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Perception of mothers towards exclusive breastfeeding in Nigeria

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Abstract

Background: Exclusive breastfeeding (EBF) involves feeding an infant only breast milk for the first six months of life. Despite the benefits of exclusive breastfeeding to maternal and infant health: the rate in Nigeria is only 17 per cent; the country also has the sixth highest infant mortality rate in the world. The World Health Organization (WHO) recommends EBF as an effective intervention for reducing infant mortality globally, and it has been proven as such. However, mothers' perceptions of EBF have influenced its uptake. This review explores how mothers' perceptions of EBF affect their practice in Nigeria.

Methods: Literature for this review was obtained via Pubmed, Scopus, CINAHL (EBSCOhost), and the Cochrane Library. Data from papers published between 2011 and 2022 were extracted using standardised forms and studies were evaluated using the Mixed Methods Appraisal Tool (MMAT). This review followed the Preferred Reporting Items for Systematic review and Meta-analysis (PRISMA) guidelines.

Findings: Nine studies met the inclusion criteria. Six reported on quantitative research, and three on qualitative research. Findings show that mothers' perceptions of EBF and the perceived barriers and facilitators affect their practice.

Conclusion and recommendations: The perception of Nigerian mothers towards exclusive breastfeeding is crucial to its practice. This study recommends that mothers be informed about EBF to eliminate misconceptions and increase awareness, and that family members, including the mother's partner, should be provided with information on all elements of EBF. In addition, the workplace and public support systems must facilitate and encourage EBF. More research is required relating to specific regions of Nigeria and to Nigerian mothers living in other countries.

Keywords: perception, mothers, exclusive breastfeeding, Nigeria

Background

Exclusive breastfeeding (EBF) is the practice of feeding an infant only breast milk, although prescription medications, vitamin drops, minerals, and oral rehydration solution can be administered (WHO 2021). The WHO (2021) recommends that a newborn baby should begin breastfeeding within the first hour of life and be exclusively breastfed for the first six months.

EBF is the single most popular and effective preventative practice to reduce child mortality, with the potential to prevent 1.4 million child deaths globally (Sinshaw et al 2015). EBF promotes a child's growth, development and brain development, and reduces infant morbidity and mortality over time (Bhutta et al 2013). Newborn mortality rates are higher for non- or partially breastfed babies than exclusively breastfed babies (Sankar et al 2015) and children who are EBF have a 15 per cent better chance of surviving pneumonia and diarrhoea (WHO 2016).

Data from the Institute of Health Metrics and Evaluation (IHME) (2017) shows Nigeria has a high infant mortality rate of 100 under-fives per 1000 live births, with only a quarter of six-month-old children EBF (Folayan et al 2020).

As mothers' perceptions of EBF are likely to be highly influential on whether it is practised, this literature review explores mothers' perceptions of EBF practice in Nigeria.

Methodology and methods

This study used a narrative synthesis approach to collate the current evidence on the subject.

Key terms

The search terms were developed based on the SPIDER framework:

- **S**ample, women in Nigeria
- **P**henomenon of **I**nterest, exclusive breastfeeding
- **D**esign, all study designs
- **E**valuation, women's perceptions
- **R**esearch type, all primary research.

The keywords were developed based on the question framed by the SPIDER search tool. Significant equivalent words were also identified using thesaurus (MeSH) and cross checking with other specialist articles on what terms were used. The keywords used were: exclusive breastfeeding, perception, nursing mother, and Nigeria.

Search strategy

Health-related databases Pubmed, Scopus, CINAHL (EBSCOhost) and the Cochrane Library were searched for English-language articles published between June 2011 and June 2022. Boolean operators (AND, OR) and truncations were used to search for MeSH keywords, study titles, and abstracts. Abstracts and reference lists of included articles were hand-searched for more relevant articles. This search was carried out between June 11–30 2022.

