

Informational Support Needs of Breastfeeding Mothers: A Meta-synthesis of Qualitative Research

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ARTICLE INFO	ABSTRACT
<p><i>Article type:</i> Review article</p>	<p>Background & aim: Worldwide, exclusive breastfeeding (EBF) is considered the healthiest option for infant feeding. Providing informational support to mothers is crucial for informed breastfeeding decision-making and continued practice, as the rate of exclusive breastfeeding has globally declined. This review aimed to systematically synthesize existing evidence on mothers' informational support needs to identify gaps and improve support strategies.</p> <p>Methods: This meta-synthesis of qualitative studies was conducted based on meta-aggregative qualitative synthesis. The search strategy encompassed English articles indexed in PubMed, Web of Science, Scopus, ProQuest, Google Scholar, as well as the Persian articles indexed in SID, and Magiran. No time restriction was applied up to April 2025. Eligible studies were full-text qualitative articles focused on informational support needs among breastfeeding women. Exclusion criteria included unavailable full texts, review articles, letters to editor, conference papers, case reports, quantitative studies, duplicates, and articles with unresponsive authors, and incomplete or irrelevant data. The quality of the published studies was evaluated using the JBI checklist.</p> <p>Results: This meta-synthesis included ten eligible studies. The review process created 27 subcategories, which were grouped into 20 categories. From these categories four synthesized themes emerged: the need for breastfeeding informative topics, the need for effective strategies for providing information, the need for genuine breastfeeding practice, and the need for sources of information.</p> <p>Conclusion: These findings emphasize the need for healthcare policies that provide personalized, timely, and culturally appropriate breastfeeding information so that mothers can make informed decisions and continue breastfeeding.</p>
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Introduction

Breastfeeding is widely acknowledged as a fundamental public health strategy that contributes significantly to the short and enduring health of both infants and societies (1) and is considered a highly effective behavior in promoting health (2). Globally, more than 50% of child mortality has been attributed to insufficient breastfeeding or complementary feeding (3). It has been estimated that optimal

breastfeeding practices could prevent approximately 1.5 million child deaths annually worldwide, highlighting its critical role in child survival strategies (4). Exclusive breastfeeding can stop up to 61% and 63% of secondary hospitalizations due to pneumonia and diarrheal diseases, respectively (5). The World Health Organization (WHO) and the American Academy of Pediatrics have emphasized exclusive breastfeeding for the first 6 months, followed by

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complementary foods, and continued breastfeeding until at least 2 years of age (6). One of the goals of the global strategy for infant and young child nourishing is exclusive breastfeeding for at least 50% of babies under 6 months of age until 2025 (7). Despite the importance of breastfeeding and the increasing emphasis on it, regrettably, 3 out of 5 babies do not receive breast milk in the first hour of their life, and the rate of exclusive breastfeeding in the world is reported to be 41% (8). A national study stated the rate of exclusive breastfeeding to be 53.1% in Iran (9). Various factors affect the initiation and sustainability of breastfeeding, such as demographic, psychological, and social factors related to the mother (2, 10-11). Social support from important others is a significant factor that inspires mothers to breastfeed their babies (12-13). It is classified into four types of support: emotional support, which includes empathy, encouragement, and reassurance; informational support, such as guidance and education; instrumental support, which refers to practical assistance or resources; and appraisal support, involving constructive feedback and affirmation of a mother's efforts (14). Mothers who receive social support from important others tend to breastfeed longer than those who do not (15). Information about nursing and advice related to breastfeeding is an example of the informational support delivered by important others to breastfeeding mothers (16-20). Lack of understanding of the informational support needs of breastfeeding mothers is a leading cause of failure to complete breastfeeding (19, 21).

Although several meta-syntheses have examined breastfeeding support broadly, including peer support, professional support, social support, and supportive practices in disadvantaged groups, few have isolated informational support as a distinct domain (17, 22-27). This systematic review aimed to synthesize qualitative evidence on the informational support needs of breastfeeding mothers to inform policy and improve supportive healthcare services.

Methods

In this study, a qualitative meta-synthesis was conducted based on guidelines outlined in the Joanna Briggs Institute (JBI) Reviewers'

Manual applying meta-aggregative qualitative synthesis (28). The protocol of the study was registered in the International Prospective Register of Systematic Reviews PROSPERO (ID: CRD42024528494).

This review was guided by the PICO framework, which stands for Population, Phenomena of Interest, and Context, in qualitative studies, focusing on breastfeeding mothers (Population), their informational support needs (Phenomenon of interest), and the context of breastfeeding (Context).

