) were more likely to agree with statements around price, proposed impact on infant development and added ingredients than older mothers, with those aged 35 and over being least likely to agree.

Table sixteen: Reasons for using follow-on formula, split by maternal age

	≤ 24 years (n = 15)		25 – 34 years (n = 110)		35 ≥ years (n = 38)	
	N	%	n	%	n	%
The guidance on the package said it was suitable for my baby’s age	13	86.7	102	92.7	37	97.4
This formula helps babies’ physical development	12	80.0	88	80.0	27	71.1
It was cheaper than first stage formula	13	86.7	83	75.4	27	71.1
It was on special offer in the shop	14	93.3	81	73.6	26	68.4
A Health professional recommended it	12	80.0	82	74.6	26	68.4
Most people I know use this type of formula	12	80.0	78	70.9	28	73.7
This formula has an added ingredient I wanted my baby to have	10	66.6	80	72.7	27	71.1
This formula is easy to digest	13	86.7	77	70.0	26	68.4
I had some discount vouchers	13	86.6	74	67.3	27	71.1
I saw it promoted on social media	12	80.0	77	70.6	24	58.1
I had a free sample	11	73.3	75	68.3	26	68.5
It is more advanced than first stage formula	11	73.3	74	67.3	26	68.4
It will help my baby sleep	12	80.0	73	66.4	26	69.5
Friends/family encouraged me to use it	10	66.7	61	55.4	20	52.7
This formula boosts the immune system	8	53.4	65	59.1	17	44.7
This formula has better ingredients in than first stage formula	10	66.7	49	44.5	18	47.4
This formula keeps my baby fuller for longer	6	40.0	53	48.1	12	31.6
It will help my baby’s brain development	5	33.4	37	33.6	7	18.4

To compare reasoning for choosing formula stage by those who chose infant formula and follow on formula, the number agreeing with each statement that was included for both groups is shown in table 17. Agreement for each of the reasons, particularly for factors related to marketing slogans such as proposed impact on infant sleep and development and additional ingredients was overall generally higher in those who had moved onto follow on formula milks. This may be because advertising is having an impact, or that those who move onto follow on milk may be more susceptible to advertising slogans.

Table seventeen: Comparing reasons for choosing current infant milk between those using infant formula and follow-on formula

	Infant formula (n =350)		Follow-on formula	
	n	%	n	%
The guidance on the package said it was suitable for my baby's age	323	92.2	152	93.2
This formula is easy to digest	136	39.0	116	71.2
Most people I know use this formula	131	37.6	118	72.4
A Health professional recommended it	127	36.4	120	73.6
Friends/family encouraged me to use it	122	35.2	91	55.8
This formula helps babies' physical development	105	30.3	127	77.9
This formula has better ingredients than other milks	99	28.4	77	47.2
This formula helps keep my baby fuller for longer	90	25.9	71	43.6
This formula boosts my baby's immune system	89	25.6	90	55.2
This formula helps babies brain development	88	25.2	49	30.1
This formula has an added ingredient I wanted my baby to have	86	24.6	117	71.8
I saw it promoted on social media	83	23.9	113	69.8
This formula helps babies to sleep	76	21.8	111	68.1
It was on special offer in the shop	71	20.3	121	74.2
I had some discount vouchers	30	8.6	114	69.9
I had a free sample	14	5.4	112	68.7

To explore reasoning in more detail, participants were asked to describe further why they chose to use either an infant formula or follow on formula product.

1. Infant formula

Looking first at those who had decided to give infant formula, four main reasons were given:

a) Knowledge that only infant formula was needed

For those using infant formula the most common reason given was that mothers understood guidance that only infant formula was necessary and that there was no need to 'move on' to follow on formula milks.

"She will use first stage until she is one, I don't use follow on milks" (age 33)

"I knew that first milks were ok to use all the time" (age 35)

However, a number of participants who were using infant formula whose baby was under six months old made reference to the fact that the milk they were using was suitable for babies aged 0 – 6 months. It is possible a number of these mothers without the correct information may make a switch once their baby is older.

b) Guidance from health professionals

Closely tied to mothers' knowledge of there being no need to move on to a different stage of milk, many mothers talked about how their health professional had specifically advised them to remain on infant formula.

"Midwife mentioned at a feeding class that babies need the first formula and can stay on that until they are one"

c) Concern over additional ingredients

Notably, and in contrast to the following section on rationale for using follow-on formula, a number of participants actually expressed concern at added ingredients advertised as being

in follow on milks. They were unsure of whether they were necessary or safe, with worries that they might overload their baby.

“I felt the others were a con and worried about the extra ingredients” (age 42)

d) Reluctance to change milk

Finally, a number of participants described how even though they had looked at different formulas, they were reluctant to move onto the next stage as their baby was growing and thriving on the infant formula that they were using.

‘He was settled on this one, so I didn’t want to risk that’ (age 30)

e) Suspicion of advertising strategies for follow on milk

A further idea raised was the perception that follow-on formula and their advertising slogans were simply developed in order to circumnavigate promotional rules. Mothers were suspicious of strategies and remained using infant formula mainly because they understood it was all that was necessary but also partly due to suspicion and irritation with advertising strategies for follow on milks.

“First as don’t believe any other type is necessary. I feel it was made to allow advertising” (age 32)

“I know that first formula would meet his needs and follow on is a marketing ploy” (age 30)

2. Follow-on formula

A wider variety of reasons were identified amongst those who had moved onto follow-on formula. These included a number of reasons related to marketing and promotional strategies used by companies to promote this type of product. Clearly, these messages were influencing purchasing decisions.

a) Product labelling

Many participants referenced product labelling as a central reason they moved onto follow-on milk. As packaging stated it was suitable for babies from six months old, they felt it was suitable for their baby.

“Read 6 months plus, so felt it was appropriate” (age 28)

“It is for babies age 6 months plus” (age 25)

b) Perception that follow-on formula was more advanced

A common idea was that follow-on formula had additional ingredients or ones that better suited a growing baby. Follow-on formula was seen as ‘advanced’ compared to first stage and moving onto the next stage was a natural progression.

“It’s better for him now he’s growing” (age 42)

“More advanced stage” (age 26)

“It’s got more in it than first stage” (age 28)

Related to this, a common phrase used amongst participants was the idea that their baby was ‘*ready for the next stage*’, implying perception amongst mothers that babies have additional nutritional needs after six months and that follow-on formula is specifically different to meet these needs. Follow on formula was clearly seen as significantly different or better for infants over six months old, compared to infant formula.

b) Perceived benefits of specific milks

It was clear that many parents had decided to purchase specific follow-on formula based on advertising and promotional messages particularly around the proposed impact of milks upon infant behaviour or development. References to impact on sleep, digestion and specific mechanisms of ingredients were all raised, many of them clearly matching specific advertising strategies of the brands listed. Phrases used by parents when describing reasons

for why they chose the product often matched terminology, language or phrasing used in specific adverts.