Inclusion and exclusion criteria

Inclusion criteria

- Peer-reviewed articles
- English language
- Journals published between 2011–2022
- Perception of mothers older than 17 years
- Nigeria
- Primary research
- Exclusive breastfeeding
- Mothers
- Female

Exclusion criteria

- Grey literature, unpublished articles
- Other languages
- Journals before 2011
- Perception of mothers younger than 18 years
- Countries other than Nigeria

- Secondary research, systematic reviews
- Non-breastfeeding, non-exclusive breastfeeding
- All health care professionals
- Other genders

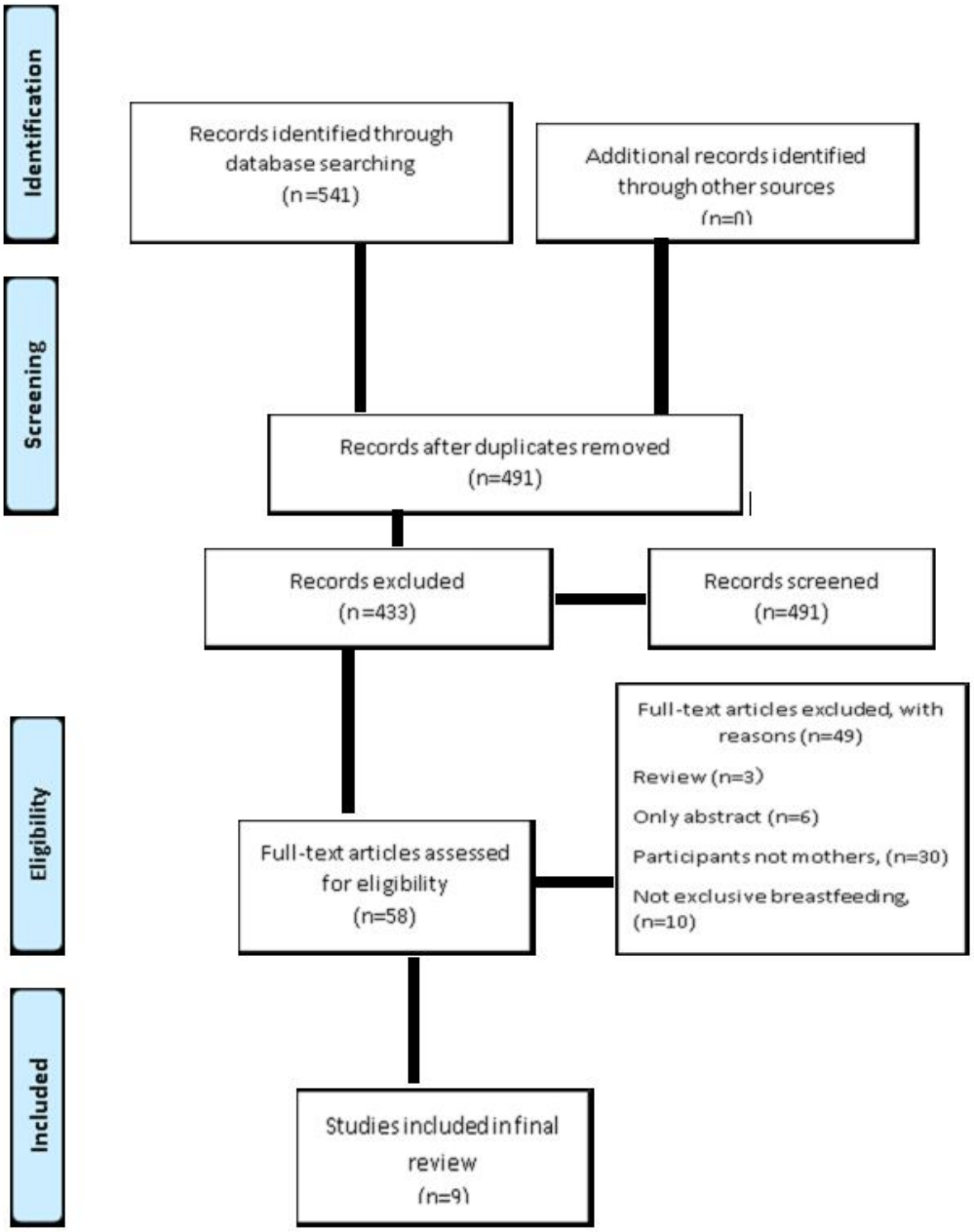
Data extraction

All titles and abstracts of articles were screened for eligibility. Abstracts were reread to prevent bias and ensure no relevant study was omitted. Full texts of included studies were read to confirm eligibility. Reference lists of included articles were screened for additional eligible studies. Author, study aim, participants, design, evaluation, and key findings were extracted from the included studies.

