

# Breastfeeding practices and influencing factors among mothers: a survey study

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## ABSTRACT

**Aims:** Breastfeeding practices vary across communities, and the continuation of breastfeeding for the recommended duration remains suboptimal. This study aims to evaluate the breastfeeding practices of mothers with children older than 12 months and the factors influencing these practices.

**Methods:** This survey study was conducted at the Child Clinic of Konya Beyhekim Training and Research Hospital from November 15 to December 30, 2024. A total of 218 mothers were selected through simple random sampling. Data were collected using a structured questionnaire that assessed sociodemographic information, health status, breastfeeding practices, and related experiences. The questionnaire was administered face-to-face during hospital visits.

**Results:** The study found that 63% of mothers exclusively breastfed their infants for the first six months postpartum. Among those who did not provide breast milk immediately, the primary reason cited was that 73% felt they had insufficient milk, while the second most common reason was that the baby was ill or required incubator care. 65% of mothers continued breastfeeding for over 12 months. Comparing the characteristics of mothers who exclusively breastfed their babies for the first 6 months and those who did not, significant differences were found in age groups, mode of delivery, number of living children, multiple pregnancies, prematurity, birth weight, infant illness, hospitalization, pacifier use, and bottle feeding.

**Conclusion:** Study findings emphasize that more than half of mothers feed their babies exclusively with breast milk for the first 6 months, and a significant portion of them continue breastfeeding after the first year. It has been shown that some baby and maternal factors may be effective in feeding babies only breast milk for the first 6 months.

**Keywords:** Breastfeeding, survey study, infant, postpartum period

## INTRODUCTION

Breast milk is the most natural source of nutrition that can meet all of an infant's needs during the first six months of life. For healthy growth and development, it is recommended that infants be exclusively breastfed for the first six months and continue to receive breast milk alongside complementary foods for at least two years afterward. Breastfeeding offers numerous benefits for both infants and maternal health.<sup>1</sup> It is estimated that exclusive breastfeeding for six months and continuing breastfeeding throughout the first year of life could prevent a significant proportion of deaths in children under five years of age.<sup>2</sup>

The timing of breastfeeding initiation, exclusive breastfeeding for the first six months, and the duration of breastfeeding can vary significantly between communities. However, despite the numerous advantages of breast milk, the continuation of breastfeeding for the recommended duration remains suboptimal.<sup>1</sup> For instance, data indicates that only 25% of infants in Europe and 43% in the Southeast Asia region are exclusively breastfed at six months of age. In many

countries, although initiation rates of breastfeeding are high at birth, there is a noticeable decline in the rates of exclusive breastfeeding over time. This is particularly evident in Europe, where the prevalence of exclusive breastfeeding at six months is markedly low.<sup>3</sup> Globally, the rate of exclusive breastfeeding for the first six months is 44%, while in Turkiye, this rate is reported to be 41%. Furthermore, among newborns aged 0-1 month, 59% are exclusively breastfed, whereas this figure drops to 45% for infants aged 2-3 months and 14% for those aged 4-5 months.<sup>4</sup>

Previous studies have shown that the proportion of mothers who breastfeed for a year or longer is significantly higher in developing countries. This rate was reported to be 91.8% in Africa, 87.5% in Asia, approximately 85% in Kenya, and 59.9% in Latin America and the Caribbean.<sup>5,6</sup> In a study conducted in our country, the proportion of mothers who breastfed for more than one year was found to be 12.3%.<sup>7</sup> The variations in these rates may be attributed to cultural differences and socioeconomic factors among countries.<sup>8</sup> In poorer countries,

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the initiation of breastfeeding tends to be delayed, and the rate of exclusive breastfeeding for the first six months remains below 40%.<sup>9</sup>

Various factors influence breastfeeding practices, including education level, employment status, family structure, income level, pregnancy desirability, health issues, parity, prior breastfeeding experience, breastfeeding education, and mode of delivery.<sup>10</sup> The study results examining factors affecting breast milk and breastfeeding vary across different countries and regions within the same country.<sup>8</sup> Promoting early initiation of breastfeeding after birth is essential for increasing mothers' awareness and knowledge of proper breastfeeding practices.<sup>11</sup> In this context, identifying community practices and experiences regarding breast milk and breastfeeding is crucial for increasing exclusive breastfeeding rates during the first six months. Therefore, this study aims to evaluate the breastfeeding practices of mothers with children older than 12 months and the various factors influencing these practices.