Two independent reviewers (MB and RB) performed a systematic electronic search across English databases of PubMed, Web of Science, Scopus, ProQuest, and Google Scholar search engine, as well as Persian databases of SID and Magiran. No time restriction was applied up to April 2025. The search keywords included: (breastfeeding) OR (nursing) OR (lactation) AND (informational needs) OR (information) OR (education) AND (social support) OR (support) OR (informational support). The references were then imported into EndNote reference management software (version X8) and duplicates were removed. Both the titles and abstracts of the retrieved articles were independently screened by two authors (MB and NB). Subsequently, the full text of the articles was assessed for eligibility by two researchers independently (MB and RB). The final decision on which articles to be included in the review involved all the authors. The inclusion criteria of the reviewed articles were full-text qualitative studies in English or Persian published up to April 2025. The reviewed studies must also described informational support or needs for breastfeeding among mothers who were breastfeeding. The exclusion criteria comprised lack of access to the full text of the articles and the articles whose authors did not respond to the researchers' contact, review studies, letters to the editor, articles presented in conferences, case reports, duplicate documents, quantitative studies, and articles with incomplete and unrelated data to the study topic.

Quality assessment

The JBI Critical Appraisal Checklist for Qualitative Research was used by two authors (MB and NS) to assess the quality of included

studies (Table 1). This checklist consisted of 10 criteria, with each study receiving a score of 1 for each met criterion and 0 otherwise, for a total score of 0-10. Overall study quality was then classified based on JBI guidelines: high (8-10), moderate (4-7), and low (0-3) (28). Discrepancies between the two authors were resolved through discussion, or with a third author (NS).

Data Extraction, Analysis, and Synthesis

Data extraction from included articles was performed independently by two reviewers using a predefined checklist, capturing details such as first author, publication year, country, design, sample, data collection method, sources of support, and main outcomes.

Following JBI guidelines, meta-aggregative approach to qualitative synthesis emphasizes the direct application of primary study findings without reinterpretation (28). This approach aims to generate transferable, evidence-based recommendations for healthcare practice and policy development. The process of data synthesis in a meta-aggregative review is conducted in three systematic steps: (1) extracting relevant findings from each study, supported by participant quotations and assigned a credibility level (unequivocal, credible, or unsupported); (2) grouping findings with similar meanings into categories (minimum of two findings per category); and (3) synthesizing categories to produce comprehensive synthesized findings reflecting overarching themes. To ensure rigor and trustworthiness, two reviewers independently extracted and coded findings, resolving discrepancies by discussion. Methodological decisions were documented, and reflexive discussions were used to minimize bias and keep the synthesized findings faithful to the primary studies.

Results

Out of the 169 articles retrieved from databases. After removing duplicate articles, 131 articles were evaluated by the inclusion criteria. 118 articles lacking inclusion criteria were excluded from the study. Out of 13 papers assessed for appraisal, three were excluded due to letter, review studies and irrelevant outcom.

As a result, 10 papers were included in the qualitative meta-synthesis (Figure 1).

All the included studies used qualitative methodologies. They were conducted between 2004 and 2025 in eight different countries, and all were published in English. The summary of the designs, sample, method of data collection, source of support, and main outcomes/themes is presented in Table 2. The findings of meta-aggregative approach are summarized in Table 3.

Theme 1: The need for breastfeeding informative topics

Although many participants gained valuable information, most still had information gaps and desired more guidance on specific topics.

1-1. Safety of taking medicines while breastfeeding

Breastfeeding mothers frequently express concerns about the safety and correct use of medications. They seek clear guidance to ensure that the medicines they take do not pose risks to their infants. Understanding the purpose, contents, and potential side effects of medications is a major informational need.

One mother emphasized the importance of transparency, stating: "I want to know why I'm taking it, what it does for me, knowing exactly what's in it."

