"If the Nipple Cracked in a Cross, the Breastmilk Will Be Poisonous": The Barrier to Exclusive Breastfeeding in Indonesia's Islands Area

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Abstract

Successful exclusive breastfeeding enhances sensory and cognitive capabilities and protects children against infectious and chronic ailments. Children's growth and development are adversely affected by inadequate neonate feeding practices. The study aims to explore the barrier to exclusive breastfeeding in the Indonesia's Islands area. This was a qualitative study using a thematic data analysis. Focus group discussions and interviews were conducted with community leaders, senior citizens, breastfeeding mothers, pregnant mothers, health cadres, midwives, nutritionists, health officers, religious leaders, and traditional birth attendants. The study highlights three main themes that categorize the barrier to exclusive breastfeeding in Indonesia's Islands. The first theme is the belief barrier, including the perception of the form and size of the nipples related to breastfeeding quality, religion-related traditions toward newborns, and perception of milk adequacy. The second theme related to the physiological barrier, which covered the physical condition of the breasts and the lack of milk production. The third theme is a sociological barrier associated with the working mother's status, the child born out of wedlock, and the influence of the older family members. Identifying specific barriers within communities enables health workers to create targeted health promotion strategies, thereby enhancing the coverage and effectiveness of exclusive breastfeeding initiatives.

Keywords

Breastfeeding; child feeding; exclusive breastfeeding; health belief; island areas

Introduction

Breastfeeding is highly efficient in guaranteeing a child's well-being and continued existence (World Health Organization [WHO], 2023). Optimal breastfeeding is crucial for the well-being and growth of the infant. Optimal nutrition during infancy and early childhood guarantees optimal growth and development of newborns and children (Jama et al., 2020). Infants should be exclusively breastfed, meaning they should only consume breast milk during the first six months (WHO, 2023). Exclusive breastfeeding (EBF) refers to providing only breast milk to an infant without additional meals or liquids, including water, formula milk, or other beverages. The only exceptions to this are medications or vitamin and mineral supplements (Centers for Disease Control and Prevention [CDC], 2024; Laksono et al., 2021). A competent mother's knowledge and a positive attitude are crucial for successfully implementing EBF (Dukuzumuremyi et al., 2020).

Exclusive breastfeeding offers numerous advantages for children, including improved dietary habits, enhanced hospital recovery, optimal weight gain, reduced body mass index, decreased adiposity, lower total cholesterol levels, enhanced cognitive development, improved behavior, and stabilized metabolic rate in children with metabolic disorders (Couto et al., 2020; Motee & Jeewon, 2014). Exclusive breastfeeding is the most economically efficient method to decrease childhood illnesses such as obesity, hypertension, gastroenteritis, and mortality (Motee & Jeewon, 2014). A study conducted in Spain has revealed that the Spanish National Health System can achieve significant cost savings by increasing the prevalence of EBF (Quesada et al., 2020). Breastfeeding also decreases the occurrence of other persistent illnesses such as diabetes (both Type 1 and Type 2), obesity, hypertension, cardiovascular disease, hyperlipidemia, and certain forms of cancer (Binns et al., 2016). Exclusive breastfeeding has effectively prevented and decreased Rotavirus infection in children (Krawczyk et al., 2016).

Breastfeeding is an optimal method of infant feeding. It provides health benefits for both the infant and the mother, yet many mothers face problems with EBF until the infant is six months old, as recommended. Exclusive breastfeeding rates are still low in many regions and even countries. Several factors, such as cultural norms, socioeconomics, and a lack of support from service providers, have been identified as barriers to EBF practices. Lack of knowledge about the benefits of EBF and maternal employment are the most common barriers in sub-Saharan African countries (Ejie et al., 2021). It was reported that barriers to EBF among working mothers include maternal factors, lack of family support and daycare support, as well as work-related factors, such as length of maternity leave, flexible working hours, and availability of breastfeeding facilities (Gebrekidan et al., 2020; Naah et al., 2019). In the Kilimanjaro region of Tanzania, barriers such as appearance, change, or abdominal pain during or after breastfeeding and concerns that breastfeeding in public may attract negative attention or the 'evil eye' need to be addressed to improve EBF practices (Mgongo et al., 2019). A study in New Haven, Connecticut, reported that some black mothers felt ignored by healthcare providers, which may reduce their confidence in seeking breastfeeding support (Tran et al., 2022).