Paper selection

After deduplication, 541 titles and abstracts remained. The title and abstract were reviewed, 58 potentially relevant articles' full texts were retrieved. Nine studies met the inclusion criteria after reading the full articles. Manually screening references for articles not found in the original search yielded no additional articles.

Figure 1. PRISMA flow diagram for the search strategy and study selection process



Evaluation

The article quality was evaluated using The Mixed Methods Appraisal tool (MMAT), version 2018 (Hong et al 2018)

Ethical approval was not required.

Synthesis

The findings from the studies were synthesised using a process of narrative synthesis. Similarities and differences between studies, knowledge summary results, data relationships, and evidence strength were explored and summarised.

Findings

The included studies are shown in Table 1. The review found that long-held beliefs, EBF misconceptions, inadequate knowledge, external support systems, financial constraints, physical appearance, stigma, work pressure, and fear of virus transmission affect mothers' perceptions of EBF.

Table 1. Study characteristics of included articles

Author(s)/ year	Study design	Sample	Phenomenon of interest	Aim of study	Findings
Ihudiebube-Splendor et al (2019)	Cross-sectional descriptive survey design	201	Exclusive breastfeeding	Assess primiparous women's EBF knowledge and intention to breastfeed	58.7% of respondents did not know the benefits of EBF Only 62.7% planned to exclusively breastfeed for 4–6 months
Anazonwu et al (2018)	Cross-sectional survey design	592 childbearing mothers	Exclusive breastfeeding	To determine how mother's attitude affects EBF To examine cultural determinants of EBF practice	60.1% did not practise EBF 19.9% reported work pressure 17.4% lacked family and social support 14.6% reported sagging breasts
Olatona & Odeyemi (2011)	Cross-sectional descriptive design	400	Exclusive breastfeeding	Determine mothers' breastfeeding knowledge and attitudes, especially about exclusive breastfeeding	77.1% were aware of EBF and its benefits
Joseph & Earland (2019)	Qualitative study design	20	Exclusive breastfeeding	To examine sociocultural factors that influence a mother's decision to breastfeed for 6 months in northwest Nigeria	Traditional religious beliefs/rites, lack of mother awareness, and family support hindered exclusive breastfeeding
Coetzee et al (2017)	Qualitative study design	37	Exclusive breastfeeding	To identify EBF barriers among HIV-infected and uninfected women in Nigeria	EBF expertise HIV fear Poor family support Monetary restraint Environmental hygiene fears
Anyanwu et al 2014	Cross-sectional descriptive design	143	Exclusive breastfeeding	To describe mothers' breastfeeding practices, starting with timing of initiation,	16.1% started breastfeeding on time 30.8% had no intention of breastfeeding 9.1% breastfed for 2 years

				at the federal teaching hospital, Abakaliki	38.8% believed breast milk was insufficient 13.6% reported work pressure
Balogun et al (2016)	Longitudinal descriptive study design	210	Exclusive breastfeeding	To determine the relationship between prenatal EBF intentions and EBF and other factors associated with EBF until 3 months postpartum among mothers	70% planned to breastfeed exclusively Age, religion, and unplanned pregnancy were barriers
Amoo & Anjola (2022)	Cross-sectional study design	218	Exclusive breastfeeding	Assess nursing mothers' knowledge and practice of exclusive breastfeeding and their relationship	76% nursing mothers knew about EBF 58% exclusively breastfed for 6 months
Okafor et al (2018)	Qualitative study design	60	Exclusive breastfeeding	To discover factors that influence EBF	EBF is influenced by cultural beliefs, family support, and knowledge

Study characteristics

The nine studies included in the review, with a total number of 1881 participants, were published between 2011 and 2022, with three qualitative studies (Coetzee et al 2017, Okafor et al 2018, Joseph & Earland 2019), and six quantitative studies (Olatona & Odeyemi 2011, Anyanwu et al 2014, Balogun et al 2016, Anazonwu et al 2018, Ihudiebube-Splendor et al 2019, Amoo & Anjola 2022).