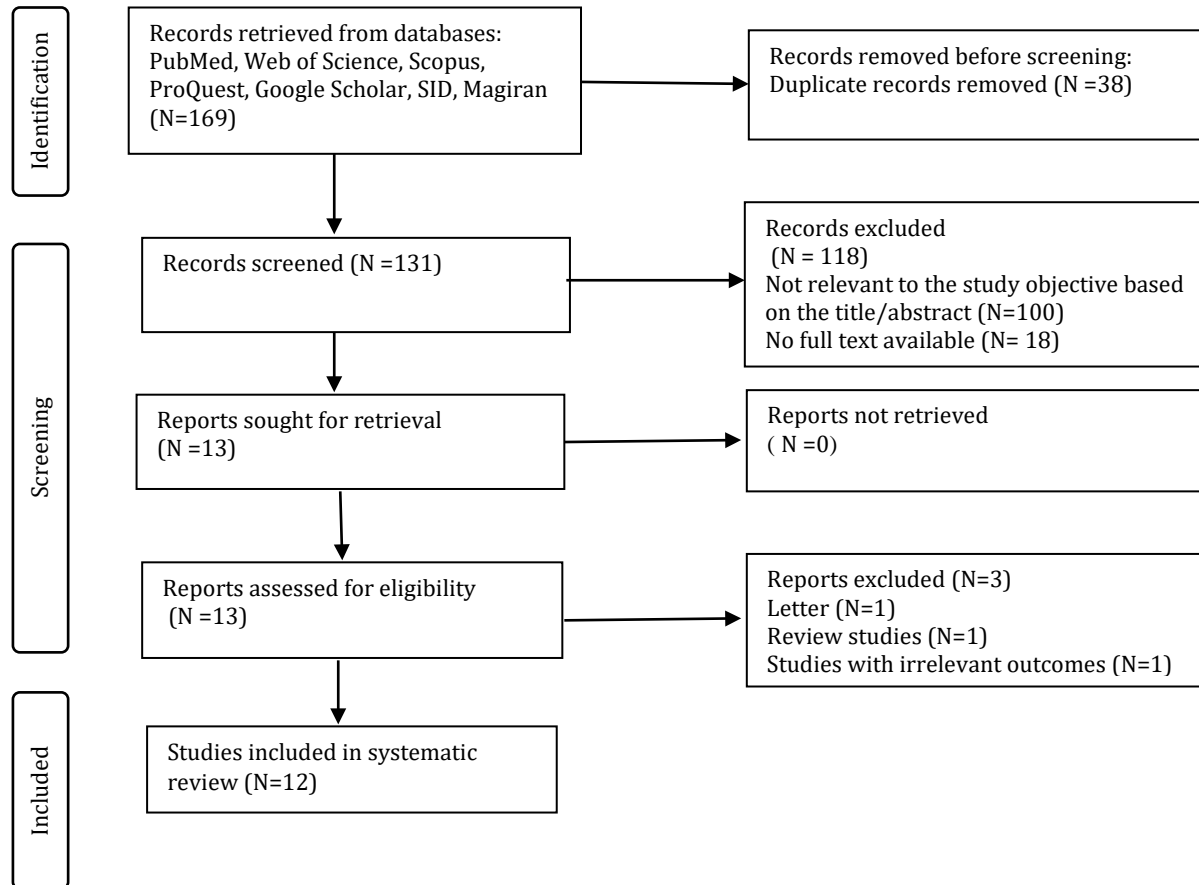


Figure 1. PRISMA 2020 flowchart illustrating the process of selecting eligible studies

Table 1. Quality assessment of included studies using the JBI critical appraisal checklist

Quality assessment questions											
Author [Year]	Congruity between the stated philosophical perspective and the research methodology	Congruity between the research methodology and the research question or objectives	Congruity between the research methodology and the methods used to collect data	Congruity between the research methodology and the representation and analysis of data	Congruity between the research methodology and the interpretation of results	A statement locating the researcher culturally or theoretically	The influence of the researcher on the research, and vice versa,	Participants and their voices adequately represented	Consideration of research ethical principles/ Evidence of ethical approval by an appropriate body	Conclusion drawn from the analysis or interpretation of the data	Quality score
Nelson and Sethi (2005)	Yes	Yes	Yes	Yes	Yes	Unclear	Unclear	Yes	No	Yes	7 (moderate)
McKenzie J (2005)	Yes	Yes	Yes	Yes	Yes	Unclear	Unclear	Yes	No	Yes	7 (moderate)
Moore Schaefer K (2004)	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	8 (high)
Dykes et al. (2003)	Yes	Yes	Yes	Yes	Yes	Unclear	Unclear	Yes	No	Yes	7 (moderate)
Malata and Chirwa (2011)	Yes	Yes	Yes	Yes	Yes	Unclear	Unclear	Yes	Yes	Yes	8 (high)
Dieterich Leurer et al. (2019)	Yes	Yes	Yes	Yes	Yes	Unclear	Yes	Yes	No	Yes	8 (high)
Hirani and Karmaliani (2013)	Unclear	Yes	Yes	Yes	Yes	Unclear	Unclear	Yes	No	Yes	6 (moderate)
Pentecost and Grassley(2013)	Yes	Yes	Yes	Yes	Yes	Unclear	Unclear	Yes	No	Yes	7 (moderate)

Quality assessment questions											
Author [Year]	Congruity between the stated philosophical perspective and the research methodology	Congruity between the research methodology and the research question or objectives	Congruity between the research methodology and the methods used to collect data	Congruity between the research methodology and the representation and analysis of data	Congruity between the research methodology and the interpretation of results	A statement locating the researcher culturally or theoretically	The influence of the researcher on the research, and vice versa,	Participants and their voices adequately represented	Consideration of research ethical principles/ Evidence of ethical approval by an appropriate body	Conclusion drawn from the analysis or interpretation of the data	Quality score
014)											
Barnes et al. (2019)	Yes	Yes	Yes	Yes	Yes	Unclear	Unclear	Yes	Yes	Yes	8 (high)
Maleki and Mirzaei (2025)	Yes	Yes	Yes	Yes	Yes	Unclear	No	Yes	Yes	Yes	8 (high)

The main thing is making sure that it's recommended as being safe for the baby." Another participant shared a similar view: "It's important to know what it [medicines] is used for and what the

risk factors are—so side effects and contraindications—particularly whether it's going to affect the baby or not"(22).

