

Breastfeeding Mothers' Informational Support Needs: A Qualitative Study in Iran

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Abstract

Background: Breastfeeding is a health promotion priority due to its implications for both maternal and infant health in the short and long term. However, breastfeeding rates have been steadily declining globally. Therefore, protecting, promoting, and supporting breastfeeding are recognized as public health priorities. Accordingly, this study aimed to explore the informational support needs of breastfeeding mothers.

Methods: This qualitative study was performed from March 2018 to April 2021 in five health centers and four hospitals affiliated with Mashhad University of Medical Sciences in Iran. Data were collected through individual semi-structured in-depth interviews with 25 breastfeeding mothers, 2 family members, and 9 healthcare providers. Data were analyzed using directed content analysis based on the approach proposed by Elo and Kyngas via MAXQDA 2010 software.

Results: Data analysis led to the identification of *informational and educational services* as the primary category with four subcategories including *the need for instruction on proper breastfeeding behavior, the need for breastfeeding information, the need for information on maternal-related issues, and the need for information on infant-related issues*.

Conclusion: Breastfeeding mothers require informational support to sustain breastfeeding. Significant others, such as healthcare providers, family members, and peers, play an important role in fulfilling breastfeeding mothers' informational support needs.

Keywords: Breastfeeding mothers, Qualitative research, Social support, Informational Support, Need Assessment

Citation: Maleki N, Mirzaei K. Breastfeeding mothers' informational support needs: a qualitative study in Iran. *J Qual Res Health Sci*. 2025;14:1412. doi:10.34172/jqr.1412

Received: March 20, 2024, **Accepted:** September 22, 2024, **ePublished:** March 11, 2025

Introduction

Breastfeeding is a health promotion priority because of its implications for maternal and infant health in the short and long term (1). Recognizing the benefits of breastfeeding, international and regional health organizations actively promote the initiation and continuation of breastfeeding practices (2-5). While the American Academy of Pediatrics has designated breast milk as the gold standard for the nutrition of newborns and healthy infants, and the World Health Organization (WHO) recommends exclusive breastfeeding for all infants during the first six months of life, exclusive breastfeeding rates remain persistently low. For babies in the Eastern Mediterranean region, America, Australia, and Iran, exclusive breastfeeding rates within the first six months have been reported at 36%, 16%, 10%, and 28%, respectively (6).

The initiation and continuation of breastfeeding are affected by a variety of factors, including maternal demographic and psychological characteristics, as well as cultural and social factors such as breastfeeding social support (7-12). Social support involves a reciprocal

exchange of resources or activities between at least two individuals, aimed at improving the health and wellbeing of the recipient. Support can be provided by both formal sources (healthcare providers) and informal sources (friends, family) (13-15).

House categorized social support into four types including emotional, informational, instrumental, and appraisal support (16). Qualitative studies suggest that satisfaction with and perception of breastfeeding support interactions are crucial determinants of maternal wellbeing (17-20). Several domestic and foreign studies have shown that supporting mothers significantly increases the possibility of exclusive breastfeeding (21-26). Besides, a systematic review indicated that all types of support, particularly informational support provided by healthcare providers, increase the chance of initiation and continuation of breastfeeding (27).

Healthcare providers play a vital role in caring for and educating breastfeeding mothers and identifying their informational needs (28). Moreover, Barona-Vilar et al emphasized that breastfeeding is a culturally embedded



practice, influenced by traditions and messages from previous generations and family members (29). It is important to acknowledge that support is a subjective concept, affected by individual understanding and experiences, and varies significantly across different sociocultural contexts.