According to the World Health Organization (WHO), the global target for EBF coverage is to reach at least 50% by 2025 and 70% by 2030 (Bhattacharjee et al., 2021; Zong et al., 2021). The Ministry of Health aims to provide 80% of EBF coverage in Indonesia (Government of

Indonesia, 2012). However, several studies indicate that EBF coverage in Indonesia remains low, including in Central Java Province (Kartasurya et al., 2023; TNP2K, 2017).

Based on routine reports from health centers, the proportion of EBF in Central Java in 2022 was 71.4% (BPS-Statistics Indonesia, 2023), while in Jepara District, the proportion was higher at 74.6% (Jepara District Health Office, 2022). However, data analysis from the 2022 Indonesian Nutrition Status Survey (INSS) showed a much lower figure, with the proportion of EBF coverage in Central Java at only 43.1%, higher than the national figure of 16.7%. The highest coverage was in Klaten district at 59.8%, while the lowest was in Batang district at 22.3%. Jepara district ranks third lowest at 25.8%. The 2017–2021 trend shows that the proportion of EBF in Central Java tends to increase, but the distribution per district varies and fluctuates (BPS-Statistics Indonesia, 2022). Central Java is a region with almost all of its territory having mainland characteristics. However, the Jepara district has Karimunjawa Islands subdistricts inhabited by people from diverse cultural backgrounds (Wijayanto et al., 2023). Those circumstances require a unique approach to understanding the obstacles to achieving EBF and cannot merely adopt a general policy.

Karimunjawa, the location of this research, has unique sociocultural characteristics influenced by its geographical conditions and the dynamics of its community life. Karimunjawa's geographical condition, being a remote island region, and sociocultural factors make it difficult for the local population to access healthcare services. The people of the Karimunjawa Islands are still influenced by the traditions or beliefs prevalent in the community, including a belief in mystical things (Asyfihani & Utama, 2020).

Fishermen, farmers, seaweed cultivation (especially on Kemojan Island), shipping businesses, and laborers in the informal sector are the main livelihoods of the male population in this area. As a result, they spend more time outside the home. In addition to being homemakers, women are more involved in household economic activities, such as trading and processing marine and agricultural products. This impacts the interaction patterns within the family, where women have a more prominent role in managing household responsibilities. Women have to do many things: manage the household, support the family economy, and care for the children, making it a unique challenge in the practice of EBF. Social support is often lacking due to limited knowledge about EBF. The decisions made by mothers regarding breastfeeding are influenced by the tradition of introducing complementary foods early on. Based on the rationale, we conducted the study to explore the barrier to EBF in the islands area of Indonesia.

Methods

Study design

We designed the study using a qualitative research method and a case study to determine what the informants thought and believed about mothers who breastfed their babies. Case studies are an excellent way to examine what makes it hard for women to nurse exclusively.

Setting

We conducted the study in the Karimunjawa Islands of Indonesia. Karimunjawa is an archipelago in the Java Sea, included in Jepara Regency, Central Java Province, with a land

area of ±1,500 hectares and waters of ±110,000 hectares. The Karimunjawa Islands consist of 27 islands with only five inhabited islands. As of Semester 2 of 2020, the Population and Civil Registration Service of Jepara Regency recorded that around 10,484 people lived in the Karimunjawa archipelago (BPS-Statistics Indonesia, 2024). Karimunjawa Island was selected for its ethnic, cultural, and religious diversity, which could represent part of the cultural diversity of Indonesian regions. Numerous ethnicities inhabit Karimunjawa, including the Javanese, Bugis, Makassar, Madurese, Buton, Bajo, and Mandar. Karimunjawa is characterized by religious diversity in addition to its ethnic diversity. The majority of individuals identify as Muslims. The daily vernacular of the tribes and also the presence of stilt houses are among the unique characteristics that demonstrate their commitment to cultural diversity (Faizah et al., 2022; Viana et al., 2023).