Table 2. Characteristics of published studies included in the meta-synthesis

Author (year)	Country	Study design	Sample	Data collection	Source of support	Main outcomes/Themes
Nelson and Sethi (2005)(26)	Canada	Grounded theory	8 teenage mothers	Interview, field notes	Family and friends Health care providers	Deciding to Breastfeed Learning to Breastfeed Adjusting to Breastfeeding Ending Breastfeeding
.McKenzie J (2006) (25)	Canada	Ethnography	19 women	Interview	Partner peers Health care providers	Frame information needs Authority of information sources Helpfulness of information sources Finding appropriate sources of information Muscle Soreness, Pain, and Stiffness Made It Difficult to Breastfeed
Moore Schaefer (2004) (27)	USA	Phenomenology	14 women	Interview	Mother, sister, husband, close friends, maternity nurses	Fatigue Interfered With Breastfeeding Forced Unplanned Weaning Necessary Use of Medications Perceived Insufficient Milk Supply Sore Nipples Feeling Sad and Depressed
Dykes et al. (2003) (17)	UK	Multimethods	7 adolescent breastfeeding mothers	Focus groups, interview	Mother, partner, midwife	Emotional support Esteem support Instrumental support Informational support Network support
Malata and Chirwa (2011) (31)	Malawi	Exploratory descriptive	150 first-time mothers	Focus group, interview	Traditional counsellors, family and friends	Information before labor Information during birth Birth information Information after birth (breastfeeding).
Dietrich Leurer et al. (2019) (23)	Canada	Qualitative descriptive	25 breastfeeding women	Interview	Registered nurses consultants Internet, written material friends/family, and peers Husband, mother-in-law, grandmother, friends, employers and colleagues	Information Sources Desired topics
Hirani and Karmaliani (2013) (24)	Pakistan	Qualitative descriptive	9 breastfeeding women	Interview		Maternal attributes Social support Workplace support,

Author (year)	Country	Study design	Sample	Data collection	Source of support	Main outcomes/Themes
Pentecost and Grassley(2014) (32)	USA	Content analysis	90 adolescent mothers	Interview	Family and friends, health care providers	Informational Support Emotional support Appraisal support Instrumental support
Barnes et al. (2019) (22)	Australia	Thematic analysis	18 breastfeeding women	Focus groups, interview	Health care providers, peers, and published research	Women's preferred information sources and information needs The need for instruction on Proper breastfeeding behavior
Maleki and Mirzaei (2025)(33)	Iran	Content analysis	25 breastfeeding mothers,	Interview	Family members and healthcare providers	The need for breastfeeding information The need for information on maternal-related issues The need for information on infant-related issues

In addition to prescribed medications, many women reported using herbal remedies during breastfeeding, particularly those believed to support milk production (galactagogues), relaxation, or digestion. Complementary products such as multivitamins, probiotics, iron, and necessary fatty acid supplements were also commonly used. As such, information regarding the safe use of complementary and alternative medicines, including herbal products and dietary supplements, was also considered essential by many mothers.

1-2. Characteristics of a good expression

-Timing and frequency of milk expression

Participants expressed a strong need for guidance on when and how often to begin milk expression after birth. Key questions included how soon expression could start, how frequently it should be done, optimal session length and expression scheduling to avoid

feeding disruption. One participant shared her experience of finding a suitable routine:

“I know [the] sweet spot from my midwife, where it was like an hour after [the] baby feed when I could get enough milk but enough time that it wouldn't interfere with her next feed”(23).

This reflects the importance of individualized timing and professional guidance in establishing effective expression practices

-Use of Breast Pumps and Hospital Support

In addition to timing concerns, mothers also discussed the practical aspects of expression, particularly regarding the use of breast pumps. Access to high-quality pumping equipment and early support from hospital staff were seen as essential to establishing and maintaining milk supply, especially when direct breastfeeding was delayed or challenging.

One participant expressed, “It was really helpful for me to learn to use their hospital pump. It gave me a bit of confidence with pumping”(23).

Table 3. The meta-aggregative approach from grouping the study findings into categories and anstracting the categories into themes

Grouping the study findings into categories	Synthesized categories	Themes
Information related to taking medicines like: Complementary medicine products, herbal medicines, vitamin or mineral supplements, probiotics(22).	Safety of taking medicines while breastfeeding.	The need for breastfeeding informative topics
Participants desired timely information on the basics of expression(23).	Characteristic of a good expression	
Participants sought information on storage issues(23)	Storage of human milk	
Participants appreciated information about other products that helped minimize the disruption of their breastfeeding (22). Participants want to make sure they're producing enough(27).	Products that help in the continuation of breastfeeding	
The women were interested to know what the newborn baby looks like and what the baby is capable of doing(27).	Information about infant behavior	
Problems with breastfeeding, including: Sore nipples, mastalgia, mastitis, fatigue, feeling sad and depressed(33)	Common breastfeeding difficulties	
Mothers Nutritional demands (33)	Mother's nutritional needs	
Mothers wanted to be informed about the benefits of breastfeeding(32). Women were asked about the topics that they likeed to receive more information about during breastfeeding. Subthemes that emerged were: "learning needs about mental and physical health, lifestyle," and 'learning needs about Family planning(26).	Health-related information on breastfeeding	
Advices Directions Suggestions Consultations Feedbacks Tips and tricks(17)	Verbal information	The need for effective strategies for providing information
Visual information was particularly helpful, for example, watching a program on local television, visual images, and leaflets (17).	Visual information	

