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Instrumental Support Needs of Breastfeeding Mothers: A Qualitative Study in Iran

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ABSTRACT

Background & aim: Breastfeeding is an important strategy to ensure health promotion and wellbeing. Breastfeeding rates have consistently decreased around the world, and therefore protection, promotion, and support of breastfeeding is considered as one of public health priorities. This study aimed to explore breastfeeding mothers' perceptions and experiences of instrumental support needs.

Methods: This study was performed between March 2019 and April 2021, in five health centers and four hospitals affiliated to Mashhad University of Medical Sciences. Participants were 23 breastfeeding mothers, two family members, and 11 healthcare providers, who were selected using a purposive sampling method and attended in individual semi-structured in-depth interviews. Data were analyzed using directed content analysis based on the Elo and Kyngas approach, with MAXQDA software (version 2010).

Results: Five categories of mothers' instrumental support needs emerged: 'facilitating maternal roles', 'supplying necessary items', 'providing welfare services', 'cultural services' and 'healthcare services'.

Conclusion: Breastfeeding mothers need various forms of instrumental support to facilitate and sustain breastfeeding. . Significant others, such as the husband, family members, health providers, and broader social and institutional systems play an important role in addressing these needs.

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Introduction

Breastfeeding is an important strategy to ensure health promotion and wellbeing (1). Breastfeeding provides some short- and long-term health benefits for both the mother and infant (2-3). The WHO and UNICEF jointly recommend exclusive breastfeeding for the first 6 months and its continuation up to at least 2 years of age (4). Scientific evidence from several studies has also highlighted the importance of breastfeeding (2-3, 5-8). However, the methods of nutrition for infants are not favorable, and breastfeeding rates have consistently decreased around the world (5). The level of exclusive breastfeeding in the six-month period in America, Australia, the Eastern Mediterranean region, Iran, and other parts of the world has been reported to be 16%, 36%, 10%, 28%, and 37%, respectively (9). Breastfeeding initiation and its sustainability are affected by various issues like the mother's demographic and psychological factors as well as cultural and social factors like breastfeeding social support, etc. (7, 10-14). House (1981) categorized the concept of social support into four types of

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behavior: emotional, informational, instrumental, and appraisal support. Instrumental support includes any practical and tangible support, containing financial aid, services, task division, and equipment (15, 16). If mothers can recognize, understand, and communicate their needs to other people in their social network, they will probably achieve successful breastfeeding (17), but then again mothers experience breastfeeding as a challenging and demanding behavior (5); they face a range of difficulties and stressors in this period (8).

Social support has a buffering and health-benefit effect during stressful events such as breastfeeding and helps a person adjust to a new situation (10). Based on social and behavioral inquiries, it has an integral role in the initiation and continuation of breastfeeding (11, 14, 18-19).

Although most breastfeeding studies have used quantitative approaches, a limited number of qualitative studies have explored breastfeeding-related social support in different contexts, including Iran, England, and the United States (20-22). Previous qualitative research has addressed different dimensions of social support, including emotional, informational, instrumental, and appraisal support. For example, a qualitative study in Iran specifically explored breastfeeding mothers' emotional support needs (20), whereas a study in England identified emotional, esteem, instrumental, informational, and network support needs among adolescent breastfeeding mothers (21). More recently, a qualitative study in the United States explored emotional, instrumental, informational, and appraisal support among breastfeeding mothers (22). However, instrumental support has generally been examined as one component of broader social support rather than as the primary focus of inquiry. Thus, limited qualitative evidence exists regarding breastfeeding mothers' specific instrumental support needs, including the types of practical assistance they require, the sources of such support, and how these needs are experienced within their sociocultural context. Similarly, most of the studies conducted in Iran on this subject have employed quantitative methods (23), hence a dearth of qualitative research. Since there has been a paucity of information on breastfeeding mothers regarding social support needs, especially instrumental support needs in Iran, it is crucial to address such needs so that appropriate support programs can be designed during this period. This qualitative study aimed to explore the instrumental support needs of breastfeeding mothers who were living in Mashhad, Iran, to gain an in-depth understanding of these needs and inform the development of appropriate support interventions to promote and sustain exclusive breastfeeding. So that their instrumental support needs are deeply understood and therefore proper support is provided for increasing the level of exclusive breastfeeding.