Furthermore, it is important to understand the experiences and informational support needs of mothers within their unique contexts for improving the quality of breastfeeding care. Most of the studies on breastfeeding support have used quantitative methodologies, which may limit the identification of comprehensive supporting factors involved in breastfeeding in the sociocultural context of the given region. While quantitative studies are valuable for explaining cause-effect relationships, particularly in intervention studies, qualitative research can generate rich data by providing a deeper understanding of phenomena in normal conditions, revealing “why” and “how” these phenomena occur (30). Given the low rates of exclusive breastfeeding in the first six months in Iran and globally, and the lack of qualitative studies specifically examining the concept of informational support needs in breastfeeding from the perspective of Iranian women, it is necessary to reconsider and reevaluate our current understanding of breastfeeding informational support needs from the viewpoint of Iranian women. Therefore, this qualitative study was conducted to identify the informational support needs of breastfeeding mothers in Mashhad, Iran, to comprehensively understand their informational needs and be able to provide appropriate support to increase exclusive breastfeeding rates.

Methods

This qualitative study used a directed content analysis approach and was conducted at five health centers and four hospitals affiliated with Mashhad University of Medical Sciences in Mashhad, Iran from March 2018 to April 2021. Participants included 25 breastfeeding mothers, 2 family members, and 9 healthcare providers, who were selected using purposive maximum variation sampling in terms of socio-demographic characteristics. The inclusion criteria for the study included volunteering to participate, willingness to be interviewed, fluency in the Persian language, residing in Mashhad, having a full-term infant, and the absence of any significant diseases in both the mother and the infant. The exclusion criterion was the unwillingness of breastfeeding mothers to participate in the study.

This study received ethical approval from the Medical Ethics Committee of Mashhad University of Medical Sciences (IR. MUMS. REC.1396.124). All breastfeeding mothers were informed about the voluntary nature of participation, their right to withdraw from the study at any time, and the assurance of anonymity and confidentiality of all their information. No participants withdrew from

the study.

Data were collected through semi-structured interviews conducted by the first author (NM) at a time and place convenient for the participants to gain insight into breastfeeding mother's perceptions and experiences. Before each interview, the researcher introduced herself, explained the objectives of the study, and obtained informed consent to audio-record the interview. Interviews began with general questions about breastfeeding experiences and then proceeded to explore participants' informational support needs during this period. Subsequent questions were tailored to individual participant responses. The main interview questions included, “*Could you please talk about your breastfeeding experiences?*”, “*Based on your experiences as a breastfeeding mother, what informational support did you need during this period? Who helped you meet your informational support needs, and how?*”, and “*What types of informational support in this period decreased your stress and increased your knowledge?*”. Probing questions such as “*Could you please elaborate on that?*” were asked to elicit further information. The mean interview duration was 40 minutes (range: 25-140 minutes). Data collection continued until data saturation was achieved. All interviews were audio-recorded, transcribed verbatim, and subsequently analyzed.

Data were analyzed using the directed content analysis approach proposed by Elo and Kyngas via MAXQDA software (version 2010) (31). The trustworthiness and rigor of the data were ensured by adhering to the criteria established by Guba and Lincoln (32,33).

Results

The socio-demographic data of the 36 participants who took part in this study are shown in Table 1.

As a result of the content analysis, *informational and educational services* emerged as the main category, with four subcategories including *the need for instruction on proper breastfeeding behavior*, *the need for breastfeeding information*, *the need for information on maternal-related issues*, and *the need for information on infant-related issues* (see Table 2).

The need for instruction on proper breastfeeding behavior

One of the primary informational support needs of mothers was the instruction on correct breastfeeding behavior. In this regard, emphasis was placed on educating mothers about proper breastfeeding techniques, exclusive breastfeeding, weaning practices, and breastfeeding hygiene. A health expert noted, “*There is a problem; now most of our mothers have nipple soreness... Why? Because they don't know how to breastfeed properly*” (Participant 27, 45 y/o). Another participant said, “*I needed to be told how to breastfeed... I needed someone to tell me, 'Sit down and breastfeed your baby!'*...” (Participant 30, 29 years