“This formula helps babies to sleep better and he still wasn’t sleeping” (age 28)

“This one has better ingredients” (age 27)

“This one is best for brain and motor function” (age 33)

“Helps older babies once they are crawling” (age 32)

Linked to this was a definite perception of certain companies conducting greater research into their products, with certain brands in particular being deemed the most scientific.

“As a researcher the amount of science and development that goes into this milk swung my choice” (age 34)

c) Cost and promotional benefits

A central theme raised by many parents was that follow-on formula was cheaper, had promotional offers or you could receive store card points.

“Sounds really bad but nectar points” (age 33)

“How much it cost i.e. much cheaper!” (age 29)

The direct impact of marketing was seen, with participants describing how they had been sent promotional vouchers or been given free samples, and this had led to them purchasing the milk for their baby.

“I had a free sample and he liked it” (age 28)

“I had some vouchers so thought I would try it” (age 27)

Underneath many responses was an anger expressed by participants that they were unable to receive promotional offers on infant formula. They deemed this unfair so deliberately purchased the next stage.

“I’m angry you can’t get offers on earlier milks, so I buy this one (follow on)” (age 34)

d) Recommendations of family and friends

Another clear influence was that of family and friends. This came through direct recommendations to 'move their baby on' or a more subtle following of what friends and family had chosen. There appeared to be a lot of comfort in offering the milk that many others used.

"My friends in the US where they tell you more about formula milk recommended it" (age 23)

"Friends moved their baby on (to follow on)" (age 28)

e) Advertising

A number of participants directly referred to seeing adverts for follow on formula which encouraged them to move their baby onto these milks.

"You see it advertised a lot and everyone else uses it so I thought it was as good a choice as any" (age 29)

Others viewed advertising information as being product information and therefore felt that they were making a more informed choice by selecting that product.

"I could get lots of information on this one and there was barely anything on the first stage" (age 32)

Related to this, several mothers described how advertising of follow-on formula made them feel, not specifically in relation to milk content or proposed benefits but the concept that advertising restrictions of infant formula made them feel angry or ashamed. They therefore bought follow-on formula out of principle.

"I buy this one (follow on) on principle as I refuse to be made guilty by them not sharing information with me about earlier milks" (age 32)

"Because it is advertised, and you can have offers on it so I feel I am not being shamed by using it" (age 34)

4.3.4. Future intentions

Parents who had not yet started to use an infant milk were asked if they knew which brand they planned to use. Seventy-seven parents completed this section. Notably, despite not yet

using formula, around half had already made a decision on which brand they would use. These are shown below in table 18.

Table eighteen: Intended future infant milk brands

Formula Brand	N	%
Brand name	32	42.4
A prescription formula	3	3.9
Shop brand	2	2.6
Undecided	40	52

Parents were asked why they planned to use that particular brand in an open-ended box. Thematic analysis of these responses led to five main themes, with significant overlap with the reasons those already using infant milks gave. It was clear that even before a milk had been purchased, a number of factors were influencing maternal decisions:

a) Previous experience

For those with an older child, the main rationale was that they had used this brand with a previous baby. Again, this shows the strength of previous experience and brand loyalty over future continued purchasing.

“I used it with my first born and has no issues” (age 32)

“Gave to other child and he was fine with it” (age 29)

b) Influence of health professionals

Influence of health professionals, either directly or indirectly also affected decisions. Again, the authority that a hospital using a certain brand of milk gave was seen; mothers assumed that if the hospital was using it, it must be best.

“I know the hospital use [Brand] so we’ll probably use that too” (age 32)

“I discussed it with my health visitor” (age 29)

c) Friends and family

Friends and family also had considerable sway. Mothers were keen to follow their example, perhaps interpreting that it seemed to work for their babies so they would use it too.

“I saw friends using [brand name] which is why I used it previously” (age 35)

“It’s the brand my friends use” (age 29)

d) Perceptions of product content

Participants had clear perceptions that certain brands were gentle, more natural or similar to breastfeeding, presumably from hearing advertising for infant milk products.

“Lots of natural ingredients and no nasties” (age 21)

“My baby has never been a good sleeper so I sometimes think if I use a hungry baby one it might fill her up and help her sleep longer” (age 29)

Indeed, some referred directly to adverts as influencing their decisions

“Probably because the advert says, “move on from breastfeeding”, I gave my eldest daughter ready-made bottles of (Brand A) to granny’s house when I returned to work 2 days a week as she was still feeding to sleep for her nap” (age 38)

“It says it’s closest to breastmilk in advertising” (age 31)

e) Price and availability

Cost and availability also played a role.

“Appears to be readily available and a reasonable price. Can get it in all major supermarkets and in aldi/lidl” (age 39)

“We chose one that was readily available in our local convenience store” (age 33)

4.4. What type of infant milks are parents using?

Parents were asked which type of infant milk they commonly used in terms of whether it was ready to feed, powdered or a mix of these options. Table 19 shows that over two thirds

of parents (68.4%) use the more expensive option of liquid / ready to feed formula at least some of the time. Mothers in the youngest age group (18 – 24) were the least likely to use powdered formula only, with just 19.5% in this age group using this type of infant milk.

Table nineteen: Type of infant milk used, split by maternal age

Type of formula	Whole sample		<25 years		25 – 34		35+ years	
	n	%	n	%	n	%	n	%
Powdered milk only	173	31.6	8	19.5	110	30.8	55	36.4
Mainly powdered, some ready to feed/ liquid milk	228	41.7	20	48.8	147	41.2	61	40.4
About half powdered milk, half ready to feed / liquid milk	45	8.2	4	9.8	32	9.0	9	6.0
Mainly ready to feed / liquid milk, some powdered milk	43	7.9	6	14.6	30	8.4	7	4.6
Ready to feed / liquid milk only	60	10.9	3	7.3	38	10.6	19	12.6

4.4.1. Infant milk preparation

Parents who used powdered infant milk at least some of the time (n = 489) were asked a series of questions about how they made up bottles of milk. Parents could choose multiple options, and many reported using a variety of different methods (Table 20). Milk preparation machines were popular, with over half the sample using such a machine, although mothers aged 35 and over had lower use than the two other age groups.

Table twenty: Preparation of infant milks by maternal age

	Whole sample		<25 years		25 – 34		35+ years	
	n	%	n	%	n	%	n	%
Kettle or stove	327	66.9	32	84.2	218	68.3	77	58.3
Milk preparation machine	276	56.4	19	59.6	189	59.2	68	51.5
Instant boiling water tap	66	13.5	6	15.8	47	14.7	13	9.8

In terms of when and how feeds were prepared, parents were given a range of different ways in which powdered infant milk s could be made up. Parents chose the option they most typically used. Frequency of parents using different options is show in table 21.