Grouping the study findings into categories	Synthesized categories	Themes
Information was valued when it was individualized and relevant to the mother's particular situation (17). Breastfeeding position, for some of the mothers was relatively easy and trouble-free, and for others was difficult(26). Breastfeeding in twins or more (25). Mothers need information for acceptance of their new responsibilities and changes brought about by becoming mothers(20) The process of planning to end breastfeeding through weaning is challenging for mothers (20). Health care practitioners (HCPs) Family Friends Peers Women's own experiences Internet Written material (17, 22, 23).	Tailored and personalized information Variation in initial breastfeeding experiences Concerns and challenges of breastfeeding multiples Adjusting to Breastfeeding Learning weaning Preferred information sources	The need for genuine breastfeeding behavior
Participants valued information received from trusted HCPs (22, 23). Participants want to receive desired, helpful, and timely information from HCPs Failure to receive informational support (22, 23, 31)	Trust in professionals vs. influence of peers Qualified information sources	The need for sources of information
Sharing experiences and knowledge with other mothers (22).	Relationshipwith other mothers (peers)	

Participants stated that practical recommendation was not received, for example, "I didn't hear anything about pumping" (23).

Some participants identified HCPs who did not or were unable to provide the desired expression information. They acknowledged that the time in the hospital may be too short, but HCPs should assess for expression teaching needs. A participant described the lack of expression guidance, "Really, no one. I would not say the subject was brought up to me, not from my health care providers. . . . They would ask if you're breastfeeding, and that's it."

Another reported similarly, "I don't think anyone even suggested pumping when I was having nursing problems"(23).

1-3. Storage of human milk

Participants wanted information on storage issues, comprising how long human milk can sit at room temperature and consequently be stored in the refrigerator/ freezer, and the best type of storage container. As one indicated, "The most helpful part is just knowing how long breast milk lasts, because it's way different than formula. Like formula can only sit out an hour... or you could freeze it even and it would be fine"(23).

This statement highlights mothers' uncertainty about safe storage times and differences between breast milk and formula. Despite general awareness, many lack clear knowledge of recommended storage durations. According to the CDC (2023), breast milk can be

kept safely for 4 hours at room temperature, 4 days in the fridge, and up to 6 months in the freezer. The WHO offers similar guidelines, allowing up to 6–8 hours at room temperature and 3 days refrigerated. Both recommend using clean, food-grade containers. These gaps point to the need for clearer, more accessible postpartum education to help mothers confidently store breast milk.

1-4. Products that help in the continuation of breastfeeding Milk supply

Participants valued information about products that minimized disruption, including pumps, bra, nipple shields... These tools were often considered essential for continuing breastfeeding, particularly for working mothers or those experiencing physical difficulties.

However, access to such products was not equal for all. Socioeconomic status influenced mothers' awareness of available tools, their ability to purchase them, and their confidence in choosing safe and effective options. For many, the high cost of new breastfeeding equipment was a significant barrier. As a result, some women explored second-hand alternatives or relied on informal advice from peers.

One participant suggested helpful information contains "how to buy those [products] used, because I think a lot of women buy them used and that could be perfectly safe, or it might not be"(26).

1-5. Information about infant behavior

The women were interested to know what the newborn's appearance and capabilities were important, so women were asked about their breastfeeding experience.

1-6. Common breastfeeding difficulties

Several of the women noted that they need information about difficulties with breastfeeding, including sore nipples, inadequate milk supply, fatigue, feeling sad and unhappy, mastalgia, and mastitis. Sore nipples were skilful universally by all the women who breastfed. Sore nipples in some cases initiated the "drying up" process. The women talked about their milk "drying up." One woman reported not experiencing breast engorgement during initial breastfeeding. Another woman noted that the time to breastfeed seemed to "take so long" that she felt her milk was "not

coming in right." Their solution was to supplement with bottled formulas (27).

One woman indicated, "Initially, I was so excited to nurse. He attached...and he loved it. I worked with him for about 1 month, and he finally got it...But I couldn't produce enough milk...My frustration was so high that I finally said, 'Oh let's just forget it.'" She described breastfeeding as a "frustrating experience (27)."