Three studies were conducted in Northern Nigeria (Balogun et al 2016, Coetzee et al 2017, Joseph & Earland 2019), two in the south-west (Olatona & Odeyemi 2011, Amoo & Anjola 2022), and four in the south-east (Anyanwu et al 2014, Anazonwu et al 2018, Ihudiebube-Splendor et al 2019, Okafor et al 2018).

Gayawan et al (2014) reported that south-western and north central mothers were more likely to practise EBF than mothers in other regions; north-western and north-eastern Nigeria, which are predominantly Muslim, had the lowest rate of EBF practice.

All included studies reported the perception of mothers, noting their perceived barriers and facilitators to EBF uptake and the effect of this perception on EBF practice. Four studies (Olatona & Odeyemi 2011, Anyanwu et al 2014, Ihudiebube-Splendor et al 2019, Amoo & Anjola 2022) assessed mothers' knowledge, attitude, and intent to practise EBF, whereas five studies (Balogun et al 2016, Coetzee et al 2017, Anazonwu et al 2018, Okafor et al 2018, Joseph & Earland 2019) assessed the perception of breastfeeding among mothers by identifying the barriers and facilitators that influenced EBF.

Study quality assessment

Using the MMAT tool (MMAT 2018), scores were moderate and ranged from 0.51 and 0.79, therefore all studies were considered of similar quality and given equal weighting in discussing the findings.

Table 2. Summary of quality assessment of qualitative, quantitative, and mixed method studies using MMAT 2018

Author	Qualitative	Quantitative	Mixed methods	Score	Quality

Olatona & Odeyemi 2011		**		0.55	Moderate
Anyanwu et al 2014		**		0.55	Moderate
Balogun et al 2016		**		0.51	Moderate
Coetzee et al 2017	**			0.70	Moderate
Anazonwu et al 2018		**		0.60	Moderate
Okafor et al 2018	**			0.70	Moderate
Ihudiebube-Splendor et al 2019		**		0.60	Moderate
Joseph & Earland 2019	**			0.75	Moderate
Amoo & Anjola 2022		**		0.51	Moderate

Overview of findings

Table 3 shows themes, sub-themes, and codes developed in the synthesis.

Table 3. Overview of the articles reporting the perception (perceived barriers and facilitators) of mothers in Nigeria towards EBF

Themes	Sub-themes	Codes	Studies
1.Maternal influences	1.1 Maternal influences	1.1.1 Formal and informal work schedules	Coetzee et al 2017, Anazonwu et al 2018
		1.1.2 Breast milk insufficiency	Olatona & Odeyemi 2011, Anyanwu et al 2014, Balogun et al 2016, Coetzee et al 2017, Anazonwu et al 2018, Okafor et al 2018
		1.1.3 Appearance concerns	Coetzee et al 2017, Anazonwu et al 2018
		1.1.4 Poor EBF understanding / awareness of EBF benefits	Olatona & Odeyemi 2011, Anazonwu et al 2018, Ihudiebube-Splendor et al 2019, Amoo & Anjola 2022
		1.1.5 HIV-positive or fearing child's transmission	Coetzee et al 2017
		1.1.6 Schooling or resuming school or work	Anyanwu et al 2014, Anazonwu et al 2018
		1.1.7 Mother's health	Anyanwu et al 2014, Anazonwu et al 2018
		1.1.8 Maternal distress	Okafor et al 2018
		1.1.9 Public breastfeeding reluctance / public nursing disapproval	Olatona & Odeyemi 2011, Okafor et al 2018
		1.1.10 Other reasons for mother's refusal	Anyanwu et al 2014, Anazonwu et al 2018
2. Structural factors	2.1 Family influence 2.2 Health systems' influence 2.3 Workplace influence	2.1.1 Husband's influence	Olatona & Odeyemi 2011, Anyanwu et al 2014, Coetzee et al 2017, Anazonwu et al 2018, Okafor et al 2018, Joseph & Earland 2019 Joseph & Earland 2019, Coetzee et al 2017
		2.1.2 Mother / mother-in-law / grandmother influence	Anyanwu et al 2014, Anazonwu et al 2018, Okafor et al 2018, Joseph & Earland 2019
		2.2.1 Impact of health worker's advice	Olatona & Odeyemi 2011, Okafor et al 2018, Amoo & Anjola 2022
		2.3.1 Lack of workplace support	Anazonwu et al 2018, Okafor et al 2018