Table 1. Demographic characteristics of participants

Participant	Job	Age (year)	Education	Infant's Age (month)	Infant's Gender	Birth order	Delivery method
1	Housewife	32	Bachelor's degree	2	Girl	1	NVD
2	Housewife	31	Diploma	4	Boy	1	C.S
3	Housewife	34	Diploma	6	Boy	1	C.S
4	Health provider (midwife)	47	Bachelor's degree	-	-	-	-
5	Accountant	35	Bachelor's degree	1	Boy	2	NVD
6	Faculty Member	42	Master's degree	21	Boy	2	C.S
7	Housewife	35	Bachelor's degree	15	Boy	1	NVD
8	Housewife	30	Diploma	10	Girl	1	C.S
9	Employee	27	Bachelor's degree	8	Boy	1	NVD
10	Health provider (Family Health Specialist)	45	Bachelor's degree	-	-	-	-
11	Housewife	25	Elementary school	1	Boy	2	C.S
12	Housewife	28	Elementary school	1	Boy	2	NVD
13	Employee	35	Bachelor's degree	5	Boy	1	NVD
14	Health provider (Family Health Specialist)	37	Master's degree	-	-	-	-
15	Housewife	33	Bachelor's degree	6	Boy	1	C.S
16	Housewife	30	Diploma	1	Boy	2	NVD
17	Housewife	27	Diploma	8	Girl	1	NVD
18	Housewife	37	Elementary school	2	Boy	3	NVD
19	Health provider (midwife)	34	Bachelor's degree	-	-	-	-
20	Housewife	26	Diploma	23	Girl	1	NVD
21	Health provider (breastfeeding consultant)	40	PhD	-	-	-	-
22	Worker	35	Bachelor's degree	6	Girl	1	NVD
23	Student	39	PhD	24	Boy	1	NVD
24	Student	35	Master's degree	21	Boy	1	NVD
25	Health provider (breastfeeding expert)	35	Master's degree	-	-	-	-
26	Pediatrician	40	Professional doctorate	-	-	-	-
27	Health provider (breastfeeding expert)	45	Bachelor's degree	-	-	-	-
28	Teacher	34	Bachelor's degree	5	Girl	2	NVD
29	Pediatrician	45	Professional doctorate	-	-	-	-
30	Housewife	29	Diploma	1	Girl	1	NVD
31	Housewife	34	Diploma	1	Boy	3	C.S
32	Housewife (grandmother)	66	Elementary school	-	-	-	-
33	Teacher	40	PhD	21	Boy	1	NVD
34	Employee	37	Diploma	1	Boy	3	C.S
35	Housewife	27	Diploma	3	Girl	3	NVD
36	environmental health engineer (husband)	37	Master's degree	-	-	-	-

old).

Breastfeeding experts highlighted the lack of or inadequate training on exclusive breastfeeding at health centers, viewing this as a critical educational deficiency for mothers and their families. One participant stated, *"Health providers don't give special training and information about exclusive breastfeeding in health centers... They should tell mothers that if the baby's weight is good, they shouldn't give anything else until six months... just breastfeed... Under one year, the priority is mother's milk and things like that"* (Participant 21, years old).

Participants reported that mothers' knowledge about health issues related to breastfeeding, such as hand hygiene before and after breastfeeding and breast hygiene, was low due to inadequate training at health centers. Therefore, they considered informing mothers about breastfeeding health as both a need and a necessity. A health expert emphasized, *"Mothers are not aware of many hygiene tips during breastfeeding because they are not given training.... Hygiene issues such as washing hands before breastfeeding, daily bathing, and the need to wash nipples before breastfeeding should be taught..."* (Participant 27, 45

Table 2. Main category and sub-categories

Main Category	Sub-Categories
Informational and educational services	The need for instruction on proper breastfeeding behavior
	The need for breastfeeding information
	The need for information on maternal-related issues
	The need for information on infant-related issues

years old).

Another aspect of breastfeeding behavior mentioned by many mothers was the lack of training on correct weaning methods. Instead, they often relied on recommendations from close others, peers, or social networks, which can be inaccurate and unprincipled, resulting in complications such as pain, swelling, and adverse psychological distress for both mothers and their babies.

The need for breastfeeding information

Participants also identified a pressing need for information on various topics, including medication use, the benefits of breast milk, the feasibility of breastfeeding, how to express and store milk, and breastfeeding quantity and quality.