1-7. Mother's nutritional needs

Women expressed a clear need for information regarding their dietary requirements during breastfeeding. Beyond supporting milk production, adequate nutrition plays a vital role in mothers' overall physical recovery, mental well-being, and long-term health. Nutritional education was seen not only as a way to improve energy levels and manage postpartum fatigue, but also as a preventive strategy against conditions such as anemia, weakened immunity, and postpartum depression. One participant stated, "I need to know what to eat and what not to eat to breastfeed my baby well. I don't know"(33). Anything providing tailored dietary guidance may therefore enhance both maternal self-care and infant care capacity, reinforcing the foundational role of nutrition in holistic postpartum health.

1-8. The breastfeeding benefits

Mothers expressed a strong interest in receiving clear, accessible, and evidence-based information about the benefits of breastfeeding. They wanted to understand not only the biological advantages for the infant but also the health, emotional, and practical benefits for themselves.

Many women emphasized that knowing the specific benefits—such as strengthening the baby's immune system, reducing the risk of infections, and supporting cognitive development—would help reinforce their motivation to continue breastfeeding, especially during challenging periods.

One mother shared: "I knew it was good, but when I understood how it protects the baby from illness, it made me feel more confident in choosing to breastfeed"(32).

Another said: "I wish someone had told me earlier that breastfeeding also helps with

postpartum recovery and even reduces the risk of breast cancer. That kind of information makes a big difference”(32).

These reflections show that mothers value not just general encouragement to breastfeed, but specific, relatable, and personalized information that links breastfeeding to both short-term benefits (such as bonding and infant health) and long-term health outcomes for mother and child.

1-9. Health-related information on breastfeeding

Women were asked about the topics that they would like to receive more information about during breastfeeding. Subthemes that emerged were “learning needs about mental and physical health, lifestyle.

Theme 2: The need for effective strategies for providing information

2-1. Verbal information

Mothers highly valued clear, supportive, and consistent communication during breastfeeding. Effective communication included personalized advice, practical suggestions, and empathetic listening from both healthcare providers and family members. One participant recalled, “My mum gave me verbal comments and guided me”(17), reflecting the importance of informal yet trusted sources of guidance. Personalized instruction, such as tips for waking a sleepy baby or ensuring a good latch, was especially appreciated and empowering. However, ineffective communication, marked by inconsistency or conflicting advice from different providers, led to frustration and confusion. As one mother explained, “My nurse changed twice a day and each one gave different advice”(32). Highlighting how conflicting messages can undermine a mother’s confidence and create confusion during a sensitive period. This emphasizes the need for coordinated, patient-centered communication in breastfeeding care.

2-2. Visual information

Visual information was particularly helpful, for example, watching a program on local television, visual images, leaflets...

“Midwife came to see me; she said I can express it and she just said she would tell me

how to do that and she told me how to do it and gave me a leaflet”(17).

2-3. Tailored and personalized information

Relevant, individualized information was valued by mothers.

Theme 3: The need for genuine breastfeeding practice

Genuine breastfeeding behaviors involve feeding the baby on demand, often 8-12 times in 24 hours, and following the baby’s cues for feeding

3-1. Variation in initial breastfeeding experiences

The data also highlighted a spectrum of early breastfeeding experiences, ranging from ease and confidence to significant physical discomfort and complications. While some mothers reported minimal difficulty and strong support from healthcare professionals, others described painful latching, recurrent breast infections, and a gradual process of adjustment and improvement.

“I always remember they [the nurses] had to help me, I think, once in the beginning, just after she was born, getting her to properly latch on, and after that it was fine. Sore for a little bit, but not really... I never found it hard... they pretty much said I was natural at it”(26).

“In the beginning, it was pretty bad. I kept getting breast infections. Well, it was painful for the first couple of weeks. It just really hurt every time he latched on. Then, once I had gotten enough sleep, and I didn’t get so many breast infections, then things kind of got better after that”(26).

3-2. Concerns and challenges of breastfeeding multiples

Participants expressed a range of concerns related to the practical and physical challenges of breastfeeding twins or triplets. These included doubts about their ability to simultaneously nurse more than one baby, the possibility of insufficient milk supply, fatigue due to staggered feeding times, and the broader implications of prematurity among multiples.

“I’m concerned about how you deal with two babies at once? ... Can you breastfeed two of them for real, not just in books? [Laughs] Can it be done?”(25)

“That’s a question I ask myself... could I breastfeed both of them? Maybe my body will not be able to produce enough milk for them”. My worried about one getting up, and then you just nurse them and feed them, and then you fall asleep, and then the other one’s getting up, and then it’s like you’d be so tired”(25).

As noted in the data, “Many identified twin or triplet-specific concerns about baby feeding, including issues such as the increased risk of prematurity associated with twins and the ability to produce sufficient milk supply”(25).

3- 3. Adjusting to Breastfeeding

Adjusting to motherhood—including new responsibilities, identity shifts, and caregiving roles—is a key aspect of maternal adaptation. This process requires access to information, emotional support, and cultural affirmation.

For adolescent mothers, the transition can be more challenging due to ongoing identity development and limited support systems. Cultural norms also shape how prepared or capable they feel in their new role.