Materials and Methods

This study used a qualitative method with directed content analysis approach. The study was conducted at five health centers and four hospitals affiliated to Mashhad University of Medical Sciences and medical clinics in Mashhad, Iran, between March 2019 and April 2021. Participants in this study were 23 breastfeeding mothers, two family members, and 11 healthcare providers, who were selected using a purposive sampling method using maximum variation strategy. The maximum variation in sampling was reflected in terms of socio-demographic level including age, education and job. The inclusion criteria for breastfeeding mothers were willingness to participate, speaking Persian, living in Mashhad, having a term infant (37–41 weeks of gestation), and having no maternal or infant medical conditions that could directly affect breastfeeding or substantially alter the mothers' support needs. These conditions included severe maternal physical or mental illness and infant conditions such as major congenital anomalies, serious neonatal illness, or other conditions requiring specialized medical care.Breastfeeding mothers who showed no willingness to go on participation in the study were excluded. For healthcare providers, the inclusion criteria were having professional experience in maternal and child, working in healthcare centers or maternity-related settings in Mashhad, having direct experience providing

care or counseling to breastfeeding mothers, and being willing to participate in the study.

Data were collected using semi-structured interviews at a time and place appropriate for the participants to gain an insight into breastfeeding mothers' perceptions and experiences. Before the interview, the researcher introduced herself and explained the objectives of the study and obtained informed consent to record interviews with a recorder. The interview began with general questions and proceeded to ask the participants to explain their experiences of breastfeeding. Subsequent questions were based on the participants' responses and the social support conceptualization by House (1981) (15). The main questions were:

Would you talk about your breastfeeding experiences?

What kinds of practical or tangible support did you need during the breastfeeding period?? Who helped you to meet your support needs during the breastfeeding period and how?

What kinds of actions in this period decreased your stress and made you feel more comfortable?

What types of healthcare services did you need?

Probing questions such as "Could you tell me more about that, please?" were asked to find additional data. The mean duration of each interview was 40 minutes (range: 25-140). Data saturation was reached by the 25th interview.

The research team considered how their professional backgrounds and prior experience in qualitative research might have influenced data collection and interpretation. The corresponding author (NM) conducted and transcribed the interviews and performed the initial coding under the supervision of the supervisors. As the corresponding author had a prior professional relationship with some participants, ongoing reflection was maintained regarding potential influences on participants' responses and their interpretation. The emerging codes and interpretations were discussed with the supervisors to enhance reflexivity and reach consensus.

Qualitative data were analyzed using content analysis following the approach of Elo and Kyngäs (2008) (24), with MAXQDA software (version 2010). This approach has three main stages: preparation, organization, and reporting. In the preparation stage, the first author (NMS) listened to the recorded interviews, and then all interviews were transcribed verbatim. In the second stage, the transcriptions were read line by line, and important words, sentences, or paragraphs were underlined and labeled as codes based on a categorization matrix; then data grouping, categorization, and abstraction were performed. In the final stage, researchers reported the analysis process and the discoveries (24).

Given the presence of an established theoretical framework relevant to the research question, we adopted a directed approach to content analysis, whereby the existing theoretical concepts served as the basis for the initial coding framework. Specifically, House's Social Support theory (House, 1981) was used as the theoretical framework for guiding the analysis. House conceptualizes social support in terms of four functional dimensions: emotional support, informational support, instrumental support, and appraisal support (15).

Thus, House's framework guided the conceptual focus of the analysis, while Elo and Kyngäs (2008) guided the analytical process. This approach was considered appropriate because the aim of the study was to examine experiences of instrumental support needs within breastfeeding mothers' using an established conceptual framework, rather than to develop a new theoretical model from the data. Accordingly, the framework provided a systematic and theoretically grounded basis for coding and interpreting the findings (24).