Most mothers admitted they lacked adequate information about medication use while breastfeeding and its possible side effects, which caused confusion, anxiety, and concern. They emphasized that health centers or health professionals should be aware of the mothers' conditions when prescribing medications to reduce their stress and provide sufficient information about potential side effects. One participant stated, *"I need information about taking medicines when I'm sick.... What medicines I can take or not take.... I need to know this"* (Participant 11, 25 years old).

Healthcare providers noted that most mothers are not aware of the benefits of breastfeeding, which are crucial for mothers, their spouses, and families. For mothers, understanding these benefits can enhance their self-esteem and motivation to breastfeed, and for families, it strengthens support for mothers. Therefore, it is necessary for health centers, healthcare professionals, and experts to inform mothers. A health expert remarked, *"All breastfeeding mothers need to know the benefits of breastfeeding...how beneficial it is for them, their infants, and even their families and society"* (Participant 26, 40 years old).

The need for information about the feasibility of breastfeeding was another informational support need. Participants expressed confusion and anxiety regarding breastfeeding in certain situations such as pregnancy while breastfeeding and fasting. They also felt uninformed about maternal and infant illnesses during breastfeeding. A health expert pointed out, *"Lack of information about contraindications of breastfeeding related to the mother and infant is an issue mothers need to understand because their*

level of knowledge in these areas is very low" (Participant 10, 45 years old).

Some participants indicated that breastfeeding mothers, particularly working mothers, do not know how to express milk by hand or pump and how to store breast milk. They stressed that health centers should provide mothers with sufficient information regarding pumping and storing breast milk. In this regard, mothers need to be educated on the correct temperature and storage duration for breast milk outdoors, in the refrigerator, and in the freezer, as well as the appropriate containers for storing milk and how to thaw frozen milk.

Participants also highlighted the need for information about the quantity and quality of breastfeeding. Most of the mothers were not aware of the factors that affect milk volume, such as what causes a decrease or an increase in milk production. They also lacked sufficient information about breastfeeding at night and the necessity of breastfeeding based on the child's desire. One participant stated, *"I need to know what causes my milk to decrease or increase... How often should we breastfeed? How should I breastfeed at night? How should I adjust my breastfeeding? How many hours should I breastfeed the baby?"* (Participant 3, 34 years old).

A common concern among mothers was the feeling of insufficient milk, which led to decreased self-esteem and increased anxiety about continuing breastfeeding. This perception of inadequate milk is often incorrect and due to a lack of knowledge and information. Therefore, it is essential to provide mothers with this essential information. One participant expressed, *"I didn't understand; I didn't know if my milk was enough or not... I only found out that if the baby's weight was normal, that meant my milk was enough... Well! Health centers should explain the signs of milk sufficiency..."* (Participant 8, 30 years old).

The need for information on maternal-related issues

Participants identified several informational support needs related to the mother, which can be categorized into four areas, including nutrition during breastfeeding, family planning education, physical and mental health during breastfeeding, and common breastfeeding difficulties.

Nutrition while breastfeeding was highlighted as a critical topic where many mothers often lack sufficient information. For example, nutrition tips and foods that increase breast milk production were significant concerns. Furthermore, some breastfeeding mothers were not aware that dieting during breastfeeding is prohibited, underscoring the necessity of explaining special nutrition during breastfeeding in health centers, for both mothers and their husbands. One participant stated, *"I need to know what to eat and what not to eat to breastfeed my baby well. I don't know anything! I haven't received any*

training... I even think that men should be taught about their wives' nutrition" (Participant 30, 29 years old).

The fear of becoming pregnant and questions about contraceptive methods during breastfeeding were also common concerns among mothers. In addition, many believed that they had insufficient and inaccurate information about family planning, emphasizing the need for education on suitable contraceptive methods during breastfeeding. One participant remarked, "They should teach us about contraceptives because it is sometimes questionable... I don't take any pills... I need to be educated... I'm afraid of becoming pregnant again" (Participant 12, 28 years old).