As one young mother shared: “At 3 months, I guess, like it was easy. You don’t have to think about it at all, you know”(26).

This may reflect a delayed or less conscious engagement with responsibility, common among younger mothers. In cultures where early motherhood is normalized, adaptation may be smoother, while in others, stigma and lack of support can intensify difficulties.

3-4. Learning weaning

The process of planning to end breastfeeding through weaning is challenging for mothers because they find weaning very difficult for emotional reasons.

Most of the teenage mothers experienced an increased period of vacillation between continuing and weaning, as typified by one participant:

“I don’t know, I just think I’ll start weaning soon. I guess I’ll just have to keep going, though, if she doesn’t want to”(20).

Therefore, they felt to need for information about the gradual weaning advantages.

Mothers in the study described their breastfeeding experiences as a mix of positive and challenging aspects. The vacillation appeared to be strongest when the mothers

were learning to breastfeed and when they were contemplating moving from adjusting to breastfeeding to ending breastfeeding.

Breastfeeding offered benefits such as improved infant health, bonding, enjoyment, personal growth, convenience, and cost savings. Challenges included pain, reduced freedom, strained partner relationships, discomfort with public feeding, and disrupted schedules. Ongoing support and information seemed crucial for mothers to sustain breastfeeding.

Theme 4: The need for sources of information

4-1. Preferred information sources

While most participants reported drawing on multiple sources of information, a tension emerged between formal, professional advice from healthcare practitioners (HCPs) and informal advice from peers or online sources.

4-2. Trust in professionals vs. influence of peer

Although women often emphasized the reliability of midwives and lactation consultants:

“I think they’d [other breastfeeding women] trust their midwife’s opinion too...”(22). They also described learning passively from peers, often without seeking clarification from professionals:

“Just hanging out with other moms, hearing without asking... and getting ideas”(23). This suggests a possible conflict where peer influence might override professional advice, especially when shared casually or through lived experience.

4- 3. Qualified information sources

Some participants praised HCPs for their practical and customized support:

“The lactation consultant showed me how to use the machine... to mimic the babies’ let down”(23).

Others valued professionals who first acknowledged their prior knowledge: “She first asked me what I knew about breastfeeding...”(22).

However, when this personalization was lacking, women might have sought simpler or more relatable advice from friends or the internet, despite its varying accuracy: “I just Googled basically”(23).

Despite hospitals providing written information, some mothers overlooked it or found it secondary:

"I did get a good booklet from the hospital... And it did say breast milk can be stored..."(17). This contrasts with the immediacy and accessibility of peer-shared knowledge, pointing to a disconnect between professionally curated resources and what mothers engage with.⁴

4-4. Connection with other mothers (peers)

Sharing experiences and knowledge with other mothers helped participants connect and better understand breastfeeding. The support from female relatives and male partners also played a significant role in shaping their breastfeeding experiences. Healthcare professionals, especially public health nurses, provided essential encouragement, with one mother recalling, "One thing they [public health nurses] kept telling me, 'It will get better'" (22).

Several mothers offered advice to healthcare providers on how to better support breastfeeding. In summary, anticipatory guidance during pregnancy and early postpartum was crucial in helping mothers successfully navigate breastfeeding.

In summary, anticipatory guidance during the prenatal phase and early postpartum support appear essential to successful breastfeeding outcomes.

Discussion

The meta-synthesis of ten qualitative studies revealed that informational support emerged as a consistent finding in all studies of women's breastfeeding experiences. However, methodological differences—such as variations in study design, data collection methods, and cultural contexts—may have influenced how informational support was perceived, evaluated, or delivered across studies. The researchers concluded that women require informational support to successfully breastfeed. Various studies also highlighted the importance of informational support when assisting mothers with breastfeeding (17, 20, 26, 34-37). Informational support was identified as a supporting subcategory in the grounded theory developed by Nelson and Sethi (2005) regarding the breastfeeding experiences of adolescents (26). Another study from the UK outlined

reasons why women do not breastfeed, such as a lack of postnatal care and training support, emphasizing the importance of breastfeeding education (38).

The present study reported that breastfeeding mothers have informational support needs related to breastfeeding information, communication methods, and genuine breastfeeding behavior. Most mothers are likely to have an understanding of topics including the benefits of breastfeeding, common breastfeeding difficulties, milk expression and storage, breastfeeding continuation, milk supply, baby behavior, health-related information in breastfeeding, safety when taking medicines while breastfeeding, and the mother's nutritional needs. According to other literature, the benefits of breastfeeding are important to mothers (18, 35, 39). Studies indicate that mothers want to be informed about how to express breast milk, collect and store expressed milk, and maintain milk supply (18, 40).

Qualitative research has highlighted that some women report being unprepared when encountering common breastfeeding difficulties, such as sore nipples and pain, which can be a concern and barrier to continuing breastfeeding (41-42).