Just under half of parents reported that their most common method was to use an infant milk preparation machine. For the others, the majority followed instructions correctly to make up powdered infant formula either making bottles fresh for each feed or making multiple bottles up correctly and storing them in the fridge for later use. A small proportion of parents (7.4%) reported using outdated advice, boiling water and cooling it in the fridge and then using the water to make up bottles at a later stage. Of these parents those in the youngest age group (18 – 24) were most likely to follow this approach (12.8%), followed by those aged 25 – 34 (7.6%) and those aged 35 and over being least likely to use this method (5.3%).

Table twenty-one: Method of infant milk preparation

Method	Whole sample		<25 years		25 – 34		35+ years	
	n	%	n	%	n	%	n	%
I make feeds fresh each time following the instructions on the tin	168	33.5	9	23.1	108	32.7	51	38.3
I make multiple feeds at a time following instructions, keeping some in the fridge to warm later.	48	9.6	5	12.8	29	8.8	14	10.5
I boil water, keep it in the fridge to use to make up feeds to warm up later.	37	7.4	5	12.8	25	7.6	7	5.3
I use a formula preparation machine	228	45.5	18	46.2	156	47.3	55	41.4
Other (please describe)	20	4	2	5.1	12	3.6	6	4.5

Examples of ‘Other’ methods included, mixing formula into porridge, doing a mixture of the methods in the categories presented, using a mixture of boiling water and ‘cooled’ boiled and preparing night feeds in the evening for the night ahead.

4.5. How confident and knowledgeable do parents who use formula feel?

Finally, parents who were currently using infant milks were asked a series of questions around how confident they felt about different aspects of using formula.

4.5.1. Parental confidence

Parents were asked a series of statements around confidence and knowledge in preparing feeds, choosing a type of infant milk to buy and judging whether their baby was getting enough milk. Table 22 presents those who strongly agreed or agreed that they felt confident in different feeding aspects, split by maternal age group. It was clear that confidence was mixed across the group, with around half of participants stating that they felt confident in the different aspects of giving infant milks to their baby. In terms of differences between age groups, those in the youngest age group (18 – 24) typically felt the least confident, followed by those aged 25 – 34, with those aged 35+ feeling the most confident.

Table twenty-two: Parental confidence in different aspects of formula feeding

Aspect of feeding	Whole sample (n = 549)		<25 years (n = 42)		25 – 34 years (n = 358)		35+ years (n = 149)	
	n	%	N	%	N	%	N	%
Deciding which brand to use	248	45.2	14	33.3	162	45.3	72	48.3
Deciding which type/stage to use	378	68.9	27	64.3	240	67.1	111	74.5
Preparing day feeds	357	65.3	21	50.0	231	64.7	105	70.9
Preparing night feeds	351	64.6	24	57.1	230	62.6	98	66.7
Combining breast & formula feeding	273	49.6	17	40.5	169	47.2	86	58.2
Knowing my baby is getting enough milk	325	59.3	17	40.5	201	56.2	103	69.6
Knowing how much to give them	316	57.7	19	45.2	192	53.7	105	70.9
Knowing how often to feed them	296	54.3	14	34.3	187	52.2	96	65.3
Knowing which bottles to use	271	49.5	13	30.9	173	48.3	75	57.9

Parents were asked in an open-ended box whether they had any further concerns or thoughts about different aspects of giving their baby infant milk, including where they felt they would benefit from further information.

a) Greater information on different infant milks

A common request was for more detailed information to be given on the content and proposed impact of different infant milks, conducted independently rather than given through the company promoting the product. Participants wanted research rather than advertising slogans.

“A good and objective comparison of all the different formulas to help advise parents which would be suitable for babies. Not just relying on the brand advertising” (age 38)

“Better understanding of the actual research done into formula feeding would be useful” (age 35)

A number of women felt that this information was deliberately being held back from them, and this might make women more susceptible to marketing claims

“Stop treating women like they are too thick to make an informed decision” (age 40)

“The reason that parents make unwise choices and succumb to marketing is that formula feeding isn’t taught antenatally. All infant feeding education should discuss both breast and formula feeding to stop parents falling victim to marketing claims” (age 32)

However, some were aware that there was little difference in content, and wanted this information to be more widely shared

“It would be great if it was made really clear that all formula milks have to meet a basic standard and therefore all formula milks are pretty much the same as each other. I think this message needs to come from health care professionals in particular. The fact that they use [brand] in hospital seems like an implicit recommendation of this brand being more ‘medical’ or reliable. It would also be great if it was common knowledge that follow-on milks are completely unnecessary” (age 34)

b) Further information on the practicalities of formula feeding

A number of mothers wanted more detailed information on how to bottle feed such as timing and volume of feeds and the best way to position a baby.

“How much is the recommended quantity to give and frequency of feeding” (age 31)

“How to position baby and bottle, how often to wind baby” (age 27)

This often included information on safe storage and preparation of bottles. Many were confused as to which guidance to follow and the rationale behind it

“The guidance on preparing feeds is unfeasible and leads to people inventing their own ways of doing it. The risks are unclear – does the water need to be hot? Why? What if it isn’t?” (age 38)

“I think health care professionals should give you information on how to safely bottle feed your baby (sterilising and making up feeds)” (age 38)

c) Guidance on combining breast and formula feeding

Finally, greater support for how to combine breast and bottle feeding was a common theme. Participants described how they had received little information and struggled to know what was best

“Advice on combining with breastfeeding from health professionals is very poor, I relied on support groups such as KellyMom and La Leche League” (age 35)

“Just that it seems there is very little information about mixed feeding - I find this odd as it is a solution that works for many families in different ways. Whether their baby has formula occasionally like our family or a mix daily” (age 33)

5. Discussion

This report explored the reach, interpretation and impact of infant milk marketing practices upon new families. It showed a widespread reach of different forms of infant milk advertising across a variety of different platforms, many of which are interpreted by some as being for infant formula rather than follow on or toddler milk brands. It highlighted how messages in these adverts, typically around unproven claims, are driving both brand choice and the type of infant milk that families are using. Finally, it showed a gap in maternal support, with many mothers feeling a lack of confidence in giving their baby infant milks. The findings are important for considering both how industry marketing tactics can be better regulated and ensuring that all families are offered accurate, timely and consistent support, free from industry influences, when they need or choose to give infant formula to their baby.

5.1 Frequency of exposure to adverts for infant milks

In terms of frequency and interpretation of infant milk adverts, almost all participants in this survey reported that they had seen an infant milk advert, regardless of how they were feeding their baby (thus breastfeeding mothers being exposed to advertising) or how old their baby was (thus adverts reaching mothers of babies under six months). This shows that advertising is widespread and not, for example, just targeted at those already purchasing products, or those who have asked to be sent marketing information.

