



Relationship between perceived social support, breastfeeding self-efficacy, and perception of insufficient milk in breastfeeding mothers of eastern Türkiye

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Abstract

Background: Breastfeeding is a complex process influenced by various factors, including social support, perceived milk insufficiency, and breastfeeding self-efficacy. This study aimed to explore the relationships between perceived social support, breastfeeding self-efficacy, and the perception of insufficient milk among breastfeeding mothers in eastern Türkiye in 2022.

Methods: This correlational study was conducted at a state hospital in eastern Türkiye with 500 breastfeeding mothers of infants aged 0-6 months attending the pediatric outpatient clinic. The participants completed the Sociodemographic Data Form, the Multidimensional Scale of Perceived Social Support, the Breastfeeding Self-Efficacy Scale-Short Form, and the Perceived Insufficient Milk Questionnaire. Pearson correlation analysis was used to examine the relationships between the scales, with a significance level set at $p < 0.05$.

Results: The mean scores were 62.91 ± 16.16 for perceived social support, 52.49 ± 9.03 for breastfeeding self-efficacy, and 38.25 ± 10.04 for perceived insufficient milk. Significant positive correlations were found between perceived social support and breastfeeding self-efficacy ($r = 0.188$, $p < 0.001$), perceived social support and the perception of insufficient milk ($r = 0.251$, $p < 0.001$), and breastfeeding self-efficacy and the perception of insufficient milk ($r = 0.251$, $p < 0.001$).

Conclusion: High levels of social support are associated with increased breastfeeding self-efficacy and improved perceptions of milk supply, thereby supporting both maternal and infant health. Healthcare professionals can enhance these outcomes by providing targeted training programs, motivational interviews, and social-cognitive support to breastfeeding mothers.

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Highlights

What is current knowledge?

Breastfeeding is a multidimensional process influenced by multiple factors.

What is new here?

This study highlights the positive relationship among perceived social support, breastfeeding self-efficacy, and perceived insufficient milk supply in women.

Introduction

Breast milk is widely acknowledged as the most natural and beneficial food for newborns, providing essential nutrients, fluids, and energy for their growth and development. Breastfeeding offers numerous advantages for both infants and mothers, including nutritional, health, immune system support, and various developmental, psychological, social, and economic benefits. The World Health Organization (WHO) and the United Nations International Children's Emergency Fund (UNICEF) recommend initiating breastfeeding immediately after childbirth, exclusively breastfeeding for the first six months, and continuing breastfeeding for up to two years or more, supplemented with appropriate nutrition. According to the Global Breastfeeding Scorecard published by WHO and UNICEF, the worldwide rate of exclusive breastfeeding for infants under six months is reported to be 44%, while in Türkiye, it is approximately 41% (1,2).

Over the past decade, exclusive breastfeeding rates have decreased in Türkiye. To address this, the country has implemented initiatives like infant-friendly hospitals, legal regulations, and free breastfeeding and antenatal classes (3). Perceived self-efficacy, which refers to a mother's belief in her ability to successfully breastfeed her infant, is crucial. However, stress, emotional disturbances, and insufficient milk can hinder breastfeeding success. Social support also contributes to this perception, even when the infant is growing adequately (4).

The literature suggests that breastfeeding is influenced by both instinctive behavior and the social environment surrounding women. Social support significantly influences women's breastfeeding attitudes and beliefs, with a strong support network increasing the likelihood of breastfeeding. However, reliable and evidence-based information is crucial, as non-evidence-based practices and myths can negatively affect breastfeeding and a mother's self-efficacy. This study explored the relationship between perceived social support,

breastfeeding self-efficacy, and the perception of insufficient milk among breastfeeding mothers (1,5,6). It acknowledged the limited research on this topic and aimed to provide further insights by investigating the relationship between these factors, ultimately helping mothers address breastfeeding-related issues.