Guba and Lincoln's criteria were utilized to ensure the trustworthiness and rigor of the data. To establish credibility, long-term involvement and continuous observation by the researcher, review of transcriptions by 12 members of participants and maximum variation in the sampling were put into operation. Some external reviewers (reproductive health experts) were requested to ensure the dependability of the study. Transcriptions, codes, and extracted categories were reviewed by qualitative researchers in order to improve the confirmability of data; hence, an appropriate agreement was attained

in this regard. Also, details of the study process and the participants' direct quotations were provided to enhance the transferability of the results (25-26). No participants asked to withdraw from this study.

Results

Socio-demographic characteristics of 36 participants who took part in this study, such as age, education, occupation and etc. are listed in Table 1-3.

Table 1. Socio-demographic characteristics of breastfeeding mothers

Description	Number
Age	
25-35	16
35-45	7
Occupation	
Housewife	16
Teacher, Dispenser, Freelancer, Student	7
Educational level	
Lower than diploma	8
diploma	4
Bachelor	11
Baby's Infant age	
0-6 months	9
6-12 months	4
12-18 months	4
18-24 months	6
Baby's sex	
Male	15
Female	8
Baby's birth order	
1st	13
2nd	6
3rd	4
Type of delivery	
Normal vaginal delivery	13
Cesarean section	10
Duration of interview	
40 (25–140 minutes)	
Total	
23	

Five emerged categories of qualitative data that were placed under the main Category of instrumental support needs included: 'facilitating maternal roles', 'supplying necessary items', 'providing welfare services', 'cultural services' and 'healthcare services'. These categories emerged from 11 subcategories which will be subsequently discussed (Table 4).

Table 2. Socio-demographic characteristics of healthcare professionals

Description	Number
Age	
35-45	2
45-55	8
55-65	1
Occupation	
Breastfeeding counselor	2
Health Affairs Specialist	3
Midwife	5
Pediatrician	1
Educational level	
Master's degree	7
PhD	4
Duration of interview	
40 (25–140 minutes)	
Total	
11	

Table 3. Socio-demographic characteristics of family members

Description	Number
Age	
45-55	1
55-65	1
Occupation	
Environmental Health Specialist	1
Housewife	1
Educational level	
Diploma	1
Bachelor	1
Duration of interview	
40 (25–140 minutes)	
Total	
2	

1-Facilitating maternal roles

This emerging category describes the perceptions and experiences of participants in relation to the need to assist the mother in the housewife and maternal roles. This Category has emerged with three subcategories, which include: " the spouse cooperation in child care", " others' cooperation in home affairs" and assist in child breastfeeding". Most mothers have perceived assistance in fulfilling their maternal roles as one of their Instrumental support needs. Based on their perceptions and experiences, in child care matters such as night care, cleaning, hugging and calming the child, the help and cooperation

of the spouse were needed. In this regard, one of the participants said:

"If your wife tells go to rest, I'll take care of the child. It is very effective... For example, to hug or, to calm him, so I can rest especially at night... I was tired, and I need this help (Participant 16, 32- year-old mother). Participants stated that the housework division and taking part in the home responsibilities will help them to lose less energy and physical weakness; instead, they will be able to focus on breastfeeding and other related matters. One participant pointed out this: "I needed someone to help me with housework. I used to receive help making meals and giving the baby milk at the same time. Food was burning occasionally. I really needed help" (Participant 1, 32-year-old mother). Most participants expressed the need for cooperation of important others, especially spouses and family members, during breastfeeding initiation. Mothers, not only in the hospital but also at home, needed the help of a person during breastfeeding, and most of them expected assistance from their spouses, while expressing their lack of knowledge about the woman's support needs during breastfeeding. One of the participants said, "because of Caesarian wound, movement was very difficult...If someone helped me to keep the baby, I could have breastfeeding comfortable" (Participant 22, 35-year-old mother).