Notably, two thirds had interpreted an advert as being for infant formula. It is unlikely, given strict advertising restrictions on promotion of infant formula that they had seen such an advert in the UK, yet a third of mothers described not only seeing these adverts but seeing them frequently. Younger mothers aged 18 – 24 were more than twice as likely to report seeing infant formula adverts frequently compared to those aged 35 and over. This is likely in part due to our finding that mothers in the older age groups had a greater awareness that it is illegal to advertise infant formula milks.

These findings fit with what we know from other countries. Research in Australia ⁽⁹⁾ and Italy⁽¹⁶⁾ reported that pregnant and new mothers are regularly exposed to such adverts and frequently misinterpret adverts for follow-on formula to be adverts for infant formula. This is likely exacerbated by the unclear package differentiation between different products in the range ⁽¹³⁾.

Parents who were formula feeding reported higher levels of perceived exposure to formula marketing, particularly perceptions of seeing infant formula adverts. However, the direction of this relationship is not clear. It may be that parents who formula feed are simply more likely to notice or remember seeing adverts for formula as they resonate with them, a phenomenon known as confirmation bias. They may also be more likely to actively seek out products and information about different milks, being exposed to more adverts as part of this.

However, it might also be that parents who receive more formula marketing are more likely to decide to introduce formula milk. In our survey, respondents who formula fed reported higher levels of intention to buy a product after seeing an advert compared with breastfeeding mothers. Prior research does demonstrate that exposure to formula feeding marketing appears to influence feeding decisions ⁽⁵⁰⁻⁵²⁾. For example, in a US randomised trial of over 540 women, those who were given formula company promotion material while pregnant were significantly more likely to stop breastfeeding in the first two weeks when compared to those who were given research-based educational packs ⁽⁵⁰⁾.

5.2. Locations of infant milk adverts

Participants recalled seeing adverts for infant milks across a wide variety of locations. Although the traditional formats of television, baby magazine, shops and on billboards were the most common places that adverts were encountered, the findings show the increasing reach of adverts on social media and in locations such as the cinema. Social media was a particularly common place for participants to spot product placement, which is a growing tactic with several celebrities or 'mummy bloggers' collaborating with formula manufacturers to promote products ⁽⁵³⁾.

Given the popularity of social media, particularly amongst younger generations ⁽⁵⁴⁾ and new families as a source of parenting information ⁽⁵⁵⁾, this is a concerning trend. It is not simply the exposure directly as a consequence of companies sharing posts, but the way these posts can be targeted at certain age groups / interests. Whilst a billboard in the street may attract the attention of some people walking by, regardless of age or parenthood status, social media targeted advertising settings allow placement of adverts directly in the social media feeds of the demographic most likely to purchase the product. Moreover, users behaviour on social media serves to further promote the product by boosting its visibility through individuals interacting with the post i.e. through 'liking', sharing, commenting ⁽⁵⁶⁾. These allow for members of the public to in a sense 'promote' the products without it coming directly from the manufacturer.

The use of social media, particularly Facebook, as a vehicle for infant milk promotion was established in a 2012 study in the USA. The authors identified how infant milk manufacturers had established presences across social media platforms, engaging with followers and promoting their products through tactics such as prize drawers, testimonials from parents and posting discount offers. Relationships with bloggers were common with parents being encouraged to click links to product websites. It was noted that one brand alone had over 2 million 'likes' from individuals following the page ⁽⁵⁷⁾. This study is now over eight years old, with significant growth of social media platforms, and thus likely exposure during this time ⁽⁵⁸⁾.

Finally, almost all (88%) of participants recalled having received some sort of direct marketing of materials such as money off vouchers, branded toys, height charts, fridge magnets, photo mounts etc. When asked, only 36% of participants could remember giving permission to receive this, despite regulations that any such marketing material must be via opt-in permission ⁽¹⁴⁾. It is possible that some participants did consent but could not remember doing so. It is more likely that consent was technically given but in an indirect way, without participants realising they were giving permission for such products. For example, the small print of some parenting clubs would technically allow such material to be sent. Others may have joined pregnancy or birth clubs run by infant milk manufacturers, distracted by elements such as a free pregnancy advice line.

A key concern is that some respondents reported receiving formula marketing information from a healthcare professional or in a healthcare setting. Around one in five respondents also said that a health care professional had influenced their choice of formula milk brand, or that they had simply continued with a brand that was available in the hospital. It is well known that formula companies target health professionals as they are a key source of information on infant feeding for parents. While the UNICEF UK Baby Friendly Initiative has gone some way to preventing health professionals from promoting infant formula ⁽⁵⁹⁾, there is increasing concern around the subtle ways in which the breastmilk substitute industry is still able to reach and influence health professionals ^(24, 60).

Influence over health professionals can occur in a number of ways including through adverts appearing in professional magazines, journals, and via industry funded health service study days. For example, an investigation by Channel 4's *Dispatches* revealed that 59 out of 195 NHS Clinical Commissioning Groups in England had recorded breaches of the WHO Code ⁽⁶¹⁾. However, claims made by formula companies directed at health professionals are commonly very misleading ^(23, 24); much of the information conveyed to health professionals via advertisements found in professional and scientific journals may appear credible in its presentation, but is often not based on sound evidence. Industry funded research, which may be vulnerable to bias, is also often used to substantiate scientific claims and statements made in the adverts ⁽²³⁾.

Exposure to these adverts may lead to professionals believing a brand's product claims, potentially influencing prescribing and recommendations. However, influence may also be more subtle. If parents perceive any link between a health professional and a product, they can make the assumption of endorsement. Many attendees at such events will, sometimes inadvertently, return back to the workplace with literature or items such as pens which bear industry logo, claims or slogans ⁽⁶²⁾. Whether the health professional has directly made a recommendation not, the important issue is that clearly some parents believe they are promoting specific brands. Industry very much values this type of connection as it is seen as 'sanitising' and 'normalising' the brand and products if endorsed by health professionals, or a public health body ⁽⁶³⁾.

5.3. Advert content and impact on brand decisions

Participants were asked to recall whether they had seen certain messages within infant milk adverts. Commonly viewed messages were clustered around topics such as being scientifically advanced, containing added or special ingredients, improving infant health or impacting on behaviour. Further open-ended questions exploring why mothers chose specific formula brands showed that messages from these adverts were affecting purchasing decisions. This was particularly stark when reasons for choosing different milks were compared for those using infant formula or follow-on formula; around twice as many participants who used follow-on formula (which is legally and widely advertised) agreed that they had chosen their milk based on these different messages suggesting a strong influence of advertising, compared to those using infant formula (which is prohibited from being advertised). This suggests that advertising *is* having a direct impact on infant milk sales, but also a knock-on impact onto infant formula sales through brand association.