The need for information about physical and mental health during breastfeeding was identified as a significant informational gap because most mothers were not aware of the role that their physical and mental health plays in successful breastfeeding. Besides, they lacked knowledge about the beneficial or harmful effects of exercise on breastfeeding. A health expert mentioned, "We inform mothers to be physically active as long as they don't become too tired.... Most mothers are not aware of the role of physical and mental health in successful breastfeeding, and they need information in all these areas" (Participant 10, 45 years old).

Another key informational support need emphasized by most participants was receiving information about common breastfeeding difficulties. Participants expressed a need for information on nipple disorders, as well as the causes and symptoms of mastitis, abscess, and mastalgia. Nipple soreness was one of the most common issues faced by mothers, which, according to the experiences of health experts, was often caused by incorrect breastfeeding techniques. While most mothers experienced nipple soreness during breastfeeding, they did not know its causes, treatment options, and healing methods. They also needed to have sufficient information about disorders related to nipple size, including large or inverted nipples, which can hinder successful breastfeeding. Most mothers said they needed information on breast problems such as mastitis (breast inflammation), abscesses, and breast pain, as they did not know the causes and symptoms of these conditions. One of the participants said, "Once I had mastalgia, fever, and shivering. What a fever!!... My breast was tense and I didn't know what it was.... I became depressed and cried... I didn't know what to do. I thought it was due to my C-section wounds until I went to the doctor and he told me about mastitis" (Participant 20, 26 years old).

The need for information on infant-related issues

Mothers expressed concern about various infant symptoms while breastfeeding, including colic, oral thrush, jaundice, crying, and restlessness. It is essential for health centers to provide mothers with enough information about these

issues to alleviate stress and confusion, as such anxiety can hinder the continuation of breastfeeding. One participant explained, "Sometimes my baby cried a lot... I didn't know what to do... I kept asking myself, what's wrong, or is he not eating... I got confused... I didn't know if this was normal or not. It would be helpful to receive information about the causes of these issues in health centers or hospitals" (Participant 20, 26 years old)". Another participant remarked, "Well! There are many things that breastfeeding mothers, especially first-time mothers, do not know and need to be educated about... jaundice, colic, and oral thrush and their causes and treatment methods.....they should be aware of what to do during those times" (Participant 27, 45 years old).

Furthermore, mothers need to be informed about the role of breastfeeding in the physical and psychological growth and development of infants. A health expert stated, "Mothers do not know enough about the role of breastfeeding in the physical and psychological growth and development of infants, and it is necessary to educate them" (participant 25, 35 years old). Some mothers also experienced challenges with their babies refusing to suckle, and a lack of understanding about the causes of this issue and how to address it led to confusion and stress.

Discussion

Based on the experiences and perceptions of the participants, *informational and educational services* emerged as significant support needs for mothers, including *the need for instruction on proper breastfeeding behavior, the need for breastfeeding information, the need for information on maternal-related issues, and the need for information on infant-related issues.*

One of the primary informational support needs of mothers was instruction on correct breastfeeding behavior, which included appropriate breastfeeding techniques, exclusive breastfeeding, and breastfeeding hygiene. According to healthcare providers, most mothers breastfeed incorrectly, which leads to problems such as sore nipples. Moreover, mothers were dissatisfied with the lack of instruction on proper breastfeeding techniques at health centers, highlighting the need for more education. Breastfeeding experts also noted the lack of training on exclusive breastfeeding in health centers, identifying it as a critical educational need for mothers and their families. This finding aligns with the results of a study by Yilmaz et al., which indicated that the lack of training on proper breastfeeding techniques during pregnancy contributed to the early termination of breastfeeding (34). Furthermore, the study by Allahgholi et al found mothers with higher knowledge levels experienced better infant growth and weight gain due to the regular and appropriate breastfeeding technique (35). Kohan et al emphasized that training on appropriate breastfeeding techniques and exclusive feeding significantly enhances mothers' skills

and success in breastfeeding (36).

Participants highlighted the need for information on various breastfeeding-related topics, such as medication use while breastfeeding, the benefits of breast milk, the feasibility of breastfeeding, pumping and storing breast milk, and the quantity and quality of breastfeeding. The literature shows that many mothers lack adequate knowledge about breastfeeding and associated issues, including milk adequacy, medication consumption, milk expressing, and infant behaviors, leading to stress and reduced ability to continue breastfeeding (37-39). A study by Shahbazi-Sigaladeh et al. reported that maternal knowledge about signs of breast milk adequacy was low, which may significantly contribute to breastfeeding failure (40).