Informant recruitment

The study determined community leaders who knew about customs, rituals, and breastfeeding practices in the local community were the key informants. The participant list, comprising pregnant and breastfeeding women, particularly those involved in focus group discussions (FGDs), was recruited by midwives, considering variances in ethnicity, age, and occupational backgrounds. Furthermore, informants were selected through a snowball technique based on information from community leaders and midwives. The informants covered various roles in breastfeeding practices. Including older individuals, such as parents or grandmothers, in the household is also a factor in participant representation. Subsequently, breastfeeding mother participants for the interviews were chosen by snowball sampling until data saturation was achieved. The characteristics of informants can be seen in Table 1 in detail.

Table 1: Informant's Characteristics

Characteristic	Total
Gender	**45**
- Male	13
- Female	32
Role	**45**
- Community Leader	7
- Senior Citizen	8
- Breastfeeding Mother	15
- Pregnant Mother	3
- Health Cadre	1
- Midwife	2
- Nutritionist	4
- Health Officer	1
- Religious Leader	1
- Traditional Birth Attendant	3

Data collection

We utilized FGD and in-depth interviews with informants based on their roles to collect the data to help us learn more about their beliefs, perceptions, and experiences with breastfeeding practices in the community. The study employed FGD guides and semi-structured interviews with open-ended questions to determine what people thought about 1) How they breastfed, 2) What made it hard for them to breastfeed, and 3) What they knew about EBF. The study

conducted FGDs twice, first with community leader participants and second with breastfeeding mother participants. Everyone who was asked decided to take whole part in the study. Field notes were made, and body language and nonverbal interactions were observed. During the analysis, these helped make the discussions better understood.

We collected data using FGDs and interviews in two languages, Indonesian and Javanese, depending on the informant's environment and comfort. Senior citizens use Javanese more widely, especially to capture some local words or terms.

Data analysis

This study employed triangulation to improve its trustworthiness, incorporating methodological and source triangulation. Triangulation involves the researcher's analysis of multiple sources and varied perspectives to thoroughly evaluate the phenomenon (Kakar et al., 2023). Focus group discussions (FDGs) and interviews were employed for methodological triangulation. We also involve diverse participants to obtain varied and comprehensive perspectives for source triangulation.

We used an audio recording device to conduct FGDs and interviews, then verbatim transcribed the findings. After the conclusion of each FGD and interview, researchers reflected on the contents documented in the diary. Thematic analysis was used to build themes from the reflections, aligning them with the field's context. In addition, the outcomes of the recording and exact transcription were categorized based on these topics.

The initial analytical team meeting discussed the codes and their classification into emerging topics. Individual team members independently reviewed the transcripts in preparation for a second meeting to discuss additional inductive and deductive codes for implementing thematic analysis. Additionally, this phase was an approach to increase reliability in this qualitative study.

Independent analysis and peer review were conducted to ensure consistency checks. We performed a thematic analysis, which involved categorizing the topics from the FGDs and interviews and comparing them to the existing literature on EBF.

Using thematic analysis, we derived concepts and categories from the data, including EBF performance in the islands area, belief barrier, physiological barrier, and sociological barrier. To validate the precision of our analysis, we presented the findings to the study participants to obtain their input and confirm that the outcomes and categorizations aligned with the data. This procedure facilitated verifying the data while expressing gratitude and recognition for the participants' contributions.