However, an interesting juxtaposition occurred between different statements exploring mother's knowledge of different infant milks. Whilst almost all participants agreed that there was little difference in content between infant milks, at the same time almost half stated that some milks had better ingredients than others and that expensive milks had better ingredients. This seeming ability to hold two views at once has been evidenced in other research around people's perceptions of breast and formula milk. For example, in one study, whilst almost all participants believed breastfeeding protected babies health, few believed formula would harm it, despite these essentially being the same statements ⁽⁶⁴⁾. Here participants thinking suggests that it is common to perceive most milks as being the same, perhaps *apart from the one you are using* – that is an improved or better formula.

In terms of specific messages that were seen or believed, those around scientific advancement (i.e. being 'developed by scientists' or being 'the most advanced yet') were particularly common with almost all participants recalling seeing these messages, with almost 9 in 10 seeing these frequently. Other related and common messages were the concept of the milk being 'closer than ever to breastmilk' or having added ingredients. Research with former employees of infant formula manufacturers highlights the deliberately

vague nature of these statements. Slogans are made to sound scientific but also difficult to disprove. For example, 'our most advanced formulation yet' or 'inspired by 40 years of breast milk research'; statements that sound appealing but in fact do not technically mean anything ⁽⁶³⁾.

Despite this, these perceptions are affecting infant milk choice. For example, a quarter of those using infant formula and half of those using follow-on formula agreed they chose their specific milk because 'it has better ingredients than other milks'. Younger mothers aged 18 – 24 were much more likely to agree they chose their specific milk based on these statements than older mothers were. Clearly, these soundbites are appealing to parents and it is understandable why: parents should be able to trust information on the side of a product.

A second common messaging tactic was to promote the idea of milks affecting infant behaviour such as being for hungry babies, easing digestion or keeping their baby fuller for longer. For example, almost all participants perceived that they had seen milk advertised aimed at 'hungry babies', with three quarters believing they had seen frequent adverts for this product. Although this is not a commonly promoted product in terms of adverts upon television or billboards, it is likely that instore, website and packaging promotion is serving to increase awareness of the product. A google search for 'hungry baby milk' also leads to numerous articles supposedly questioning its use yet still listing products on sale e.g. Made for Mums ⁽⁶⁵⁾. Likewise, messages around ease of digestion, helping babies feel fuller for longer and impact on sleep were given as primary reasons for choosing specific brands by around a quarter of participants using infant formula and half of those using follow-on formula. Again, these reasons were also particularly common reasons given by younger mothers aged 18 – 24.

This type of marketing is a concern, because despite there being no evidence that milks marketed as being for 'hungrier babies' have any impact on the amount or frequency of feeding, or indeed formula feeding having any impact on infant sleep ⁽⁶⁶⁾, this messaging feeds into common parental concerns. Many parents worry that their baby is unsettled, feeding too much or not sleeping through the night ⁽⁶⁷⁾, with these reasons being common factors involved in early cessation of breastfeeding ⁽³⁰⁾. Other normal infant behaviours that

can be misinterpreted as being a sign something is wrong including infant 'fussiness' or spitting up milk.

Proposed benefits upon specific ingredients boosting infant immune system, brain or physical development, or high levels of added vitamin D or iron were also common tactics seen in adverts. Again, these messages drove purchasing with around a quarter of those using infant formula and up to three quarters of those using follow-on formula stating these messages drove their decision making. Notably, 72% of those using follow-on formula chose the milk due to it having a specific added ingredient – something that was less common (25%) for those using infant formula. This is understandable; parents worry about their baby's intake of nutrients and growth ⁽⁶⁸⁾, perhaps especially so if they are not happy with stopping breastfeeding or introducing infant formula ⁽⁶⁹⁾. However, reviews of health claims made by formula marketing have deemed that many claims made are at best limited by poorly conducted research and at worst, unsubstantiated and misleading ^(19, 23, 70, 71).

Focussing on nutrient based slogans in marketing campaigns is a common tactic. For example, follow-on formula in particular are promoted as having high levels of vitamin D and iron, typically at much higher levels than are in breastmilk. However, 'more' does not necessarily equal 'better' despite marketing suggestions. One reason levels of iron are higher in formula milk is the significant variations in the bioavailability of components such as iron and zinc in breast and formula milk. Whilst levels might be much lower in breastmilk, a higher proportion is absorbed, aided by components of breastmilk such as lactoferrin ⁽⁷²⁾. Additionally, excess unabsorbed ingredients can place a strain on the infant's digestive system, with unabsorbed iron in particular being a risk factor for increased infection ⁽⁷³⁾.

More recent growth has been seen in new marketing messaging around human milk oligosaccharides (HMO), milks that have partially hydrolysed proteins or which are lower in protein. However, although the European Food Standards agency deem synthetic HMOs sufficiently safe to be allowed to be added to follow-on formula, there is no evidence of their positive impact upon infant health or development ⁽⁷⁴⁾. It is likely that 'probabiological' effect is being seen here ⁽²⁶⁾. Parents may hear about the positive impact of HMOs within breastmilk and assume similar benefit or even interpret the product as being human milk

based. Meanwhile, despite advertising claims, the evidence does not suggest a benefit of using partially hydrolysed formula to reduce infant allergy ^(75, 76).

5.4. Perceptions of adverts

Participants were also asked a series of statements around their perceptions of the adverts they saw. Overall, approximately a quarter viewed them positively: as scientific, informative, accurate and helpful. This rose to approximately half of participants when looking at only those who use infant milks, with closer to 10% of those who did not use infant milks feeling positively. Open ended responses confirmed this; whilst some mothers were angry or sceptical at the adverts others felt relieved and impressed at the adverts, expressing happiness at how informative they found them. It is difficult to disentangle this relationship. As would be expected, those who use formula generally have a more positive attitude towards infant milks than those who breastfeed ⁽⁴⁶⁾, which likely translates to perceptions of advert quality. Again, confirmation bias will encourage us to view adverts of products that we use as positive.

Notably younger mothers were much more likely to view the content of adverts positively, with around almost half of those aged 18 – 24 holding positive views, followed by a quarter of those 25 – 34 and just one in six of those aged 35 and over feeling positive. This may in part be due to younger mothers being more likely to be using infant milks but may also be affected by aspects such as reduced awareness of advertising laws. It is also likely closely tied to exposure to advert content; younger mothers were more likely to report choosing brands based on marketing techniques (such as proposed benefit on sleep or development) suggesting a greater likelihood of perceiving these adverts to be accurate and scientific.