## METHODS

### Ethics

This study was performed in line with the principles of the Declaration of Helsinki. Approval was granted by the KTO Karatay University Faculty of Medicine Non-Drug and Non-Medical Device Researches Ethics Committee (Date: 31.10.2024, Decision No: 2024/005) and an informed consent form was obtained from the participants.

### Study Design and Participants

The research employed survey design. It was conducted at the Child Clinic of the Konya Beyhekim Training and Research Hospital of the University of Health Sciences between November 15, 2024, and December 30, 2024. The inclusion criteria for participants were mothers with children over 12 months old who presented to the Child Clinic at Konya Beyhekim Training and Research Hospital.

**Inclusion criteria:** Participants were mothers with children over 12 months old who presented to the Child Clinic during the study period.

**Exclusion criteria:** Mothers who chose not to participate in the study were excluded. Additionally, mothers whose questionnaire forms were not fully completed were also excluded from the analysis. Specifically, mothers with children under 12 months old were not included in the study.

### Sample Size

The study population was determined based on the total number of births at our hospital in 2024, which was 1075. Using a known population sampling method with a 5% margin of error and an expected prevalence of 25%,<sup>12</sup> the required sample size was calculated to be 211. However, to better represent the population, the study was completed with 218 participants. A simple random sampling method was employed, where eligible mothers were randomly selected from the hospital's patient list to ensure randomness. During the study period, mothers who visited the Child Clinic during working hours were invited to participate in the study. Each day, 7 or 8 mothers were randomly selected from all eligible

mothers present at the clinic, ensuring a random selection process to reach a total of 218 participants.

### Questionnaire

The questionnaire was designed to assess breastfeeding experiences and knowledge about breast milk. It included sections on sociodemographic information, health status, breastfeeding practices, the transition to complementary foods, and questions regarding the mothers' experiences with breastfeeding.

### Data Collection Process

Data collection involved mothers filling out questionnaires upon their visit to the hospital. The distribution of the questionnaires was conducted face-to-face with those who consented to participate in the study. The questionnaire was administered in a private setting to ensure that participants could answer independently. The duration for completing the questionnaire was approximately 15-20 minutes. The survey form was prepared and revised according to the previous studies.<sup>12-17</sup> The questionnaire included the following components:

**Sociodemographic information:** Place of residence, mother's age, education level, employment status, family income, and family structure.

**Health and pregnancy information:** Frequency of antenatal visits, training received on breastfeeding and breast milk during pregnancy, the source of breastfeeding education, duration of training, planned pregnancy status, mode of delivery, and number of living children.

**Child-related information:** Child's gender, multiple pregnancies, preterm birth status, age at delivery, illnesses during the neonatal period, whether hospitalization was required at birth and duration of stay, and birth weight.

**Breastfeeding experience:** Timing of the initiation of breastfeeding, reasons for any delays beyond the first half hour, first food given after birth, whether colostrum was administered, exclusive breastfeeding status, timing of the introduction of complementary foods, reasons for providing less than six months of breastfeeding, duration of breastfeeding for the last child, frequency of breastfeeding, first complementary food introduced, provision of water while breastfeeding, use of pacifiers or bottles, and the presence of formula or other foods equivalent in value to breast milk.

### Statistical Analysis

Categorical variables were reported as counts and percentages. The Shapiro-Wilk test was utilized to evaluate the distribution of the data. Since the data did not follow a normal distribution, results were expressed as medians with interquartile ranges (IQR). Comparisons of categorical variables among different groups were performed using the chi-square test or Fisher's exact test as appropriate. To assess the reliability of the questionnaire, Cronbach's alpha was calculated. Factor analysis was conducted to evaluate the construct validity of the questionnaire, with the assessment of Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's

test of Sphericity. A p-value of less than 0.05 was considered statistically significant. Statistical analyses were conducted using SPSS software for Windows, version 21.0.

## RESULTS

A total of 218 volunteer mothers participated in the study. The sociodemographic characteristics of the participants included a median age of 34 years (IQR: 9), with the most common age range being 25-34 years (Table 1). Most mothers were college graduates and predominantly lived in nuclear family structures. About one-third were employed, and roughly one-third reported earning the minimum wage. Most participants had antenatal follow-up at least four times, and approximately half received breastfeeding education, primarily from midwives/nurses.

The experiences of mothers regarding breast milk and breastfeeding are summarized in Table 2. Regarding breastfeeding practices, around 65% of mothers-initiated breastfeeding within the first half hour after birth. Among those who did not, 73% cited insufficient milk as the primary reason. About 79% reported that breast milk was the first food given to their newborns, and 92% provided colostrum. Approximately 63% exclusively breastfed for the first six months, with insufficient breast milk being the most common reason for those who did not (69%).