3. Socio-cultural or traditional beliefs	3.1 Herbal remedies / therapeutic 3.2 Norms and beliefs	3.1.1 Herbal concoctions used as medicine	Joseph & Earland (2019)
		3.2.1 Traditional myths, and misconceptions about EBF	Coetzee et al 2017, Okafor et al 2018, Joseph & Earland 2019
4. Financial influence	4.1 Resource constraints	4.1.1 Reduce formula / hospital cost	Coetzee et al 2017
5. External variables	5.1 Poor sanitation and hygiene practices	5.1.1 Food and water contamination fears	Coetzee et al 2017

Maternal influences

Maternal influence describes how mothers' views and opinions affect EBF practice.

In two studies, working and busy schedules prevented EBF (Coetzee et al 2017, Anazonwu et al 2018), as full-time working mothers with formula had more flexibility.

According to six studies, a mother's belief that she did not produce enough breast milk is a significant barrier to EBF (Olatona & Odeyemi 2011, Anyanwu et al 2014, Balogun et al 2016, Coetzee et al 2017, Anazonwu et al 2018, Okafor et al 2018). Mothers also cited nipple pain as a reason for not exclusively breastfeeding (Coetzee et al 2017).

Two studies (Coetzee et al 2017, Anazonwu et al 2018) found that misinformation by family, friends, and the media adversely affected EBF.

Four studies (Olatona & Odeyemi 2011, Anazonwu et al 2018, Ihudiebube-Splendor et al 2019, Amoo & Anjola 2022), found that mothers who sub-optimally breastfed their children had limited awareness and understanding of the benefits of EBF, and mothers could not always distinguish between exclusive, predominant, and partial breastfeeding.

HIV-positive mothers sought alternatives to breastfeeding because they feared infecting their children. Two studies found that mothers were worried about their own health and the impact of their work on EBF (Anyanwu et al 2014, Anazonwu et al 2018).

Some mothers reported feeling embarrassed to breastfeed in public, some lacked energy to do so and others cited a lack of support facilities (Anazonwu et al 2018).

Structural factors

Three factors facilitated exclusive breastfeeding: familial influences; workplace support; and health care service support.

According to six studies (Olatona & Odeyemi 2011, Anyanwu et al 2014, Coetzee et al 2017, Anazonwu et al 2018, Okafor et al 2018, Joseph & Earland 2019), family support encouraged nursing mothers to EBF. Family members, nannies, and

housekeepers often help (Tuthill et al 2014). EBF success was linked to emotional support from family members (Joseph & Earland 2019)

Five studies reported that prenatal information on optimal infant feeding was beneficial (Olatona & Odeyemi 2011, Anazonwu et al 2018, Okafor et al 2018, Joseph & Earland 2019, Amoo & Anjola 2022), while Coetzee et al (2017) highlighted the value of health workers helping HIV-positive mothers breastfeed their babies.

Sociocultural and traditional beliefs

One study (Okafor et al 2018) found that cultural beliefs which were positive about EBF facilitated the activity. In two studies (Coetzee et al 2017, Joseph & Earland 2019), mothers considered breastfeeding a religious privilege because it provided ‘natural milk from God’. However, in three studies (Olatona & Odeyemi 2011, Anazonwu et al 2018, Okafor et al 2018), cultural beliefs were identified as barriers to EBF: mothers had to wait two to three days before breastfeeding their babies; colostrum was considered dirty; alternate feeding methods were used while the mother's breast was prepared for breastfeeding (Olatona & Odeyemi 2011, Anazonwu et al 2018, Okafor et al 2018).