Perceptions of the adverts as being emotive was particularly strong, across all feeding groups and age ranges. Analysis of open-ended responses showed variation in impact of this, with mothers who were exclusively breastfeeding feeling manipulated whilst mothers who were giving infant milks feeling reassured. A number of references by mothers perceived infant formula manufacturers as ‘being on their side’, feeding into the narrative of two groups of women: those who breastfeed and those who don’t, or perceived pressure

from health professionals to breastfeed⁽⁴²⁾. Indeed, this tactic of being perceived as supportive to new mothers is a common advertising strategy of the formula industry. Brands put significant effort into creating digital tools in particular to help mothers more broadly e.g. ovulation calculators or apps to connect new mothers. Companies recognise that creating an initial attachment and perception of being supportive later leads to sales of their product⁽⁶³⁾.

This creation of an emotional reaction is concerning. Department of Health guidance on how the regulations around the marketing of infant formula should be interpreted clearly state that promotion of infant formula should not focus on carers emotions in relation to the feeding or care of infants under six months old⁽¹⁴⁾, in part because of significant evidence that emotive advertising increases sales⁽⁷⁷⁾. We know that some parents are misinterpreting follow-on formula adverts to be for infant formula, and that brand recognition will transfer reactions across products, likely increasing positive perceptions and sales of the product.

Whilst only one in five participants overall stated the adverts increased the likelihood they would buy the product, this rose to over 40% of those already using infant milks, again with those in the youngest age group more likely to be persuaded (44%) compared to the oldest mothers (12%). This is a particular concern given our previous consideration that we know that many of the claims given are unsubstantiated^(19, 23, 70) and that there is no significant variation in content between different milks. Yet it was clear that some participants were believing such statements describing how they were pleased to be given information on how brands differed, how scientific they were and the benefits of added ingredients.

5.5. What drives the decision to use follow-on formula rather than infant formula?

Given recommendations that infant formula is suitable for babies up until 12 months old and there is no need for follow-on formula to be used, tracking the rate and rationale behind follow-on formula use was important. Almost half of infants aged over six months were being given follow-on formula, with almost one in five aged under six months old also using the product. This does mean that two thirds of participants were following

recommendations to give infant formula to babies up to twelve months old, including half of those with infants over the stated six months of age that follow on milks are promoted for.

Looking at reasons why mothers stuck to using infant formula first, although some did state they didn't actually realise there was more than one stage of formula milk, most of those giving infant formula explained that they used this milk because they understood recommendations, that a health professional had told them it was the correct type of milk to use, or they felt follow-on formula was simply an advertising ploy. Others simply wanted to stick with a milk that they knew was suited to their baby. It was also interesting to note that for at least some participants, advertising strategies to promote follow-on formula are actually having the opposite impact to what is presumably intended; some mothers were discouraged from purchasing follow-on formula due to advertising claims around additional ingredients. Not all parents believe that 'more' must automatically be better.

However, turning to reasons why participants chose to use a follow-on formula, a number of interesting factors emerged. First, as previously stated, perceptions of follow-on formula as having added ingredients, affecting infant development, and settling infant behaviour were all much higher in the participants who used follow-on formula compared to infant formula. These added ingredients and promises clearly support brand choice, with numerous participants describing how the milk they had chosen was better for their baby's development. Marketing claims, even though not scientifically supported, are clearly driving sales.

However, there were other reasons specifically related to follow-on formula and advertising regulations that drove choice. The most common reason given for using follow-on formula was that *'the guidance on the package said it was suitable for my baby's age'*. Almost all participants with a baby over six months old gave this reason showing that despite recommendations to give infant formula, packaging guidelines are affecting choices. It is entirely logical for a parent to believe that guidelines on packaging are accurate and the best for their infant. Likewise, if parents of an infant aged 6+ months are comparing products that say a milk is suitable for 0 – 12 months or 6 – 12 months, perceiving the second as being a more advanced product, or better for older infants may feel logical.

Parents may not be aware of public health guidance to stick to infant formula or may choose to disregard it given age recommendations clearly stated on the product.

Using a follow-on product may also be perceived as evidence that their infant is advancing in development and 'needs' an advanced product compared to a younger infant. Some parents find reassurance in perceiving their infant as advanced, and often use feeding decisions to reflect this to others or reassure themselves e.g. by introducing solid foods to a young baby ⁽⁷⁸⁾. The use of numbered stages on packaging e.g. stage one for infant formula, stage two for follow-on milk and stage three for growing up milk likely exacerbates this by suggesting a series of steps that infants should advance through.

Concerningly, around one in ten mothers with a baby under six months old stated that they used follow on formula as the packaging stated it was suitable for their baby's age. This suggests possible confusion over guidelines, or accidental purchasing of the product, not understanding that it was a different type. Potentially brand recognition may be at play here; parents may have bought their 'usual brand' without realising that different types of that brand were available.

All participants who stated that they chose follow-on formula for its age suitability, also gave other reasons why they selected the product. It is likely that advertising slogans and packaging attract parents, whilst the age guidance acts as a reassurance that this product is suitable for age. For example, perceptions of follow-on formula being 'more advanced' than infant formula were also common with two thirds of the sample saying this influenced their decisions. Similarly, around half stated that they used follow-on formula as it had 'better' ingredients than infant formula. These factors were more common amongst those with a baby under six months, suggesting that a perception of 'second stage' formula being more advanced or better than 'first stage' formula might be driving choice.

It is likely that adverts for follow-on formula containing lots of details about ingredients give the impression that these milks are more advanced than their first stage comparator. Companies may be using the ban on infant formula advertising to their advantage to promote follow-on milks, highlighting why a partial implementation of the WHO code allows

for loopholes. This concept was clearly illustrated in mothers' qualitative responses. Many talked about the need for the next stage milk now their baby was growing and developing in different ways. Clearly mothers had absorbed the idea that follow-on formula was somehow substantially different to infant formula, with their baby's needs being distinctly different after six months old.

Looking at this concept in more detail, whilst some reasons given for using follow-on milks were clearly based on advertising slogans, some were clearly extrapolated from images and broader messages. For example, one participant described how the milk she was using was best for baby because they were now crawling. No previous advert (that we know of) has stated this as a benefit, yet many adverts have included images of newborn babies growing up into babies that crawl, with voice overs describing babies 'moving on' or 'growing older'. Potentially this has been interpreted as a milk being particularly suitable for supporting a change in infant developmental skill.

However, a major reason for choosing to use follow-on formula was price. Three quarters of participants stated they used the product because it was cheaper than first stage formula or it was on special offer. Discount vouchers and free samples also played a major role, showing the significant potential of these marketing tricks to draw in customers. It is understandable that parents would choose a cheaper product if it also says it is suitable for their infant's age, or not see any real reason why it would not be suitable for a younger baby. This is especially true if companies are able to discount what parents view as more 'advanced milks' that have significant price mark ups; parents will feel as if they are getting a bargain, increasing attraction of that brand and milk type.