Comparative analysis revealed no significant differences between mothers who exclusively breastfed for the first six months and those who did not in terms of residence, education, family structure, employment, income, antenatal follow-up frequency, or breastfeeding education received ( $p>0.05$ ). However, significant differences were noted in age groups, mode of delivery, number of living children, multiple pregnancies, prematurity, birth weight, infant illness, hospitalization, pacifier use, and bottle feeding ( $p<0.05$ , Table 3).

To assess the reliability of the questionnaire, Cronbach's alpha was calculated. The overall Cronbach's alpha value for the questionnaire was found to be low, with the highest Alpha value of 0.416 observed when the item "Reason for breastfeeding for less than 6 months?" was excluded from the analysis. Additionally, the other items exhibited low Cronbach's alpha values, indicating potential issues with internal consistency. Factor analysis was conducted to evaluate the construct validity of the questionnaire. The KMO measure of sampling adequacy was found to be 0.604, which is considered adequate for conducting factor analysis. The Bartlett's test of Sphericity yielded a significant result ( $\chi^2=4188.951$ ,  $df=595$ ,  $p<0.001$ ), indicating that the correlations between items were sufficient for factor analysis.

## DISCUSSION

This study is a survey examining mothers' experiences with breastfeeding. Current findings indicate an exclusive breastfeeding rate of 63% during the first six months postpartum. Among those who did not exclusively breastfeed, insufficient breast milk was the most commonly cited reason. Furthermore, 65% of mothers reported breastfeeding for over 12 months.

<b>Where do you reside?</b>	
Rural, n (%)	38 (17.4)
City, n (%)	180 (82.6)
Mother's age, year, median (IQR) (min-max)	34 (9) (21-48)
<b>Mothers' age groups</b>	
19-24 years	20 (9.2)
25-34 years	112 (51.4)
35 years and above	86 (39.4)
<b>Mother's educational background</b>	
Primary school, n (%)	28 (12.8)
Middle school, n (%)	32 (14.7)
High school, n (%)	64 (29.4)
Faculty, n (%)	94 (43.1)
<b>Family structure</b>	
Nuclear family, n (%)	198 (90.8)
Extended family, n (%)	20 (9.2)
<b>Working status</b>	
Not working, n (%)	156 (71.6)
Working, n (%)	62 (28.4)
<b>Income status</b>	
Minimum wage and below, n (%)	70 (32.1)
Above minimum wage, n (%)	148 (67.9)
<b>Antenatal monitoring frequency</b>	
Less than 4 times, n (%)	30 (13.8)
4 times or more, n (%)	188 (86.2)
<b>Have you received training on breast milk and breastfeeding during pregnancy?</b>	
No, n (%)	110 (50.5)
Yes, n (%)	108 (49.5)
<b>Who provided you with training on breast milk and breastfeeding?</b>	
Physician, n (%)	14 (11.1)
Midwife/nurse, n (%)	94 (87)
Family elder, n (%)	0 (0)
Written visual media, n (%)	2 (1.9)
<b>How long did you receive training on breast milk and breastfeeding?</b>	
Short term (1-2 hours), n (%)	74 (68.5)
Long term (1 day or more), n (%)	34 (31.5)
<b>Was it a planned pregnancy?</b>	
No, n (%)	42 (19.3)
Yes, n (%)	176 (80.7)
<b>What was your last birth method?</b>	
By normal vaginal route, n (%)	86 (39.4)
Cesarean section, n (%)	132 (60.6)
<b>How many living children do you have?</b>	
0, n (%)	4 (1.8)
1, n (%)	70 (32.1)
2, n (%)	84 (38.5)
3 or more, n (%)	60 (27.5)
<b>Baby's gender</b>	
Male	124 (53.9)
Female	106 (46.1)
<b>Was it a multiple pregnancy? n (%)</b>	
No, n (%)	206 (94.5)
Yes, n (%)	12 (5.5)
<b>Is your child premature?</b>	
No, n (%)	172 (78.9)
Yes, n (%)	46 (21.1)
<b>Pregnancy age, week, median (IQR), min-max</b>	
	38 (1) (33-42)
<b>Birth weight, grams, median (IQR), min-max</b>	
	3100 (563) (1300-4500)
<b>Babies' classification according to birth weight</b>	
Less than 2500 grams, n (%)	28 (12.8)
Between 2500-4000 grams, n (%)	182 (83.5)
More than 4000 grams, n (%)	8 (3.7)
<b>Did your baby get sick as a newborn?</b>	
No, n (%)	168 (77.1)
Yes, n (%)	50 (22.9)
<b>Was your baby hospitalized as a newborn?</b>	
No, n (%)	166 (76.1)
Yes, n (%)	52 (23.9)
<b>How long was the hospital stay? Days, median (IQR), min-max</b>	
	2 (6) (1-27)