Table 4. Categories and subcategories emerged from the data analysis

Sub Categories	Categories	Main Category
the Spousal cooperation in the child care the others' cooperation in the home affairs Assisting mothers in child breastfeeding	Facilitating maternal roles	
Food supplies Breastfeeding support equipment	Supplying necessary items	
financial support Provision of breastfeeding-friendly facilities in public settings with allocated provisions	Providing welfare services	Instrumental Support Needs
Breastfeeding promotion through social media Peer support for breastfeeding	Cultural services	
Performing breast examination in health centers providing home care services	Healthcare services	

2-Supplying necessary items

The supply essential items category consists of two sub-category; "food supplies" and "breastfeeding support equipment's". The participants' statements suggested that providing nutritional support for breastfeeding mothers and access to breastfeeding support equipment were important forms of instrumental support that should be taken into account by the family, the government, and, in particular, the Breastfeeding Promotion Committee. From the perspective of the participants, food supplies were one of the instrumental support needs for mothers, especially those who are inadequate nutritional resources during breastfeeding, which can include the provision of food baskets and nutritional supplements. One participant stated: "There are many countries that give a basket of goods and food to mothers. Well, it's good to do the same here (participant 22, 35-year-old mother).

A health expert pointed out the need for food support as follows: "There is a need to nutrition support of mothers that we don't have in urban health centers (Participant 14, 37-year-old mother).

Participants also stated that providing nutritional supplements to breastfeeding mothers in health centers is a necessity in supporting them, especially in women with iron, calcium, and vitamin deficiencies. According to the experience of the participants, providing nursing aid equipment was identified as one of the support instrument support needs of mothers, which included items such as the nipple protector, the electrical or hand breast

pump, the milk cup, the kangaroo care clothes, and hot water bag. Participants outlined comfortable and cost-effective access for breastfeeding facilities as a way to improve breastfeeding and its progression, and suggested that the breastfeeding promotion system and baby-friendly hospitals should pay attention to these supplies or preparations. A health provider says about the needs of mothers for breastfeeding: "Some nursing aid equipment is expensive. I think insurance companies should cover the mother if they cannot pay costs (26 participants, 40-year-old pediatrician). Participants stated that breast milk storage containers are a very useful means, especially for working mothers that should be available to them both in hospitals and at the workplaces so that they can store the rest of their own milk.

2-Providing welfare services

This category consists of two sub-categories "financial support" and "facilitating breastfeeding in social situations with allocated provisions". According to the experiences and perceptions of participants, financial support was one of the instrumental support needs for mothers. Participants argued that financial support for breastfeeding mothers, especially those who are financially impaired, such as low-income, careless, and homeless mothers, was a necessity that governments and non-governmental organizations should play an important role in this area. Participants also pointed out that the rights and payments of working mothers during maternity leave are not fully given by employers and insurance companies, so need to resolve these problems through legislation and supportive regulations to remedy them in the working environment. One of the participants said: "I'm on maternity leave and not working because it has not yet paid my costs. The rules are not complying...Or lawgivers say maternity leave is nine months, but for us it counts six months. Well, the government should do something for us, at least the same pay for maternity leave (Participant 22, 35-year-old mother). According to participants' experiences, social facilitation is another welfare service needed by breastfeeding mothers. Participants pointed out that there is no suitable and convenient place for breastfeeding in social settings such as workplaces, universities, health centers, and the general community, and this is itself an obstacle to continuing breastfeeding and prevents success in breastfeeding. In relation to this, one participant says: "Look, I sometimes want to breastfeed the baby when I come out of the house! But there is no place! Where? It should be a safe and comfortable place to calm your baby with milk. For example, on the bus, in public places such as the cinema, the pool, workplace, health centers, and wherever… the mother needs to a privacy like breastfeeding room (Participant 9, 32-year-old mother)".

3-Cultural services

Another instrumental support needs of mothers were cultural services, which are reflected in two subcategories of "supporting breastfeeding in social media" and "using peers to support breastfeeding." In this context, the participants agreed that media advertising about breastfeeding support, promoting breast milk nutrition, and explaining the importance of breastfeeding, they also pointed out that the media has a very positive role in support, but the lack of education about breastfeeding and promotion of breast milk nutrition was one of the media's weaknesses, they emphasized that the media should present breastfeeding as a social value. A health provider said: "Media advertising about the importance of breastfeeding and supporting it should be increased. Even radio and television don't provide any training in promotion of breastfeeding. I've even seen advertisements on social networks, which are all against mother's milk (Participant27, 35-year-old breastfeeding expert).

According to the participants' experience, in health centers, breastfeeding mothers' groups should come together to talk and sympathize with each other and share their experiences. They believed that in each stage of breastfeeding, as well as from one person to another, there were different support needs, and the presence of peers could provide them with comprehensive experiences.