In addition, being able to discount follow on milk but not infant formula drew attention to regulations, which were in turn perceived by some as a form of shaming. This adds to a common tactic of certain brands wanting to be seen as 'on the side of parents' and perception that marketing regulations are about judgement and restriction. Notably some parents described how they deliberately bought follow on brands because they felt infant formula had stigma attached due to not having price promotions. Given we know how emotive infant feeding decisions can be ⁽³⁵⁾, this seems a particularly unethical tactic. Again,

this highlights how important it is that the full WHO code is implemented by extending advertising regulations to prevent the powerful promotion of unnecessary follow-on formula and any cross-branding associated with toddler milks. More detail is given to other price aspects later on in this discussion.

Finally, the concept of a lack of advertising of infant formula being seen as withholding information arose again. Some participants talked about deliberately purchasing follow-on formula because they gave them information about the product (rather than seeing this as advertising to increase sales). Indeed, promotional information was often seen as being reliable information about the product, despite our knowledge that it is typically not supported by scientific evidence ⁽²²⁾. This shows the clear need for independent information to be given about different infant milks from trusted sources outside of industry. If any health professionals are withholding information on formula milk from parents as perceived by some parents ⁽⁴²⁾ the unintended impact this may have upon purchasing choices should be made clear.

5.6. Influence of friends and family

Another strong theme throughout the research that influenced both formula brand and stage choice was that of family and friends. This was a more common experience amongst younger mothers, but one that was raised across groups. Evidence from wider health contexts shows that we are more likely to trust our friends and family than we are health professionals, as our friends and family are seen as having our best interests at heart ⁽⁷⁹⁾. This is particularly true for infant feeding decisions. For example, one study developed a counselling intervention to support younger mothers with breastfeeding. The intervention worked well to improve breastfeeding rates, but only if the mother was living away from her mother. When mothers still lived in the family home, the intervention didn't work, because the grandmothers were giving competing information which overruled the intervention ⁽⁸⁰⁾.

Participants commonly talked about their chosen formula milk being the 'family brand' that everyone used, even going back generations with some mothers reporting that they were given it themselves as a baby. Some were bought a specific type as a gift after their baby

was born, even if they were not currently using infant formula. It shows the strength of an initial brand choice and the connotations that then get attached to a brand. People may attribute babies in the family being healthy or 'strong' *because* of using that particular formula, relying on these anecdotes as perceived evidence of the safety or efficacy of a brand.

Recommendations of specific products (directly or indirectly) were also seen as another source of reliable information and this was exacerbated by social media. When friends and family, celebrities, or other trusted social media figures shared products, or posts about different products received lots of likes and shares), this was seen as a trusted recommendation. This online user-generated content is known to create awareness and add to brand integrity. Seeing a friend 'promoting' a post has been found to significantly increase advert recall and the likelihood of buying a product compared with simple exposure to an advert alone ⁽⁵⁷⁾. Manufacturers know that it is crucial to harness 'word of mouth'. Again, the increase in social media as a trusted source of parenting information and rise of sponsored mummy bloggers plays into this well.

5.7. Experiences of using infant milks

In the second part of the research, we explored mothers' experiences of using infant milks. Participants who were using infant milks responded to a series of questions examining the milks that they chose, how they prepared bottles and their perceived knowledge and confidence in doing so.

In terms of infant milk brand choice, we grouped participants into branded, supermarket own and specialist formulas. The majority of participants reported purchasing a main brand cows' milk based formula (85.9%) with just 5.9% opting for a supermarket own brand. Notably, over half of those who had not given any infant milk yet had a clear idea of which brand they would give. Given all brands of infant formula are similar in composition by law this means considerable additional cost due to differences in prices between branded and supermarket own products. For example, the most expensive branded cows' milk powdered formula costs on average £16.74 a week compared to just £6.44 a week for the least

expensive supermarket version^a. A small proportion of participants (1.7%) reported buying goats' milk-based formula. These milks are typically some of the most expensive to purchase.

For some parents, price of the formula was driving purchasing behaviour towards more expensive brands. In the qualitative responses around brand choice, although some participants talked about price not being an accurate indicator of quality, some participants specifically bought the most expensive formula they could find because they perceived it to be the best. This is a common marketing strategy. More expensive products are often viewed as automatically being better, a concept known as 'increased value perception' ⁽³²⁾. The formula industry recognises that certain groups of parents are particularly driven by wanting the 'best' product from a scientific perspective and directs their marketing strategies to this. For those not affected by price it will focus on other aspects such as promoting 'happy' babies. Slogans, product designs and campaigns will vary accordingly ⁽⁶³⁾.

However, this is a particularly ethically dubious behaviour when it comes to this customer group: mothers who are keen to buy the best possible milk for their baby, many of whom may be partly driven by unresolved guilt or anxiety over feeling unable to breastfeed ⁽⁸¹⁾. This is a significant issue for those struggling financially. The recent Channel 4 Dispatches documentary ('The Great Formula Milk Scandal') highlighted how some parents on a low income were struggling to afford formula for their baby leading them to sometimes water down feeds, placing their baby at nutritional risk. The perception that more expensive formula was more advanced and better for their infant was in part driving this.

Overall, just 3.1% of participants said that their brand use varied, showing significant brand loyalty. This loyalty was confirmed in open ended responses, again often reflecting back to family history with the brand or receiving in in hospital. This brand loyalty is of course not limited to the formula industry, but the industry is very aware of its importance, particularly in relation to securing women at the start of their first pregnancy. For example, in research that conducted interviews with formula industry specialists from around the world as to the

^a <https://infantmilkinfo.org/costs/> [2020]

tactics used, one participant stated “[corporation name] is always on a quest to find ways to identify women who are pregnant for the first time ... right when they find out they are pregnant or early in their pregnancy because ... how a woman feeds her first baby is how she is likely to feed her subsequent babies ... first time mothers are the holy grail”⁽⁶³⁾.

Research has also shown that consumers will go for familiar brands over other factors such as quality or price across a range of products⁽⁸²⁾. However, the 2016 MINTEL Baby Food and Drink Report report, highlighted ‘brand’ as being a particular focus of formula companies marketing strategy. Exposure to branding occurs through cross-promotion (i.e. of follow-on formula) or through membership of ‘baby clubs’ which often come with attractive perks for members such as money off vouchers, free toys and ‘advice lines’. Baby club membership is reported to be as high as 3000 members per week⁽⁸³⁾. These clubs are recognised by those with experience of working in the formula industry as a clear inroad to ‘reaching mothers individually and building individual relationships with mothers’. Although promotion of products may not be direct, recognition of ‘*insinuating the products as your friend*’ has been identified⁽⁶³⁾.