<b>When did you first give breast milk to your baby after birth?</b>	
In the first half hour, n (%)	142 (65.1)
At 1 hour, n (%)	34 (15.6)
In the 2 <sup>nd</sup> hour, n (%)	18 (8.3)
At the 3 <sup>rd</sup> hour or later, n (%)	24 (11)
<b>Why couldn't you give your baby breast milk within the first half hour after birth?</b>	
My milk did not come, n (%)	54 (25.2)
I was in pain, n (%)	2 (0.9)
My baby was sick or in an incubator, n (%)	12 (5.6)
The baby did not suck, n (%)	6 (2.8)
<b>What was the first food given to your baby after birth?</b>	
Breast milk, n (%)	172 (78.9)
Formula, n (%)	44 (20.2)
Water, n (%)	2 (0.9)
<b>Has your baby been given colostrum?</b>	
No, n (%)	18 (8.3)
Yes, n (%)	200 (91.7)
<b>How often did you breastfeed your baby?</b>	
Whenever the baby wants	190 (87.2)
Every 1 hour	6 (2.8)
Every 2 hours	20 (9.2)
Every 3 hours	2 (0.9)
<b>How long did you give your baby exclusive breast milk?</b>	
0-1 month, n (%)	38 (17.4)
2-3 months, n (%)	14 (6.4)
4-5 months, n (%)	28 (12.8)
6 months, n (%)	138 (63.3)
<b>What was the reason for breastfeeding your baby for less than 6 months?</b>	
Stopped sucking, n (%)	14 (6.4)
Breast milk was not enough, n (%)	54 (25.2)
I started work, n (%)	2 (0.9)
The baby was sick, n (%)	6 (2.8)
Because I'm sick myself, n (%)	2 (0.9)
<b>How long did you breastfeed your last child? (n:214)</b>	
Less than 1 month, n (%)	10 (4.7)
1-3 months, n (%)	20 (9.3)
4-6 months, n (%)	10 (4.7)
7-12 months, n (%)	34 (15.9)
12 months and above, n (%)	140 (65.4)
<b>When did you start supplementary foods?</b>	
0-2 months, n (%)	24 (11)
3-4 months, n (%)	18 (8.3)
5-6 months, n (%)	92 (42.2)
7 months and above, n (%)	84 (38.5)
<b>What was the first complementary food you started giving your baby?</b>	
Formula	52 (23.9)
Fruit juice or puree	28 (12.8)
Yogurt	128 (58.7)
Cooking water	10 (4.6)
<b>Did you give your baby water while breastfeeding?</b>	
No, n (%)	124 (56.9)
Yes, n (%)	94 (43.1)
<b>Did your baby suck on a pacifier?</b>	
No, n (%)	106 (48.6)
Yes, n (%)	112 (51.4)
<b>Have you used a bottle while feeding your baby?</b>	
No, n (%)	82 (37.6)
Yes, n (%)	136 (62.4)
<b>Do you think there is any formula or other food that has the same value as breast milk?</b>	
No	200 (91.7)
Yes	18 (8.3)