An expert said: "I have a Telegram group of breastfeeding mothers that talk, share their experiences, and even sympathize with each other. All of these can be very helpful for the

mothers (participant 27, 35-year-old breastfeeding expert).

4-Healthcare services

This was another instrumental support need of mothers, which was classified in two subcategories: "perform breast examination in health centers" and "provide home care services". Participants stated that breast examination is not carried out in health centers before or during breastfeeding, but it is necessary because mothers encounter some troubles such as nipple disorders or other anatomical breast problems, so appropriate examination can diagnose these problems and treat them. An expert explains: "A breast examination should be considered during pregnancy and breastfeeding, so that if there are problems, such as the inverted nipple, the outsized nipple, etc., identify and take effective methods to solve them and offer to the mother for successful breastfeeding" (Participant 19, 45-year-old family health expert).

According to the participant's experiences, provision of home care services is among the instrumental support needs by breastfeeding mothers, which causes them to receive demanded health services at home comfortably and also provides an opportunity to evaluate their breastfeeding method at home that is a safe and private environment, and identify their potential problems. One of the participants said: "When I came home from the hospital and performed what I was told to do, I actually needed someone to guide me, especially by health providers ...their home visits give me confidence and reassurance" (Participant 1, 32-year-old mother).

Discussion

This study explored breastfeeding mothers' perceptions and experiences of instrumental support needs, providing insight into the practical forms of support they require during the breastfeeding period.

Based on the experiences and perceptions of the participants, instrumental support needs of breastfeeding mothers consist of: "facilitating maternal roles", "supply necessary items", "welfare services", "cultural services", and "healthcare services". Facilitating maternal roles is one of the mothers' support needs that means assisting the mother in fulfilling the maternal roles in care of the baby, breastfeeding, caring for other children, and doing housework. According to the findings of the study, mothers in baby care matters such as night care, cleaning, hugging, and calming the baby need help and cooperation of important others, especially the spouse and family members. Based on the perceptions and experiences of the participants, mothers need the cooperation of their family in doing housework as well. In line with this, other studies also suggest that family support in doing housework can help the mother succeed in feeding her baby exclusively with her own milk (16, 18, 27-31). In Brown study (2013) explained that performing housework by others had a positive and direct relationship with desire to continue breastfeeding.it is not important how much help and support the mother receives but it is understood that support in carrying out maternal duties decrease problems like fatigue, lack of sleep, mother's lifestyle interferences, maternal responsibilities, painful experiences of childbirth, and psychological disorder, so it was partly compatible with the results of the current study that mothers felt needed in this field, although there were different cultural levels (32). Most participants expressed the need for aid during breastfeeding, especially the first time in the hospital. According to the mothers' experiences, health staff do not help them enough, and this issue presents them with various challenges and stress; this need was especially evident in primiparous and cesarean cases. The presence and supervision of hospital staff make mothers feel confident. Mothers needed the help of a person not only at the hospital, but also at home during breastfeeding, and most of them expected cooperation from their husbands. In support of the present study, Presbyterian et al. (1395) found that some mothers in their first attempt to breastfeed need the help of an accompanying person, especially from healthcare staff. They pointed out that in cesarean cases, due to pain, anesthesia complications, and movement problems, the rate of failure to first-time breastfeeding is increased, so the presence of a trained accompaniment or the help of health providers was important.

Another instrumental support need was essential items that, based on the experiences of the participants, included "food supplies" and "providing breastfeeding support equipment". These were presented as important facilitators in the breastfeeding process that should be brought to the attention of the family, government, and, in particular, the breastfeeding promotion committee. From the perspective of the participants, food supplies were needed, especially for undifferentiated breastfeeding mothers, which includes the provision of food baskets and supplementary nutrients. Participants emphasized the necessity of nutritional support for breastfeeding mothers in urban and rural health care centers. In this line, other studies also showed that mothers during breastfeeding have special nutritional needs that should be taken into account by their spouses, the health system, even politicians and the government (18, 27-32). But in Tahotoa et al.'s study (2009), mothers were supported by the government as well as their spouses in providing food baskets and supplements during breastfeeding, and did not have concerns about nutritional needs. This is not compatible with the current research, which returns to government supporting policies and men's involvement and education related to breastfeeding mothers' support (33). Participants identified the provision of breastfeeding support equipment as one of the mother's instrumental support needs, which included items such as the nipple shield, the electrical and manual breast pump, the breast cup, the hot water bag, the syringe, and the feeding tubes.