Information about maternal-related issues during breastfeeding was identified as a crucial informational support need of mothers, focusing on nutrition during lactation, family planning education, and the impact of physical and mental health on breastfeeding. Existing literature indicates insufficient knowledge about dietary intake during breastfeeding, with many mothers having little information about proper nutrition, which consequently causes stress and reduces their ability to continue breastfeeding (37-39). Jafari et al. noted that while mothers often use oral contraceptive pills during breastfeeding, they are unaware of the side effects or alternative contraceptive options available for this period, emphasizing the necessity for education in this context (41).

The effect of physical and mental health on breastfeeding was identified as another informational need. Supporting this, a study by Jenaabadi and Jafarpour found that successful breastfeeding depends not only on physiological factors but also on the psychological and social conditions of mothers. They recommend that healthcare providers pay attention to the role of psychological counseling and educational services in reducing mothers' stress levels (42).

Addressing common breastfeeding problems was another informational need of breastfeeding mothers. Consistent with this finding, McLelland et al. suggested that educating mothers about common breastfeeding challenges and their management would promote breastfeeding continuity and highlight the importance of this issue to mothers (43). In line with the present study, Niazi et al. found that breast problems cause pain and stress to mothers, reducing their self-efficacy and confidence to continue breastfeeding, hence highlighting the need for adequate information about the symptoms and treatments of these complications (44).

The need for information about infant-related issues was also taken into account. Mothers reported a lack of knowledge about infant ailments (e.g., colic, oral thrush, jaundice, crying, and restlessness), the implications of an

infant's refusal to suckle, and the role of breastfeeding in the physical and psychological growth and development of infants. This lack of knowledge contributed to confusion and stress. Furthermore, the literature indicates insufficient knowledge about various aspects of breastfeeding, such as infant ailments and the role of breastfeeding in infant growth and development. This gap can also hinder breastfeeding continuation (37-39).

One significant challenge that nursing mothers faced was weaning. Most reported that health centers did not provide adequate training on weaning methods, leading them to rely on peer recommendations, which are often incorrect. Other studies have noted this pressing need among mothers as well (45-48).

This qualitative study has several major strengths. It contributed new knowledge about the informational support needs of breastfeeding mothers within the sociocultural context of Iran. Moreover, the study used qualitative methods to gather rich, in-depth individual experiences of breastfeeding mothers. In addition, the involvement of healthcare providers and family members added depth to the findings.

As with most qualitative studies, a limitation of this study is its generalizability. The subjective nature of research methods used during both data collection and data analysis may have influenced the results through the researcher's personal biases. Therefore, further research in diverse areas and cultural contexts is required to gain a deeper insight into the subject under study.

Conclusion

This study contributed to an understanding of the informational support needs of breastfeeding mothers organized into four subcategories including *the need for instruction on proper breastfeeding behavior*, *the need for breastfeeding information*, *the need for information on maternal-related issues*, and *the need for information on infant-related issues*. Significant others, i.e. healthcare providers, family members, and peers, play a crucial role in fulfilling these needs. Furthermore, it is essential for health policymakers to recognize these informational support needs to implement effective informational and educational services that can improve the support available to breastfeeding mothers and reduce rates of breastfeeding cessation.

Acknowledgments

The authors would like to express their gratitude to the Deputy for Research for their financial support and extend appreciation to all the participants who contributed to this study by sharing their experiences.

Authors' Contribution

Conceptualization: Nahid Maleki, Khadijeh Mirzaei.

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Competing Interests

The authors declared no conflict of interest.

Ethical Approval

This study was approved by Mashhad University of Medical Sciences under ethical approval No. IR.MUMS.REC.1396.124.

Funding

This study was part of a PhD dissertation in reproductive health, financially supported by Mashhad University of Medical Sciences with grant no. 951682.

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