Ethical consideration

The Medical and Health Research Ethics Commission of the Faculty of Medicine, Universitas Islam Indonesia (Number: 18/Ka.Kom.Et/70/KE/V/2024) granted ethical approval for the study before its commencement. Before the data collection began, the informants received information about the study and provided written informed consent. Anyone who wanted to participate in the study was assured of their right to do so voluntarily, in confidence, and

privacy. They could also stop participating at any time. We gave participants small gifts to appreciate their time and contribution to the study.

Results

This study successfully interviewed 45 informants with various roles. The FGDs were conducted twice with different targets: first, with six community leaders as participants; second, with seven breastfeeding mothers as participants. We also conducted in-depth interviews with 32 other informants. The study highlights three main themes that categorize the barrier to EBF into three main themes. The first theme is the belief barrier. This barrier is related to the belief that causes the baby to stop breastfeeding before six months. The second theme is the physiological barrier, which is related to physical conditions experienced by the mother and her baby, such as the breastfeeding process having to stop or the baby being given formula milk or other food before six months. The third theme is a sociological barrier related to the social conditions experienced by the mother and her baby. The breastfeeding interaction is delayed, interrupted, or combined with other drinks or food intake.

Belief barrier

There are several subthemes in the belief barrier: perception of the form and size of the nipples related to the breastfeeding quality, religion-related tradition toward newborns, and perception of milk adequacy.

Perception of the form and size of the nipples related to the breastfeeding quality

The beliefs related to the physical form of the nipple are followed by prohibitions and beliefs about its effects on the baby, as a group of community leaders expressed: "*If the nipple cracked in a cross, the breastmilk will be poisonous*" (NG, community leader FGD). Meanwhile, with a different physical form of putting, a senior citizen expressed confidence in the same effect: "*If the nipple is split, the milk should not be given to the baby, sir. It is poisonous. The baby could die*" (N, a senior citizen).

Other obstacles in breastfeeding are related to the mother's perception of the size of the nipples, which is related to the belief about breast milk quality. There was the belief that the baby should not drink breast milk from a different breast size. When breastfeeding mothers have large and small breast shapes, breast milk should only be given from large breasts. There is a belief that milk from smaller breasts might harm a baby.

Religion-related traditions toward newborns

Failure to EBF is also influenced by Islamic tradition, the majority religion practiced by the people of Karimunjawa. Consequently, a shared belief in religion-related traditions is notably essential. One of the failures of EBF can also be caused by honey usage in the *Barzanji* tradition. It is a tradition to pray for a baby, performed when the infant reaches the age of *selapan* [35 days in the Javanese calendar]. One of the rituals is to apply honey and powder on the baby's cheeks, lips, and chest, which all guests carry out. The honey on the baby's lips symbolizes the hope that the child will speak well and please others. The informant argued that applying honey to the baby's lips is not unsafe, as it is just administered externally, without being eaten:

"It is just applied a little" (F, religious leader). On the other hand, a father of a baby said: *"When several adults smeared honey on the baby's mouth* [during *selapanan*], *the baby also tasted the honey"* (R, husband of breastfeeding mother).

Perception of milk adequacy

The study also found perceptions about breast milk adequacy for their children. It impacted the decision to give babies food or drink before six months, which hindered EBF practice. Quiet babies are linked to a feeling of fullness while crying babies are associated with hunger. Most informants see babies that exhibit crying despite having been fed breast milk as an indication that the amount of breast milk provided is insufficient for the baby's needs. Therefore, they must give the infants additional food. Formula milk, instant baby porridge, rice puree, and mashed bananas are some food items chosen for feeding the infant:

> *"My experience with the first child. He has been breastfed, but why was he still crying after that? It means that this child was not full yet. So, I gave him a mashed banana when he was seven days old. However, I am not giving my second child any food or formula milk because she does not cry after I breastfeed her. It shows that she is fully fed by breast milk only."*
>
> (AKA, pregnant mother)