Methods

Population and sample

The study investigated breastfeeding mothers with infants aged 0-6 months at Muş State Hospital's pediatric outpatient clinic between August 3, 2022, and November 3, 2022. This hospital was chosen because women from various socioeconomic backgrounds in the Eastern Anatolia Region, including those from neighboring provinces, frequently seek care there. The sample size was determined to be 384, with a 5% deviation and a 95% confidence level.

The inclusion criteria for participants were as follows: no speech or hearing impairments, willingness to communicate and cooperate, and no diagnosed mental health problems. Mothers who met these criteria were included in the study through convenience sampling. Data collection was conducted via face-to-face interviews with the participants. The study successfully included a total of 500 mothers.

Data collection tools

Sociodemographic Data Form: It was developed by the researchers based on the literature and includes items on age, height, weight, income status, as well as several items related to pregnancy, the infant, and breastfeeding.

Multidimensional Scale of Perceived Social Support: The study uses a 12-item scale to measure perceived social support, focusing on three groups: family, friends, and a significant other. The scale has a Cronbach's α value of 0.909, indicating a high level of perceived social support, and its reliability was confirmed by Eker et al. (2001) (5).

Breastfeeding Self-Efficacy Scale-Short Form: Dennis and Faux (1999) developed the scale, and Tokat et al. (2010) translated it into Turkish, expanding it to 14 items. It measures mothers' perceived adequacy in breastfeeding, with higher scores indicating greater breastfeeding self-efficacy. The scale does not have a set cut-off point. In this study, the Cronbach's alpha score for the scale was 0.886, suggesting strong internal consistency (6,7).

Perceived Insufficient Milk Questionnaire: McCarter-Spaulding and Kearney (2001) developed the original six-item scale to assess the perception of insufficient milk supply (8). Gökçeoğlu and Küçükoğlu (2014) conducted the Turkish validity and reliability testing of the scale, reporting a Cronbach α value of 0.82 (9). In this study, the Cronbach α value was found to be 0.91, indicating high internal consistency.

Human subjects: All individual participants in the research provided informed consent.

Data analysis

The study used SPSS 24 software for data analysis and assessed normal distribution through skewness and kurtosis. The Multidimensional Scale of Perceived Social Support, Breastfeeding Self-Efficacy Scale, and Perceived Insufficient Milk Questionnaire all followed a normal distribution. Pearson correlation analysis was employed to examine the relationship between these scales, with correlation strength categorized as low, moderate, strong, or very strong. The significance level was set at $p < 0.05$ for statistical evaluation (10).

Results

Breastfeeding mothers were mostly within the 26-34 age group (46.0%). Additionally, a significant portion had a university education or higher (34.4%). Most participants belonged to a nuclear family (82.8%) and were not wage earners (77.0%). Regarding income status, 45.2% perceived it as moderate, and 53.8% lived in a city. The majority of participants did not have a chronic disease (93.0%), and 61.2% were of normal weight (Table 1).

Table 1. Sociodemographic characteristics of the participants

Variables	Frequency (n = 500)	Percent (%)
Age groups		
18–25	198	39.6
26–34	230	46.0
35 and over	72	14.4
Educational level		
Primary school or less	165	33.0
High school	163	32.6
University or above	172	34.4
Family type		
Nucleus	414	82.8
Extended	86	17.2
Employment status		
Employed	115	23.0
Unemployed	385	77.0
Perceived income status		
Undesirable/Adequate	220	44.0
Relatively adequate	226	45.2
Optimal	54	10.8
Place of residence		
Village	72	14.4
District	159	31.8
City	269	53.8
Existence of chronic diseases		
Yes	35	7.0
No	465	93.0
BMI (kg/m ²)		
Underweight (<18.5)	16	3.2
Normal (18.5-24.9)	306	61.2
Overweight (25- 29.9)	136	27.2
Obese (≥30)	42	8.4

It was determined that it was the first pregnancy for 41.6% of breastfeeding mothers, and they had one child (43.4%). The study found that 75.2% of participants had planned their last pregnancy, and 84.8% had wanted it. Most mothers had normal childbirth, and most children were girls. The majority of breastfed infants weighed between 2501-3599 grams, and 37.4% were six months old. Most mothers breastfed within the first hour after childbirth, though 66.2% had no previous experience, and 72.0% had not received breastfeeding training. A large proportion of breastfeeding mothers (78.2%) believed they had enough milk for their infants and planned to breastfeed for 24 months or longer (47.4%). Most did not give formulas and planned to start supplementary food in the 6th month. In addition, 96.2% believed breastfeeding was their duty, and 51.8% enjoyed it.