	Exclusive breastfeeding status for the first six Months				95% CI	p-value
	No		Yes			
<b>Where do you reside?</b>	n	%	n	%		
Rural	18	22.5	20	14.5	0.845-3.474	0.133
City	62	77.5	118	85.5		
<b>Mothers' age groups</b>						
19-24 years	12	15	8	5.8		
25-34 years	44	55	68	49.3		0.020
35 years and above	24	30	62	44.9		
<b>Mother's educational background</b>						
Primary school, n (%)	14	17.5	14	10.1		0.379
Middle school, n (%)	12	15	20	14.5		
High school, n (%)	24	30	40	29		
Faculty, n (%)	30	37.5	64	46.40		
<b>Family structure</b>						
Nuclear family, n (%)	26	32.5	44	31.9	0.571-1.854	0.925
Extended family, n (%)	54	67.5	94	68.1		
<b>Working status</b>						
Not working, n (%)	52	65.0	104	75.40	0.333-1.107	0.102
Working, n (%)	28	35.00	34	24.60		
<b>Income status</b>						
Minimum wage and below, n (%)	26	32.5	44	31.9	0.571-1.854	0.925
Above minimum wage, n (%)	54	67.5	94	68.1		
<b>Antenatal monitoring frequency</b>						
Less than 4 times, n (%)	10	12.50	20	14.50	0.373-1.903	0.681
4 times or more, n (%)	70	87.50	118	85.50		
<b>Have you received breastfeeding training during pregnancy?</b>						
No, n (%)	44	55.00	66	47.80	0.767-2.317	0.307
Yes, n (%)	36	45.00	72	52.20		
<b>Who is the person you received training on breast milk and breastfeeding?</b>						
Physician, n (%)	42	52.50	66	47.80		
Midwife/nurse, n (%)	4	5.00	10	7.20		0.617
Family elder, n (%)	34	42.50	60	43.50		
Written visual media, n (%)	0	0.00	2	1.40		
<b>Was it a planned pregnancy?</b>						
No, n (%)	12	15.00	30	21.7	0.305-1.325	0.224
Yes, n (%)	68	85.00	108	78.30		
<b>What was your last birth?</b>						
By normal vaginal route, n (%)	22	27.50	64	46.40	0.242-0.794	0.006
Cesarean section, n (%)	58	72.50	74	53.60		
<b>How many living children do you have?</b>						
0, n (%)	0	0.00	4	2.90		
1, n (%)	34	42.50	36	26.10		0.013
2, n (%)	22	27.50	62	44.90		
3 or more, n (%)	24	30.00	36	26.10		
<b>Multiple pregnancy, n (%)</b>						
No	70	87.50	136	98.60	0.022-0.483	0.001
Yes	10	12.50	2	1.40		
<b>Is your child premature?</b>						
No, n (%)	56	70.00	116	84.10	0.229-0.857	0.014
Yes, n (%)	24	30.00	22	15.90		
<b>Babies' classification according to birth weight</b>						
Less than 2500 grams, n (%)	20	25.00	8	5.80		
Between 2500-4000 grams, n (%)	58	72.50	124	89.90	-	<0.0001
More than 4000 grams, n (%)	2	2.50	6	4.30		
<b>Did your baby get sick as a newborn?</b>						
No, n (%)	50	62.50	118	85.50		<0.0001
Yes, n (%)	30	37.50	20	14.50		
<b>Was your baby hospitalized as a newborn?</b>						
No, n (%)	50	62.50	116	84.10	-	<0.0001
Yes, n (%)	30	37.50	22	15.90		
<b>Did your baby suck on a pacifier?</b>						
No, n (%)	26	32.50	80	58.00	0.196-0.622	<0.0001
Yes, n (%)	54	67.50	58	42.00		
<b>Have you used a bottle while feeding your baby?</b>						
No, n (%)	18	22.50	64	46.40	0.180-0.625	<0.0001
Yes, n (%)	62	77.50	74	53.60		



The systematic review conducted by Wu et al.<sup>18</sup> identified several factors influencing exclusive breastfeeding, including maternal employment status, breastfeeding knowledge, mode of delivery, number of births, perceived insufficient milk supply, maternal feeding attitudes, breastfeeding self-efficacy, and intentions. The relationship between exclusive breastfeeding and maternal sociodemographic characteristics is intricate. While some studies indicate a significant association with maternal residence<sup>19</sup>, current findings align with those of Göktepe et al.,<sup>20</sup> showing no significant relationship. The correlation between maternal age and exclusive breastfeeding rates also varies across research. Some studies suggest that older maternal age is linked to higher breastfeeding rates,<sup>12,21</sup> while others report no significant association.<sup>22</sup> Importantly, current findings reveal that mothers aged 19-24 exhibited lower exclusive breastfeeding rates compared to older mothers, suggesting that younger maternal age may negatively affect breastfeeding duration.

To effectively support breastfeeding, it is crucial to educate mothers during both prenatal and postnatal periods. Research indicates that a significant proportion of mothers receive information about infant feeding during pregnancy, primarily from healthcare professionals.<sup>23,24</sup> Increased emphasis on breastfeeding education during pregnancy is necessary to enhance maternal knowledge and practices.