In this line, the other literature shows that in some situations, such as infant problems, breastfeeding multiple babies, full-term babies, and working mothers need breastfeeding provisions (18, 27-32). According to the participants' experiences, welfare services were another of the instrumental support needs, which includes "financial support" and "facilitating breastfeeding in social situations with allocated provisions". Participants stated that financial support for breastfeeding mothers, especially those who are financially impaired, such as low-income, careless, and homeless mothers, was a necessity in which government and non-governmental organizations could play an important role in this area. In this regard, the literature review also showed that financial support for breastfeeding mothers, especially those who are financially impaired at the level of family, work environment, and society, is essential (18, 27-32). A study by Tork Zahrani, S. et al. (2012) pointed out that financial support for women during breastfeeding appears to have a positive effect on breastfeeding patterns, duration, and leads to increased exclusive breastfeeding and success (34) .Findings of the study by Clare Ralton et al. (2018) contradict the present study results. In this study, one aspect of supporting breastfeeding mother in the UK was the financial support offered to them based on their economic situation, with a focus on areas with low income rates. They also found that financial support for mothers led to a significant increase in breastfeeding success (35). The reason for this contradiction appears to be related to the differences in the legal, economic, and supportive structures of these regions. According to the participants' experiences, facilitating breastfeeding in society is another of the welfare services needed by breastfeeding mothers. Suitable and convenient places for breastfeeding in social environments such as workplaces, schools, health, academic and public environments are necessary. In addition, employment rules must facilitate and encourage mothers to breastfeed. A study by Parsa et al. (2015) pointed out that the support of society and the existence of suitable facilities for breastfeeding in public places such as private spaces, and milk expressing equipment at workplace are considered to be an effective factor in successful breastfeeding that is consistent with the findings of the present study (36). Arshad et al. (2017) acknowledged that the presence of facilities was necessary for breastfeeding in society and could promote exclusive breastfeeding, which could highlight the importance of this issue (18). Opposite with current research, participants in the U.S. described that legal supports for breastfeeding mothers were appropriate but are not common in all workplaces (37). In study by Kolokotroni, et al. in Egypt (2017), the level of legal support for breastfeeding mothers at workplace was

ordinary, while mothers stated that there were no necessary facilities for breastfeeding, and milk storage, at workplace, the same situations were described by the current study since most mothers found that they did not have sufficient support at work and labor rules are not governed by some public and private organizations (38). According to the participants' experiences, another supporting need was cultural services, which itself consists of two issues: "supporting breastfeeding in social media" and "using peers to support breastfeeding." Participants pointed out that media advertising in support of breastfeeding, its promotion, and the importance of breastfeeding should increase. In line with the present study, Sahbazi et al. (2017) highlighted that sufficient advertising has not been made to promote breastfeeding at the community level, while this should be discussed in the mass media (39). A study by Mohsenzadeh et al.(2006) emphasized the need for raising public awareness about importance of breastfeeding by the media to make consciousness, positive changes, and improvement of mothers' breastfeeding behavior (40). Nash et al. (2014) reported that social media can play an important role in increasing awareness of breastfeeding and its importance, and may positively influence mothers' beliefs and motivation toward breastfeeding. In contrast, our findings suggest that mothers perceived limited media-based support for breastfeeding, particularly in relation to practical or instrumental support. This discrepancy may reflect differences in the availability, accessibility, content, and policy orientation of breastfeeding-related media across contexts. While social media and other communication platforms may effectively disseminate information and promote positive attitudes toward breastfeeding, increasing awareness does not necessarily translate into the provision of tangible support, such as assistance with household responsibilities, childcare, or other practical challenges that mothers may encounter during breastfeeding. Therefore, the contrast between the two studies suggests that the impact of media should not be considered solely in terms of information and awareness; its contribution to breastfeeding may also depend on whether media messages are accompanied by broader social, cultural, policy, and health-system mechanisms that facilitate mothers' access to practical support (9). Based on the participants' experiences, breastfeeding mothers groups should be formed in health centers so that mothers can talk and sympathize with each other and share their experiences. In line with the current research, Leaving Tork Zahrani et al. (2012) found that the formation of peer groups in health centers and their involvement in breastfeeding support programs had a positive effect on the quantity and duration of exclusive breastfeeding (34). World Health Organization and UNICEF emphasized that peer groups should be included in breastfeeding promotion programs (21). Shahbazi et al. (2017) explained that informal supports such as peer supports are more effective than formal supports, and the combination of both is considered more valuable (39). Healthcare services were another instrumental support need of mothers that was identified in two sub-categories: "perform breast examination in health centers" and "the necessity to provide home care services". Participants stated that breast examination is not carried out in health centers before or during breastfeeding, but it is necessary because breast anatomical problems need to be identified and their appropriate treatment. In line with this study, Shahbazi et al. (2017) noted that breast examination is not performed before and after childbirth in Nepal, while this examination should normally be carried out within the third month of pregnancy (39).