Table 2 presents the mothers' mean scores from the Multidimensional Scale of Perceived Social Support, the Breastfeeding Self-Efficacy Scale, and the Perceived Insufficient Milk Questionnaire. The participants' total mean score from the Multidimensional Scale of Perceived Social Support was 62.91 ± 16.16 , indicating a level higher than moderate. The participants had a mean score of 52.49 ± 9.03 on the Breastfeeding Self-Efficacy Scale and 38.25 ± 10.04 on the Perceived Insufficient Milk Questionnaire, both of which were also higher than moderate.

Table 2. Mean scores on the scales for breastfeeding mothers

Scales	The number of items	Mean \pm SD	Min–Max
Perceived social support	12	62.91 ± 16.16	12-84
Breastfeeding self-efficacy	14	52.49 ± 9.03	14-70
Perceived insufficient milk	6	38.25 ± 10.04	5-50

SD=Standard Deviation

The study found a weak positive relationship between perceived social support and breastfeeding self-efficacy ($r = 0.188$, $p < 0.000$), a moderate positive

relationship between breastfeeding self-efficacy and the perception of insufficient milk ($r = 0.251$, $p < 0.000$), and a weak positive relationship between social support and milk perception ($r = 0.251$, $p < 0.000$) (Table 3).

Table 3. Correlation among perceived social support, breastfeeding self-efficacy, and perceived insufficient milk in breastfeeding mothers

Scales	Breastfeeding self-efficacy	Perceived insufficient milk
Perceived social support	$r = 0.188$ $p = 0.0001$	$r = 0.251$ $p = 0.0001$
Breastfeeding self-efficacy	1	$r = 0.470$ $p = 0.0001$

r= Pearson correlation coefficients

Discussion

This study focused on examining the relationship between perceived social support, breastfeeding self-efficacy, and perceived insufficient milk among mothers during the first six months after giving birth. The results obtained at the end of the study also offered remarkable insights into the cultural aspects of Turkish women's perceptions of breastfeeding.

The study found that postpartum women in Türkiye had a mean score of 62.91 on the Multidimensional Scale of Perceived Social Support, which is higher than similar scores reported in eastern Türkiye (11), western Türkiye (12), southern Türkiye (13), and the Central Anatolian Region (14), as well as in Vietnam (4) and France (15). The study suggests that differences in social support for postpartum women may be influenced by factors such as geographical region, societal attitudes toward women, sample size, and research design. In western Türkiye, human relations are more supportive, and postpartum women are often visited after childbirth. A study conducted in Muş, Türkiye, revealed that postpartum women in the city receive above-average social support, with a tradition-bound society where visits are made to newborns and religious ceremonies are held for the infant. This includes not being left alone for 40 days and attending religious ceremonies for the infant.