Financial influence

One study (Coetzee et al 2017) found that financial constraints influenced some mothers' decision to breastfeed. Most women in this study were Muslim and unemployed due to their religion, they considered breastfeeding financially advantageous. Low-income mothers were encouraged to breastfeed because they couldn't afford formula.

External variables

One study (Coetzee et al 2017) identified the importance of environmental sanitation when breastfeeding. Poor environmental conditions increased EBF among these mothers because they feared infection from improper food preparation, water, or substances during bottle-feeding. This study was carried out in Northern Nigeria, known for poor access to clean water and hygiene.

Discussion

This study explored how EBF perceptions of mothers in Nigeria influenced their practice. The study demonstrated that mothers' lack of knowledge about EBF adversely affected practice. Their perceptions of insufficient breast milk led to the introduction of other foods before six months, supporting Thepha et al's (2018) findings. Inadequate knowledge on breastfeeding initiation and colostrum were also noted, consistent with Cascone et al (2019) who found that inadequate knowledge of breastfeeding duration, bottle feeding danger, breastfeeding on demand, colostrum, and benefits to mothers and infants were major hindrances to EBF.

In this study, mothers' perceptions that EBF affected their health and caused them distress (due to the infant's constant breast milk demand and the embarrassment of public breastfeeding) were reported as barriers to EBF. Similarly, the WHO world survey found that only 57.6 per cent of mothers globally breastfed within an hour of birth, due to maternal illness and lack of neonatal care guidelines (Takahashi et al 2017). A study in this review found that HIV-positive mothers feared passing the virus to their babies, despite the WHO infant feeding guidelines in the context of HIV/AIDS (WHO 2016), mothers also reported fear of teething and stigma (Aishat et al 2015).

Support structures for mothers can be a facilitator or barrier to EBF. Although statutory maternity leave is given to mothers it is on half pay and only for three months, with limited breast milk pumping and storage support (Osibogun et al 2018). The support of a spouse has also been reported as an important determinant of EBF among the mothers in this review, although other family support structures are also important. Most mothers and partners said antenatal health education facilitated EBF, with health care workers also playing an important role. These findings support other studies in sub-Saharan Africa that family support, especially from partners, is a major facilitator to EBF practice (Balogun et al 2015). In this study, mothers also reported a lack of public support for EBF.

In this review, financial constraints helped mothers practise EBF as there was no need to buy infant formula or cow's milk. Most mothers emphasised the economic and health benefits of EBF. Although Mgongo et al (2019) indicate that several African studies also found this to be the case, Lang'at et al (2018) noted that

financial constraints can hinder EBF as mothers had to report to work before the baby was six months' old.

Cultural beliefs — that infants need water to quench thirst, that HIV-infected mother's breast milk is bad, colostrum is bad, using coconut water to open the baby's intestine for food, and the mother staying a few days to prepare the breast before an infant can be fed — were barriers to EBF. Myths and traditional beliefs about breastfeeding also hampered EBF (Mohamed et al 2020). Similar challenges to EBF have been noted in Kenya (Mohamed et al 2020).

Study limitations

This study included only primary research among Nigerian mothers and does not include health care workers, or family members. Only peer-reviewed literature published in English from selected databases was included.

Conclusion and recommendation

Nigerian mothers' perceptions of EBF are crucial to its practice. EBF uptake among Nigerian mothers was influenced by perceived barriers and facilitators.

The study findings suggest that EBF must be appropriately explained to mothers to dispel myths and raise awareness and understanding. To ensure adequate support is provided at home, family members should also receive EBF information. Work and public support systems must support mothers to breastfeed. Better facilities to support breastfeeding outside the home must be made available.

More research is required in other geopolitical zones in Nigeria to understand how culture influences mothers' perceptions of EBF and what improvements are required.

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