According to findings of the present study, provision of health care at home has been one of the supporting needs of mothers, which makes them reassured to receive their services at home and also gives an opportunity to evaluate their breastfeeding method. Similar to the present study, Tork Zahrani et al. (2012) discovered that comfortable access to adequate support resources is important in breastfeeding difficulties, and emphasized that it is essential for successful nursing to receive basic support and care services in the hospital and then at home (34). Heidari et al.,(2016) found that visiting nursing mothers at home by health providers was very effective in improving

breastfeeding skills, correcting and improving the breastfeeding method, and continuing exclusive breastfeeding (41). Arshad et al. (2017) suggest that breastfeeding behavior should be examined in a varied manner and through home visits (18). There are several major strengths of this research. First and foremost, this qualitative study contributes to further insight into the instrumental support needs of breastfeeding mothers through the sociocultural context of Iran. Also, this research used qualitative methods to gather rich, in-depth individual experiences of breastfeeding mothers. An additional strength of this study is the participation of health care providers and two family members in the development of the research.

As with most qualitative studies, a limitation of this study is its generalizability. Due to the nature of this study, a high degree of subjectivity of research methods during both data collection and analysis influenced the results through the researcher's personal biases. Another limitation of this study is the exclusion of mothers whose infants had medical conditions or required special medical care. Therefore, the transferability of the findings may be limited, as their instrumental support needs and experiences may differ from those identified in the present study.

Therefore, further research in other geographical and cultural contexts is needed to gain a deeper understanding of breastfeeding mothers' instrumental support needs. From a practical perspective, the findings highlight the importance of developing supportive interventions that address mothers' instrumental needs, including assistance with childcare, household responsibilities, and other daily activities during the breastfeeding period. Healthcare providers, families, and community-based support programs should consider these needs when designing breastfeeding support services.

Conclusions

This study contributes to an understanding of instrumental support needs of breastfeeding mothers within five emerged categories of 'facilitating maternal roles', 'supply necessary items', 'welfare services', 'cultural services' and 'healthcare services'. Significant others, i.e., the husband, family members, and health providers, have an important role in meeting such needs. Also, health policymakers should pay attention to these instrumental support needs to inform the development of effective programs aimed at strengthening support for breastfeeding mothers and promoting the continuation of breastfeeding.

Declerations

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Conflicts of interest

The authors declared no conflicts of interest.

Ethical considerations

Breastfeeding mothers were invited to participate in this study and were informed of the voluntary nature of participation, their right to withdraw from the study at any time, anonymity, and the confidentiality of all their information.

Code of Ethics

This study obtained approval for the research plan from the Medical Ethics Committee of Mashhad University of Medical Sciences (IR. MUMS. REC.1396.124).

Use of Artificial Intelligence (AI)

We have not used any AI tools or technologies to prepare this manuscript.

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Authors' contribution

NM, MA and KhMN contributed to the conception and design of the study. NM drafted the first version of the manuscript. NM and MA revised the manuscript. NM and MA critically reviewed the manuscript for important intellectual content. All authors approved the final version.

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