The study found that perceived social support positively impacts breastfeeding self-efficacy, with a mean score of 52.49 (SD 9.03). Similar studies in the literature show that breastfeeding self-efficacy scores range between 53.32 and 65.20 (15-17). Moreover, women's employment status, education level, and the status of having education vary across different regions of Türkiye. In the present study, most of the women living in eastern Türkiye were housewives and had not received any prior breastfeeding training. We believe that this may negatively affect the breastfeeding self-efficacy of mothers. Moreover, it has been reported that postpartum women with breastfeeding self-efficacy scores below 50 are at risk of abandoning breastfeeding, and interventions are needed to improve breastfeeding outcomes (18,19). Although the breastfeeding self-efficacy scores of postpartum women in this study were above 50, their proximity to the lower limit indicates the need for further support to enhance their breastfeeding self-efficacy. Furthermore, the social environment affects women's attitudes and beliefs. Family elders, eager to share their experiences, often pass on their knowledge and traditions regarding breastfeeding to new mothers. While this transfer of knowledge can be helpful when based on reliable information, it may sometimes conflict with practices recommended by midwives and nurses. For example, family elders may discourage holding infants, which can adversely affect breastfeeding self-efficacy. Therefore, midwives and nurses should provide comprehensive training to postpartum women, focusing on issues such as perceived insufficient milk, to improve breastfeeding self-efficacy. This support can include home visits, baby carriers, skin-to-skin contact, phone counseling, video conferences, and motivational interviews.

The study found a significant positive relationship between mothers' breastfeeding self-efficacy and their perception of insufficient milk. High breastfeeding self-efficacy indicates that mothers believe they are supplying sufficient milk, while those who feel their infants are not receiving enough milk tend to be less confident (20). The mean score of the Perceived Insufficient Milk Questionnaire in this study was 38.25%. However, the majority of women reported believing they supplied enough milk to satisfy their infants. The positive relationship between perceived insufficient milk and breastfeeding self-efficacy observed in Turkish women aligns with the findings of Gökçeoğlu and Küçüköğlü, 2017 (21). In our country, breastfeeding is a traditional practice, and most mothers tend to breastfeed their infants from the first day of birth. However, as stated in the study by Işık and Kügçümen (2021), breastfeeding women may be negatively affected by others suggesting that babies cry due to hunger and inadequate milk supply (22). Similarly, according to the systematic review by Huang et al. (2022) (23), persistent crying in babies is a key indicator for mothers that their milk is insufficient, which can lead to a perception of insufficient milk. It is suggested that enhancing women's breastfeeding self-efficacy may be the solution to addressing this perception (23-25).

This study offers valuable insights into the relationships between perceived social support, breastfeeding self-efficacy, and the perception of insufficient milk. However, its cross-sectional design limits the ability to draw causal inferences. Since the study was conducted in a single state hospital in eastern Türkiye, the findings may not be generalizable to other regions or populations. Despite these limitations, the study benefits from a substantial sample size of 500 participants and the use of well-established scales, which enhances the reliability

and relevance of the results. These strengths contribute significantly to our understanding of the factors affecting breastfeeding outcomes.

Conclusion

This study highlights the positive correlation between perceived social support, breastfeeding self-efficacy, and perceived insufficient milk supply in women. Healthcare professionals should encourage breastfeeding, involve social support providers in nurturing training, and conduct motivational interviews. For future research, longitudinal studies are crucial to establish causality and to explore how these relationships evolve over time. Furthermore, expanding the research to encompass a wider variety of geographical and demographic populations could enhance the generalizability of the findings. Future studies might also explore interventions designed to improve social support and self-efficacy in breastfeeding mothers, allowing researchers to assess their impact on breastfeeding outcomes.

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Ethical statement

The study was conducted in accordance with the principles and ethical standards set forth in the 1964 Declaration of Helsinki and its subsequent amendments. Ethical approval for the study was obtained from the ethics committee of the university (Date: July 04, 2022, No: 55492), and institutional approval was granted by the relevant hospital (Institutional Approval: E-35465298-619). Data collection commenced following the approval from both the ethics committee and the institution. Written and verbal consent to participate in the study was obtained from all participants.

Conflicts of interest

No competing financial interests exist.

Author contributions

Conceptualization and Methodology: Saliha Yurtçiçek Eren, Şükran Başgöl; Data Collection: Saliha Yurtçiçek Eren; Data Analysis: Saliha Yurtçiçek Eren, Şükran Başgöl; Critical Review: Şükran Başgöl; Writing the Original Draft: Saliha Yurtçiçek Eren, Şükran Başgöl; Supervision: Şükran Başgöl; Final Approval: Saliha Yurtçiçek Eren, Şükran Başgöl.

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