In examining factors influencing exclusive breastfeeding, significant relationships have been noted regarding maternal characteristics, including age, education level, and frequency of antenatal visits.<sup>12</sup> However, other studies have shown no significant links with factors like gestational age or maternal residence.<sup>20</sup> While some research suggests a connection between maternal education and breastfeeding duration,<sup>19</sup> current findings align with those of Göktepe et al.,<sup>20</sup> showing no significant associations with exclusive breastfeeding rates. Nonetheless, a relationship was identified between the number of living children and breastfeeding practices.

The relationship between delivery methods and exclusive breastfeeding varies across studies. While some research shows no significant differences in breastfeeding initiation based on delivery method,<sup>25</sup> others report significant delays in breastfeeding for cesarean deliveries.<sup>22,26</sup> Present study reflects this trend, highlighting the need for healthcare professionals to implement strategies that promote timely breastfeeding initiation, particularly for mothers who experience cesarean sections.

Previous studies have shown that longer breastfeeding durations are associated with increased gestational age and normal birth weight.<sup>26</sup> The current study identified significant differences among those exclusively breastfeeding for the first six months based on factors such as multiple pregnancies, prematurity, birth weight, infant health status, and hospitalization. These findings suggest that premature infants or those requiring hospitalization may not receive breast milk or may receive it later due to their medical conditions.

A comprehensive study conducted in Japan in 2021 involving 80,491 mothers found that 37.4% of mothers exclusively breastfed their infants for the first six months.<sup>27</sup> According to the 2018 Türkiye Demographic and Health Survey (TDHS),

the rate of exclusive breastfeeding for the first six months was reported at 41%.<sup>4</sup> The World Health Organization aims to increase this rate to at least 50% by 2025.<sup>28</sup> In contrast, Göktepe et al.<sup>20</sup> found this rate to be 55% in their study, while the current study reports an exclusive breastfeeding rate of 63% during the first six months. Additionally, the breastfeeding initiation rate within the first hour of birth was found to be 71% in the 2018 TDHS data and approximately 77% in Göktepe et al.'s<sup>20</sup> study, whereas the present study found this rate to be 80.7%. This exceeds UNICEF's target of 80% for early breastfeeding initiation set in 2016.<sup>28</sup> These results highlight the positive trends in breastfeeding practices and indicate significant progress toward global breastfeeding goals.

Çalık et al.<sup>12</sup> indicated that a notable proportion of mothers-initiated breastfeeding within the first half-hour postpartum, with many providing breast milk as the first food. In the current study, about 65% of mothers reported breastfeeding within the first 30 minutes after birth, with around 79% indicating that breast milk was their infant's first food. Aligning with Çalık et al., who noted that many mothers breastfed their infants on demand, the present study found that a significant majority of mothers breastfed their infants whenever they wished. Furthermore, a notable proportion of mothers reported exclusively breastfeeding for the first six months. Çalık et al. identified key reasons for not breastfeeding for less than six months, including the infant ceasing to suck and insufficient breast milk.<sup>12</sup> A 2023 study conducted in Australia revealed that the most common reasons for discontinuing breastfeeding were breastfeeding challenges and low milk supply. This study also emphasized the importance of providing breastfeeding support based on women's age and education during the early postpartum period.<sup>29</sup> In the current study, among those unable to breastfeed within the first half-hour, many attributed this to the absence of breast milk, while the second most common reason was the infant's illness or need for incubator care.

In Çalık et al.'s<sup>12</sup> study, a significant number of mothers began introducing complementary foods at 4-5 months, with many offerings' formula and water as complementary foods. In contrast, the current study found that a considerable proportion of mothers breastfed their infants for over 12 months. The most common age for introducing solid foods was reported to be between 5-6 months, with yogurt being frequently mentioned as the first complementary food. Additionally, many mothers indicated that they provided water while breastfeeding, used pacifiers, and fed their infants using bottles. These findings underscore the importance of ongoing education and support for mothers regarding breastfeeding practices, particularly in addressing the barriers faced by those unable to initiate breastfeeding early or maintain exclusive breastfeeding for the recommended duration. Enhancing awareness and resources can play a significant role in achieving global breastfeeding targets and promoting infant health.

### Limitations

This study is a survey based on the opinions of mothers who are presented at the hospital, which limits the ability to establish causative relationships. Additionally, the sample

may not be representative of the entire population, and, therefore, the findings cannot be generalized to all women. Consequently, the results of this study should be interpreted with caution. The results of the reliability analysis indicate a need for further refinement of the questionnaire. The low Cronbach's alpha values across multiple items suggest that the items may not effectively measure a cohesive construction. Although the KMO value indicates that the sample size is adequate for factor analysis, the significant Bartlett's test of Sphericity confirms the need for modifications to enhance the reliability and validity of the questionnaire. Despite these limitations, the study has yielded some significant findings within the present study population.