During the FGD, a participant shared a story of a neighbor who started feeding a child before the appropriate time. Although the mother produced the milk abundantly because the child continued to cry, she fed the child for 35 days (in Javanese: *selapan*) with instant porridge and mashed rice:

> *"My neighbor has a lot of breast milk, but her child kept crying. She said he was hungry and was immediately fed. I said to her I didn't recommend it since it would be harmful to the infant's health. But she still fed the baby."*
>
> (Z, FGD of breastfeeding mother)

Several informants know that babies should be breastfed until six months of age. However, the informant said that nursing alone is insufficient to meet the baby's needs, as the milk consumed is primarily excreted as urine. However, obedience to the midwife's suggestions to only give breast milk encourages mothers to persist in breastfeeding their infants. It is shown that health promotion factors are impacting and likely diminish the misbeliefs associated with breastfeeding:

> *"I think giving only breast milk is not enough. I believe breast milk only turns into urine, with nothing remaining in the stomach. There is nothing on the baby's body. Just peeing. Therefore, we need additional food other than breast milk. But the midwife said, don't give anything but breast milk to the baby. I don't know…. I only know that if the baby remains quiet, he is full. I obey the midwife because my baby remains quiet after I breastfed him."*
>
> (AN, pregnant mother)

The older the child, the more active the child will be. Thus, breastfeeding alone is not considered enough for the baby. Therefore, the informant intends to provide additional food

when her baby is four months old: *"Maybe I will give my baby complementary foods at the age of 4 months. But I am not interested in giving formula milk."* (DS, pregnant mother)

Some informants believe that if breast milk is deemed inadequate, providing formula milk rather than introducing solid food to infants is preferable. Formula milk is thought to help make children feel fuller than only breastfeeding:

> *"Yes, the only way for me, rather than the baby being fed before the time. My mother said to give her food. I said no...it's better to give formula milk instead of being fed. The baby's stomach can't accept it."*
>
> (K, FGD of breastfeeding mother)

Physiological barrier

The physiological barrier's theme included subthemes, namely the physical condition of the breasts and lack of milk production.

The physical condition of the breasts

Participants identified many challenges to providing EBF for their infants regarding physiological conditions, including big nipples, small nipples, sore nipples, lactational mastitis, breast cancer, and lack of breast milk production. Nipples that are too big, too small, or inverted nipples are believed to be one of the obstacles in breastfeeding: *"When I have my first baby, our nipple is still big, right? So it's hard to put it in the baby's mouth."* (AKA, pregnant mother). Several mothers identified small nipples and a lack of breastmilk production as physical condition barriers in EBF practice.

Mothers also make various efforts to reveal nipples that do not appear and to produce breast milk. A mother said: "*There are no nipples, no milk comes out. I've tied rubber on my nipples all night, and the nipple won't come out."* (Su, breastfeeding mother). Another mother expressed the effort was assisted by the doctor after cesarean birth:

> *"There's no nipple. If I want to give milk to the baby, the breast has to be pulled and sucked. Yes, the doctor gave me a tool to suck continuously until it hurts. If I want to breastfeed, my breasts hurt. When it stopped, my husband said to try again, but there was no reaction (no breast milk coming out). Then, in the end, the baby was just given formula milk."*
>
> (DS, breastfeeding mother)

Sore nipples are also an obstacle to EBF, as expressed by several mothers: *"It's like being sliced; it feels like it's getting to the point of tiptoeing. I've bought nipple protectors, but the baby refused because he tasted the rubber."* (R, FGD of breastfeeding mother) A mother told her neighbor about her recent experience, who finally gave a banana to her infant: *"…her nipple is also wounded. It keeps bleeding…"* (M, FGD of breastfeeding mother)