In terms of the type of infant milk purchased, just a third of participants relied solely on powdered milk. The majority used ready to feed / liquid milk to some degree almost a fifth using it all or most of the time. There are two issues with the frequency of using such milks: the increased cost and environmental consequences. First, ready to feed formula has a significantly higher cost than its powdered comparator. If a parent chooses to use a newborn starter pack of the most expensive brand of ready to feed formula, they will spend £107.31 in a week compared to £35.42 if they buy as 200ml RTF cartons or £16.10 if they buy the same brand as a powdered formulation.^b

Second, using ready to feed formula also has a significant environmental impact. We know that the production, packaging and transport of milks has a significant impact in terms of CO2 production and landfill⁽⁸⁴⁾. Although powdered formula has an environmental cost, the increased packaging of ready to feed bottles that are disposable is a significant issue for

^b <https://infantmilkinfo.org/costs/> [2020]

landfill. Whereas empty tubs of powdered formula are in theory recyclable as storage devices, small plastic bottles are less so.

When asked how feeds were prepared, the majority of participants were following instructions on how to prepare bottles safely. However, around 8% were following outdated guidance (e.g. boiling and cooling water and then adding formula powder to this). This presents a contamination risk to the baby, presumably through a mistaken belief that bacteria is present only in the water and not potentially in the powder. Although this is a small proportion percentage wise, extrapolated across the UK population it represents a significant number of babies placed at risk. Again, changes to recommendations over the years and influence of family and friends (e.g. *'It never did you any harm'*) likely play a role here and highlight the need for education to reach older family members ⁽³⁹⁾.

Over half of participants reported that they used a formula preparation machine. Although this may be in part be influenced by a sample that had a higher level of education (and therefore most likely higher income) than average, the number of parents relying on formula machines is a concern and was present across all age groups. Testing of such machines raises concerns that formula is not prepared correctly, with the water used not being sufficient volume or temperature to guarantee eradication of harmful bacteria ⁽⁸⁵⁾. However, these machines are increasingly being promoted on social media, again by mummy bloggers or health professionals becoming affiliated with certain brands who design and promote these machines.

Underlying each of these issues is the influence of convenience. Both formula preparation machines and ready to feed formula promote the concept of convenience to parents, perceptions of which we know drives infant feeding decisions ⁽³⁰⁾. Information on manufactures websites for ready to feed formula repeatedly uses phrases such as 'does not require any preparation' or 'just shake and pour' whilst formula preparation machines promise to 'prepare a fresh bottle at just the right serving temperature within two minutes'. Preparing numerous bottles in advance is also likely to be influenced by perceptions of convenience.

Reliance on ready to feed formulas and preparation machines may potentially be an unintended negative consequence of encouraging paced feeding for infants who are formula fed. Here, smaller amounts of milk are offered more frequently, in line with a baby's natural feeding pattern rather than giving larger amounts at set times, This is based around typical frequent and irregular patterns of breastfeeding which are known to contribute to healthier weight and increased appetite control in breastfed babies ^(86, 87). However, anecdotally, this has been given for an increased reliance on feeds that need less preparation time or input. Further research of this influence would be beneficial.

Finally, participants concerns and needs around using infant milks were explored. It was clear, even amongst this sample with a higher than average level of education, that many were unsure about different aspects of feeding their baby. In particular, less than half of participants felt confident combining breast and formula feeding, with almost half lacking confidence in knowing how much to give their baby, how often to feed them or signs they were getting enough milk.

Slightly greater confidence was seen for choosing and preparing milk but still a third of participants expressed concerns around these topics. These concerns were elaborated upon in qualitative responses with many expressing the view that they felt there was not sufficient practical support for mothers who had decided to formula feed their babies. This is something that has been expressed by mothers in previous research ^(39, 42) despite clear guidance that health professionals should be supporting all aspects of feeding. Clearly there is a gap either in the information parents are receiving or their perceptions or interpretation of such information. Further research is needed.

5.7. Limitations of the research

The findings provide an important insight into the reach and impact of infant milk advertising from a UK perspective alongside the needs of parents who are using infant milks. However, it is important to give context to the results. It is likely that our sample represents those most interested in the topic, either to criticise or support infant milk marketing. Given we know that parents who use infant milks can feel judged, some parents

may be reluctant to take part in research that may be viewed as critical of the industry. However, our sample did include parents who were happy to support infant milk marketing and openly explain how and why it influenced their purchasing decisions and feeding behaviour.

In terms of participant demographic background, respondents were weighted towards those with a higher level of education and older age than population norms. This is a typical pattern across health and social care research, particularly in infant feeding research. Our sample was also predominantly White; just 5% came from BAME backgrounds. Although mothers from BAME backgrounds in the UK do have higher levels of breastfeeding initiation and continuation and may therefore be slightly less likely to respond to a survey on infant milks, 5% is significantly below population level demographics. Care should be taken in generalising the findings outside of the sample characteristics and future research should ensure greater diversity in inclusion.

The decision was made to utilise an online survey design to cost effectively reach parents from across the UK. This had the advantage of recruiting a large sample of new parents across educational and age groups but will have excluded those who do not use social media or parenting forums or may not have the literacy or English language skills to self-complete online questionnaires ⁽⁸⁷⁾. Although internet and social media use is high in the target age range, it can exclude those without reliable internet connection (although this may also reduce exposure to infant milk advertising). Further research may wish to explore themes in this report in more detail with those potentially excluded from this study.

5.8 Conclusions

Limitations aside, the findings highlight the need for accurate information for parents regarding the content and messaging around different infant milks. The industry is clearly able to circumnavigate current legislation preventing marketing of infant formula milk, through promotions of follow on and toddler milks in a number of ways, misleadingly increasing appeal and sales of products across their range. We know from new research that these tactics are at least in part deliberate ⁽⁶³⁾.

Advertisements for other infant milks are often mistaken for infant formula milk promotion with unproven messaging from these adverts being absorbed and driving purchasing decisions for specific milks or product stages. Misleading parents over such important decisions that can affect the health and wellbeing of their family is unfair, as is putting significant pressure on new families to spend additional money to get the perceived 'best' products for their baby when there is little real difference in terms of content or impact between products.

In summary, parents deserve accurate information and support free from industry bias to promote safe, responsive and appropriate infant feeding decisions including giving their baby infant milks. No company that uses phrases such as '*share of the stomach*' in relation to breastmilk being viewed as reducing how much formula milk is given ⁽⁶³⁾ should be influencing parents infant feeding decisions. There is a clear need for breastmilk substitute legislation to be extended and tightened in the UK to protect families from unscrupulous marketing.

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