## CONCLUSION

Research findings emphasize that more than half of mothers feed their babies exclusively with breast milk for the first 6 months, and a significant portion of them continue breastfeeding after the first year. It has been shown that some baby and maternal factors may be effective in feeding babies only breast milk for the first 6 months. More comprehensive studies are needed on this subject.

## ETHICAL DECLARATIONS

### Ethics Committee Approval

The study was carried out with the permission of the KTO Karatay University Faculty of Medicine Non-Drug and Non-Medical Device Researches Ethics Committee (Date: 31.10.2024, Decision No: 2024/005).

### Informed Consent

All patients signed and free and informed consent form.

### Referee Evaluation Process

Externally peer-reviewed.

### Conflict of Interest Statement

The authors have no conflicts of interest to declare.

### Financial Disclosure

The authors declared that this study has received no financial support.

### Author Contributions

All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

## REFERENCES

- Irmak N. The importance of breast milk and factors influencing exclusive breastfeeding for the first six months. *J Turk Fam Phy.* 2016;07(2):27-31. doi:10.15511/tjtfp.16.02627
- Smith HA, Becker GE. Early additional food and fluids for healthy breastfed full-term infants. *Cochrane Database Syst Rev.* 2016;2016(8):CD006462. doi:10.1002/14651858.CD006462.pub4
- World Health Organization. WHO European region has lowest global breastfeeding rates 2019. Geneva: World Health Organization; 2015. cited 2020 March 23. Available from: <http://www.euro.who.int/en/health-topics/Life-stages/maternal-and-newborn-health/news/news/2015/08/who-european-region-has-lowest-global-breastfeeding-rates>.
- Hacettepe Üniversitesi Nüfus Etütleri Enstitüsü. Türkiye Nüfus ve Sağlık Araştırması 2018. Erişim adresi: [https://fs.hacettepe.edu.tr/hips/dosyalar/Ara%C5%9Ft%C4%B1rmalar%20raporlar/2018%20TNSA/TNSA2018\\_ana\\_Rapor\\_compresse.d.pdf](https://fs.hacettepe.edu.tr/hips/dosyalar/Ara%C5%9Ft%C4%B1rmalar%20raporlar/2018%20TNSA/TNSA2018_ana_Rapor_compresse.d.pdf);2019
- Kimani-Murage EW, Madise NJ, Fotso JC, et al. Patterns and determinants of breastfeeding and complementary feeding practices in urban informal settlements, Nairobi Kenya. *BMC Public Health.* 2011; 11:396. doi:10.1186/1471-2458-11-396
- Lauer JA, Betrán AP, Victora CG, de Onís M, Barros AJ. Breastfeeding patterns and exposure to suboptimal breastfeeding among children in developing countries: review and analysis of nationally representative surveys. *BMC Med.* 2004;2:26. doi:10.1186/1741-7015-2-26
- Demir G, Yardımcı H, Özçelik AÖ, Çakıroğlu FP. Compliance of mothers' breastfeeding and complementary feeding practices with WHO recommendations in Turkey. *Nutr Res Pract.* 2020;14(6):654-666. doi:10.4162/nrp.2020.14.6.654
- Özgürhan G, Cömert S. An evaluation of the factors affecting exclusive breastfeeding. *Istanbul Med J.* 2020;21(4):301-306. doi:10.4274/imj.galenos.2020.84594
- World Health Organization. Breastfeeding in the 21<sup>st</sup> century [Internet]. Geneva: World Health Organization; 2020. cited 2020 March 23. Available from: [https://www.who.int/pmnch/media/news/2016/breastfeeding\\_brief.pdf](https://www.who.int/pmnch/media/news/2016/breastfeeding_brief.pdf).
- Aygör H, Düdükçü FT. Annelerin emzirme ve anne sütüne yönelik geleneksel uygulamaları: tanımlayıcı çalışma. *Güncel Hemşir Araşt Derg.* 2024;4(1):1-10.
- Bostancı G, İnal S. The evaluation of knowledge and practice about breastfeeding of mothers who delivering at a private baby friendly hospital. *J Health Sci Profess (in Turkish).* 2015;2(3):260-70. doi:10.17681/hsp.27403
- Çalık KY, Çetin FC, Erkaya R. Annelerin emzirme konusunda uygulamaları ve etkileyen faktörler. *GÜSBDD.* 2017;6(3):80-91.
- Victora CG, Bahl R, Barros AJ, et al. Breastfeeding in the 21<sup>st</sup> century: epidemiology, mechanisms, and lifelong effect. *Lancet.* 2016;387(10017):475-490. doi:10.1016/S0140-6736(15)01024-7
- Gün İ, Yılmaz M, Şahin H, et al. Kayseri Melikgazi Eğitim ve Araştırma Bölgesi'nde 0-36 aylık çocuklarda anne sütü alma durumu. *Çocuk Sağl Hast Derg.* 2009;52:176-182.
- Al-Sahab B, Lanes A, Feldman M, Tamim, H. Prevalence and predictors of 6-month exclusive breastfeeding among Canadian women: a national survey. *BMC Pediatr.* 2010;10(20): 1-9.
- İnanç BB. 15-49 Yaş arası annelerin anne sütü ile ilgili uygulamaları ve etki eden faktörleri. *Türk Aile Hek Derg.* 2013;17(2): 51-55. doi:10.1186/1471-2431-10-20
- Patel A, Bucher S, Pusdekar Y, et al. Rates and determinants of early initiation of breastfeeding and exclusive breast feeding at 42 days postnatal in six low and middle-income countries: a prospective cohort study. *Reprod Health.* 2015;12 Suppl 2(Suppl 2):S10. doi:10.1186/1742-4755-12-S2-S10
- Wu Q, Tang N, Wacharasin C. Factors influencing exclusive breastfeeding for 6 months postpartum: a systematic review. *Int J Nurs Knowl.* 2022; 33(4):290-303. doi:10.1111/2047-3095.12360
- Şafak Ç, Ata Tutkun N. Anne sütü ile beslenme sürelerinin yaşam çözümlemesi ile incelenmesi: Kuzey Kıbrıs Türk Cumhuriyeti örneği. *İzmir Dr Behçet Uz Çocuk Hast Derg.* 2015;5(3):167-76. doi:10.5222/buchd.2015.167
- Göktepe ST, Öztürk O. Annelerin bebeklerini emzirme süresi ve bunu etkileyen olası faktörler. *TJFMPC.* 2023;17(4):470-478. doi.org/10.21763/tjfmcp.1265079
- Tappin DM, Mackenzie JM, Brown AJ, Girdwood RW, Britten J, Broadfoot M. Comparison of breastfeeding rates in Scotland in 1990-1 and 1997-8. *BMJ.* 2001;322(7298):1335-1336. doi:10.1136/bmj.322.7298.1335
- Ünsal H, Atlıhan F, Özkan H, et al. Toplumda anne sütü verme ve buna etki eden faktörler. *Çocuk Sağl Hast Derg.* 2005;48: 226-233. doi:10.5222/forbes.2021.04706
- Eker A, Yurdakul M. Annelerin bebek beslenmesi ve emzirmeye ilişkin bilgi ve uygulamaları. *STED.* 2006;15(9):158-163. doi:10.17681/hsp.451147
- Kartal B, Kaplan B, Buldu A, et al. Doğum sonu dönemdeki kadınların emzirme özellikleri ve bunu etkileyen meme sorunları. *İzmir Üniv Tıp Derg.* 2015;1(1):1-10.