Other studies report that mothers' misunderstanding of their newborn's behavior can influence their decisions to supplement their breastfeeding (20, 39, 43). Additionally, mothers mentioned that illness and medical conditions influenced their decision to breastfeed (41).

The results of this study align with findings reported by Felice et al. (2017), which indicates that mothers sought practical advice on taking medication while breastfeeding (44).

The present study found that providing effective strategies for information delivery was an aspect of the informational support needs of breastfeeding mothers, which included tailored and personalized information, verbal information, and visual information. In this context, women valued individualized informational support and material about breastfeeding written specifically for them. Providing helpful advice, directions, suggestions, feedback, and access to a lactation consultant were identified as crucial in this category of

informational support. To improve informational support, blended education (verbal plus video) and digital health tools (e.g., apps and online platforms) offer personalized, accessible, and consistent guidance, enhancing mothers' understanding, confidence, and breastfeeding outcomes. Literature supports these informational needs as influential in facilitating women's decision to initiate and sustain breastfeeding (20, 32, 39, 43).

Providing information on genuine breastfeeding behavior was also important to participants. Women expressed learning needs, including breastfeeding positions and adapting to breastfeeding and weaning. Learning to breastfeed was a significant stage in mothers' breastfeeding experiences. They desired informational support from healthcare providers to help them correctly position and latch their newborns (20, 32, 39). However, variability in healthcare providers' competency and training often posed a barrier, leading to inconsistencies in the quality of care and support received. This inconsistency is frequently cited in the literature as a factor that can undermine mothers' breastfeeding confidence and success.

Some studies have shown that many mothers experienced stress and difficulty coping with breastfeeding. They requested training to receive more information about coping with breastfeeding and psychological adjustment during this period (41, 45). To address this need, the integration of peer support groups and referrals to professional counseling services may offer effective avenues for emotional support and improved adaptation.

Similar to our findings, in study by Nelson and Sethi (2005), mothers mentioned a lack of information from health professionals about the weaning process and the need for helpful information in this regard (26).

It seems that women used a variety of sources for information, such as healthcare providers, peers, family, and friends. Health professionals were considered the most important source of information. This is consistent with other studies, which also highlight the importance of support from social network individuals, including partners, family, and health staff, in helping mothers make

decisions about breastfeeding (32, 39, 46, 47). Women emphasized their preference for trusted and qualified information resources. Another study emphasized the importance of trained personnel and quality education in influencing breastfeeding rates and population health (48). Other researchers found that mothers desired up-to-date, accurate, and consistent breastfeeding information from healthcare providers, and that conflicting information was a common source of frustration. (17, 35, 39).

This research has several limitations. The number of the included studies were small, mostly from high-income countries so that a limited number of articles were reviewed. A gap was identified in the primary studies, with emotional support and in-depth discussions being underexplored, highlighting the need for further research. Methodological flaws, such as the use of purposive sampling and small, context-bound samples, may limit the transferability of the findings. These factors should be considered when interpreting the conclusions. Future studies should use high-quality designs to better understand the informational needs of breastfeeding women, especially in developing countries. However, the research may be affected by publication bias and language bias, as only English and Persian studies were included. Selection bias during screening cannot be entirely ruled out, and acknowledging these limitations is crucial for improving the transparency and rigor of the review. Despite these limitations, the study has unique strengths. It is one of the first review studies to analyze the informational needs of breastfeeding mothers to guide clinical practice. The use of rigorous inclusion criteria increases the credibility and reliability of the findings.

Conclusion

The study emphasizes the importance of addressing informational needs to support breastfeeding mothers. It recommends providing adequate information to boost mothers' confidence and motivation to breastfeed. Healthcare professionals, including doctors, nurses, and lactation consultants, should raise awareness about the value of meeting these needs, involving family and support networks. Public health practitioners should tailor personalized information to

increase breastfeeding initiation and continuation. Policymakers can use these insights to improve strategies and programs for supporting breastfeeding mothers. Future research should explore these needs in diverse populations and assess the effectiveness of interventions designed to meet them.

Declarations

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Conflicts of interest

Authors declared no conflicts of interest.

Ethical considerations

This study is a qualitative meta-synthesis based on previously published studies. No new human data were collected and therefore no additional ethics approval was required. Principles of research and publication ethics were observed throughout the review process.

Code of Ethics

To comply with ethical standards in research, ethical approval was obtained from the Local Research Ethics Committee of Mashhad University of Medical Sciences, Mashhad, Iran (Ethics Code: IR.MUMS.REC1402.072).

Use of Artificial Intelligence (AI)

No artificial intelligence tools were used in the designing, analysis, or writing of this manuscript.

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Authors' contribution

MB and RB initiated the concept for the paper and searched the related publications. All authors (MB, RB, SM, NS, KMN) have substantially contributed to the design, data extraction, analysis, and appraisal of the quality of these articles. The article was drafted by MB, and all authors (MB, RB, SM, NS, KMN) revised it critically for important intellectual content.

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