Another breast condition that hinders EBF is lactational mastitis, the inflammation of breast tissue characterized by a painful condition, a high fever, flu-like symptoms such as aches and chills, and red, tender, hot, and swollen breasts (Wilson et al., 2020). Some local terms for mastitis that respondents mentioned included *ngawoni, ngrangkaki* mentioned by traditional healers and some mothers: *"When my breast "ngawoni," a little milk comes out, the baby doesn't*

want it." Moreover: "*Babies have difficulty to breastfeed* [due to the lactational mastitis conditions]*, the milk doesn't come out, it doesn't flow smoothly."* (R, traditional birth attendant)
A cadre of health reported a lactating mother had breast cancer: "*A mother had breast cancer, therefore could not breastfeed her baby."* (Um, FGD of community leader)

Lack of milk production

The last physiological hurdle is related to the lack of milk production as a mother stated:

> "*On the first day, I was still breastfed. After that, the baby cried continuously for two days. Yes, the milk comes out a little bit; this baby wants a lot. The child is fussy. My breastmilk came out but a little; she continuously drank until the breastmilk wasn't coming out, and my breasts hurt. Those two days, I finally gave her formula milk because she couldn't stop crying; God, I'm so sorry, her face is all red and pale."*
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> (N, FGD of breastfeeding mother)

Sociological barrier

The sociological barriers to EBF included three subthemes: the working mother's status, the child born out of wedlock, and the influence of the older family members.

The working mother's status

A nutritionist informant stated that working mothers are a contributing factor to the failure to provide EBF:

> "*Usually, it's because their mothers work every day, so sometimes they're not very conscientious about trying to give breastmilk for their infants, even though, for example, they work at the port, the port is close by, and their time is also flexible. They can go home or maybe get the breastmilk pumped, but they don't do that. Some parents may not have breast milk, and others may lack awareness."*
>
> (Ra, nutritionist)

Several mothers also shared similar information about working mothers, which resulted in their inability to provide EBF.

The influence of the older family members

The suggestion against EBF from the older family members could also inhibit the EBF accomplishment, as stated by a mother:

> "*When the grandmother saw the baby kept crying after given the breastmilk, she told the mother to give the baby* [her great-grandson] *something to eat, and it is good for the baby's health. The grandmother said that the mother also gave the food when she was an infant, and she didn't die after that."*
>
> (R, FGD of breastfeeding mother)

A mother expressed other considerations when she decided to give her baby formula milk after a month:

> *"I was successful in giving EBF for 6 months to my first child. I pumped the milk. But for my second child, I choose the easier way. I gave him breast milk when I was home and formula milk when I was at the office. Because I entrust my two children to my parents, I don't want to cause more trouble for them, especially when I go to work and stay overnight. My first child didn't want to drink from a bottle, so he was more fussy when I went to work."*
>
> (ER, breastfeeding mother)

The child born out of wedlock

A child born out of wedlock is also at a higher risk for nonexclusive breastfeeding due to disguised birth, not being assisted by health workers, and grandmother's care of out-of-wedlock babies, like several experiences shared by community and health cadres:

> *"…If the parents are embarrassed, they will say: I will take care of the child. You* [the baby's mother] *go out to work, if you can, outside the village. So, you don't need to breastfeed from birth; use formula milk. You* [mother's baby] *had problems from the start* [because out of wedlock pregnancy]*, so I take care of your child, and you leave to work."*
>
> (Um, FGD of community leader)

Discussion

Government Regulation No. 33 of 2012 regulates the policy on EBF in Indonesia. Under this strategy, the government aggressively promotes the use of EBF. This support includes guarantees for EBF, such as offering mothers the chance to engage in exclusive nursing even when employed. The government is actively establishing dedicated breastfeeding facilities in public and office places while providing education and training to improve awareness and support for EBF in the community (Government of Indonesia, 2012).

The barriers to EBF practices in the Karimunjawa Islands are multidimensional and related to local determinants, including geographical conditions, sociocultural influences, and physiological and sociological barriers. Island regions face geographical constraints that affect community access to healthcare facilities, such as the long distances between islands, high maritime transportation costs, limited healthcare facilities, a shortage of lactation counselors, uneven distribution of healthcare workers, and dependence on weather conditions. This condition widens the gap in providing education about EBF. An accessible intervention model must be created for remote areas, such as building floating health posts and strengthening integrated health posts [*posyandu*] and health cadres. Methods for disseminating information can include local radio media, internet-based platforms, and telemedicine technology.