25. Yoldaş H, Dinçer T, Garipağoğlu M. 0-6 Aylık bebeklerin büyüme gelişme ve beslenme özelliklerinin değerlendirilmesi. *Sağl Akademik Derg.* 2021;8(1):29-35. doi:10.13140/RG.2.2.25022.56644
26. Yahşi A, Şaylı T. Anne sütünü etkileyen faktörler ve emzik kullanımının emzirme üzerine etkileri. *Pam Med J.* 2022;15(4):788-795. doi:10.31362/patd.1089158
27. Inano H, Kameya M, Sasano K, et al. Japan environment and children's study (JECS) Group. Factors influencing exclusive breastfeeding rates until 6 months postpartum: the Japan environment and children's study. *Sci Rep.* 2021;11(1):6841. doi:10.1038/s41598-021-85900-4
28. UNICEF. [cited 08.01.2025]. Available from: <https://www.unicef.org/press-releases/world-breastfeeding-week-unicef-and-who-call-equal-access-breastfeeding-support>; 2025.
29. Reynolds R, Kingsland M, Daly J, et al. Breastfeeding practices and associations with pregnancy, maternal and infant characteristics in Australia: a cross-sectional study. *Int Breastfeed J.* 2023;18(1):8. doi:10.1186/s13006-023-00545-5