Local traditions and culture can influence breastfeeding practices. There is a traditional belief that the early introduction of complementary foods enhances babies' strength. The family, particularly grandmothers, frequently exert influence on childcare decisions. Local norms will create social pressure for mothers to follow traditions. Therefore, interventions must involve

traditional leaders or religious figures to support health messages that align with regional norms.

Addressing the barriers to EBF in the islands area of Indonesia involves understanding their implications and how they impact breastfeeding practices. Misconceptions and cultural beliefs may lead to a lack of support for breastfeeding or the adoption of practices that undermine it. The condition could include using formula or other foods before six months, which can compromise the health benefits of EBF. Similar findings on the belief in EBF are also seen in studies conducted across different countries. In India, mothers use a towel soaked in turmeric paste to cleanse the baby's mouth and prevent the presence of any harmful microorganisms (Thomas et al., 2024).

Conversely, a study conducted in Tswelopele Municipality, Free State Province, South Africa, revealed that societal ideas and factors hinder the practice of EBF. Mothers are convinced that breast milk is associated with cultural ideas or traditions and is referred to as *mohlala*. An infant who is crying excessively during breastfeeding is an ominous indicator, prompting the mother to stop breastfeeding before the recommended time (Quebu et al., 2023). Meanwhile, Nigerian mothers expressed firm convictions regarding the significance of providing water to infants as personal or cultural convictions, particularly among fathers and grandmothers. These convictions hindered the participants' acceptance and implementation of EBF (Schnefke et al., 2023). Thus, it is vital to develop culturally sensitive educational campaigns to correct misconceptions, engage community leaders and influencers to promote accurate information, and create a supportive environment for breastfeeding (Anggraeni et al., 2018).

Physical challenges such as difficulty with lactation, inadequate maternal nutrition, or health issues can make it difficult for mothers to breastfeed exclusively. The situation can lead to the early introduction of supplementary foods or formulas. Several previous studies have also found a consistent physiological barrier. Although African women believe that human milk is often regarded as the optimal nutrition for infants, women frequently supplement it with other foods immediately after birth due to concerns about insufficient breastfeeding (Amzat et al., 2024). Meanwhile, in Congo, obstacles to EBF were documented to encompass child crying, societal influence, hot temperature, and inadequate maternal nutrition. Societal conventions endorsed nursing but did not advocate EBF (Babakazo et al., 2024). Furthermore, the results of the study conducted in South Africa revealed that maternal factors are significantly influenced by several other aspects when determining the success or failure of this method. These factors encompass severe breast pain, maternal sickness, anxiety over inadequate milk production, and a lack of comprehension regarding EBF (Quebu et al., 2023).

In Uganda, there was a widespread understanding of the positive effects of EBF on child health. However, this knowledge was often overshadowed by several maternal considerations that may potentially lead to the need for supplementation. These factors included employment obligations, concerns about physical appearance, and discomfort (Sewannonda et al., 2022). Furthermore, research conducted on Pakistani women reveals that although they possess an extensive understanding of the advantages of breastfeeding and the significance of colostrum, they exhibit deficiencies in their knowledge regarding breast conditions, the proper preparation of human milk substitutes, the physiology of milk production, and assisting mothers who are separated from their infants (Singletary & Waqar Farooqi, 2024). We must offer practical support and resources, like lactation consultations and maternal health services, to address nutritional and health needs and improve breastfeeding outcomes (Kusrini et al., 2020; Lima et al., 2024; Yoto et al., 2022).

Social factors, including lack of support from family, insufficient maternity leave, or inadequate breastfeeding facilities, can hinder a mother's ability to practice exclusive breastfeeding. The situation can lead to early weaning or mixed feeding (Rohmah & Laksono, 2023). Several other studies have also found that social conditions influence breastfeeding practices to some extent. Research in the United States indicated that women saw public nursing as contrary to American customs, which affected their decision to breastfeed in public. This belief inevitably contributes to limiting breastfeeding in society (Ayers et al., 2022). In addition, mothers in Ethiopia acknowledge the significance of nursing for children, but many consider returning to work after three months as a significant obstacle to maintaining continuous breastfeeding. Mothers with favorable employment conditions are likelier to engage in successful breastfeeding and report higher job satisfaction (Wolde et al., 2021). It is necessary to create breastfeeding-friendly environment policies, involve family members in support networks, and advocate for workplaces to accommodate breastfeeding facilities for working mothers (Goodman et al., 2024; Syahri et al., 2024).

To increase the coverage of EBF, an effective health promotion program needs to be designed, considering cultural norms and geographical conditions and strengthening health information dissemination through various channels. The pattern of disseminating health information in island regions has the following characteristics: (1) Information is often conveyed through integrated health posts, auxiliary health centers, or community health centers. However, the presence of these facilities is not uniform, so not all mothers have the same access. (2) Cadres of integrated health posts play an essential role as a link between the community and health services. However, the limited training of cadres poses a challenge in ensuring that nutritional messages can be effectively conveyed. (3) Local radio, digital platforms, or information through religious activities are quite effective methods but have not been maximally utilized for EBF campaigns.

The government should provide mothers and their families with breastfeeding information and counseling during the entire period from before birth to after birth, as well as adequate time to make well-informed decisions about their babies' nutrition. During counseling sessions, it is essential to prioritize discussions with these individuals on cultivating a practical comprehension of the initial nursing experience, dispelling false beliefs about breastfeeding, and resolving any wrong information or worries. Furthermore, healthcare practitioners must demonstrate empathy and respect for the mother's customs and cultures. They should also educate mothers and their families on the significance of EBF (Quebu et al., 2023; Sudarmi et al., 2023).

Efforts made by the government by making policies related to breastfeeding through government regulations, aggressive efforts related to EBF to the provision of EBF facilities for working mothers, the provision of places for breastfeeding mothers in offices and public facilities, as well as providing education and training to achieve the success of breastfeeding in the community. However, the equal distribution of understanding to all parties needs to be assessed periodically among health service personnel, breastfeeding mothers, accompanying families, and the surrounding community. Periodic evaluations are required to ensure that what is known and created in the community remains strong and does not fade while also addressing and dispelling emerging misconceptions about breast milk. The positive impacts of breastfeeding within the community are examined and presented to demonstrate its influence, encompassing academic performance in schools, the health status of breastfed children, and cognitive development as evaluated through intelligence assessments associated with breastfeeding.

Study limitation

A significant limitation we faced was that the interviews were conducted in Indonesian or Javanese and then translated directly into English. Certain subtleties of the discourse were probably not accurately conveyed during the translation process. Moreover, we lacked the resources to translate the selected quotes for this page back into Indonesian or Javanese to verify the accuracy of the interpretation. Nevertheless, all writers possess a high level of proficiency in both Indonesian and Javanese languages, which greatly assisted in reducing the impact of this constraint.

Conclusions

Based on the findings, there are three group barriers to EBF in the Islands area of Indonesia: belief, physiological, and sociological. To tackle the barrier to EBF in the island area of Indonesia, we recommend conducting community-based education programs to challenge myths and misconceptions about breastfeeding. In addition, it is also necessary to involve local leaders and respected figures to advocate for the benefits of EBF. The common physiological barriers in EBF could also be fixed by helping women contact lactation consultants and breastfeeding support groups, including families, that offer helpful information and tools. Involving employers in establishing policies and practices that encourage breastfeeding-friendly spaces may foster supportive environments. These measures can help overcome the barriers and support increased EBF rates.

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