



Examining the Breastfeeding Self-Efficacy of Mothers Diagnosed with COVID-19

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ABSTRACT

Objective: It is an important issue to determine the effects and health behaviors of mothers and babies, who are among the vulnerable groups, in particular situations that affect the perceptions and orientations of societies in many dimensions, such as the pandemic. The present study was carried out in order to investigate the breastfeeding-related knowledge and practices of mothers diagnosed with COVID-19 and their breastfeeding self-efficacy.

Methods: This descriptive and cross-sectional study was carried out on mothers diagnosed with COVID-19 and having a baby aged between 0 and 24 months. Data were obtained through a questionnaire form including participants' descriptive characteristics and the breastfeeding self-efficacy scale: short form, administered through telephone interviews.

Results: The study included participants with a mean age of 29.39 ± 5.34 years, of whom 86% resided in urban/rural centers. The average number of pregnancies was 3.46 ± 2.34 , and the average number of living children was 2.80 ± 1.79 . The percentage of mothers who continued to breastfeed their babies after being diagnosed with COVID-19 was 73.9%. The mean score of breastfeeding self-efficacy in the study group was 54.4 ± 7.2 , and the average scores of breastfeeding self-efficacy for mothers who continued to breastfeed after being diagnosed with COVID-19 were significantly higher.

Conclusion: In this study, it was determined that mothers with high breastfeeding self-efficacy scores continued breastfeeding after COVID-19 diagnosis.

Keywords: COVID-19, breastmilk, breastfeeding, self-efficacy.

1. INTRODUCTION

In 2019, a respiratory illness called COVID-19 characterized by severe acute respiratory syndrome and transmitted among people through respiratory droplets emerged in the city of Wuhan, China (1). The World Health Organization (WHO) declared this disease a pandemic on 11th March 2020 since it began to affect the whole world and spread rapidly (2). As of 1st June 2023, the WHO reported a total of 767 million cases and 6.9 million deaths worldwide (3). In Türkiye, the first case was seen on 13th March 2020 and there have been reported 17.2 million cases and 102.000 deaths as of 7th April 2023 (4).

The COVID-19 pandemic has affected all aspects of health care in every region of the world. Promotion of breastfeeding was also among the services affected. Guidelines and systematic reviews containing recommendations on breastfeeding have started to be published during the COVID-19 period. In a systematic review carried out by Çınar et al. in 2022,

46 studies on the breastfeeding status of mothers with diagnosed with or suspected for COVID-19 were examined, and it was reported that breastfeeding should continue for the protection of both mothers and babies (5). Moreover, there is no evidence of vertical transmission of COVID-19 to infants through breast milk (1,6–8). However, studies have shown that breast milk from mothers diagnosed with COVID-19 contains coronavirus antibodies (9,10) and breastfed infants have better clinical outcomes compared to non-breastfed infants (11,12).

Self-efficacy perception plays an important role in the sustainability of breastfeeding among breastfeeding mothers (13). Breastfeeding self-efficacy is defined as the mother's confidence in her ability to breastfeed her baby (14) and is one of the factors influencing the continuation of breastfeeding in the first 6 months after birth (15). Self-efficacy is one of the

essential components of Bandura's social cognitive theory (1997) and includes a person's belief and confidence in their ability to engage in healthy behaviors, including successful breastfeeding (16).

Although there are numerous studies on breastfeeding and breast milk, limited research has been conducted on the experiences of mothers diagnosed with COVID-19 and the factors influencing their breastfeeding experiences and self-efficacy during the COVID-19 pandemic, which has affected societies in many dimensions (17–19). In light of this information, this study aims to determine the breastfeeding experiences and self-efficacy of mothers diagnosed with COVID-19 and effecting factors (descriptive characteristics related to mother and infant, characteristics related to the disease, etc).

2. METHODS

2.1. Study Design and Sampling

This study has a descriptive and cross-sectional design. The study universe consists of mothers residing in Şanlıurfa province, who were diagnosed with COVID-19 and have a baby aged between 0 and 24 months old. Individuals, who were diagnosed with COVID-19 and had a baby between 0 and 24 months old, were identified from the sequential list obtained from the Şanlıurfa Provincial Health Directorate for the study (3009 individuals). The identified names were sorted in ascending order according to their national identification numbers, and a systematic sampling method was used to select participants. The contact and address information of the selected participants was recorded by making use of the data obtained from the Provincial Health Directorate's database. It was attempted to reach the participants through phone calls. Due to incorrect phone numbers of 73 mothers, unanswered calls from 58 mothers, unwillingness to participate from 26 mothers, and inability to establish communication due to not speaking Turkish by 1 mother, they could not participate in the study, and the study was completed with 142 mothers.

The inclusion criteria were having a diagnosis of COVID-19, having a baby between 0 and 24 months old, not having any complications related to breastfeeding, having no communication barriers, and agreeing to participate in the study. The exclusion criteria, mothers who refused to participate in the study, who had a barrier to breastfeeding and who had a communication barrier were not included in the study.

The study received approval from the Ministry of Health on 21st April 2021, data supply and processing approval from the Şanlıurfa Provincial Health Directorate (11/06/2021, Barcode Number: 141658715), and ethical approval from the Harran University Clinical Research Ethics Committee (Approval date: 26/04/2021, Meeting Decision No: HRÜ/21.09.05). Permission for the use of the scale was obtained from the author, who conducted the adaptation. At the beginning

of the telephone call with the participants, verbal consent was obtained by explaining the purpose of the call, assuring the confidentiality of their identity and responses, stating that the obtained information would be used solely for scientific purposes, and emphasizing the voluntary nature of participation. All procedures were conducted in accordance with the ethical standards of our institution's human experimentation committee and the Helsinki Declaration.

2.2. Data Collection Tools

In this study, data were obtained using a questionnaire that included descriptive characteristics of the participants and a breastfeeding self-efficacy scale: the short form.

The descriptive characteristics questionnaire consisted of 61 questions about the mother, infant, breastfeeding status and the disease and was prepared by the researchers.

The Breastfeeding Self-Efficacy Scale is a 5-point Likert-type (ranging from 1 = "not at all confident" to 5 = "always confident") scale consisting of 14 items. The minimum possible score from the scale is 14, and the maximum score is 70. All items are evaluated positively. A higher score indicates higher breastfeeding self-efficacy. Its adaptation into the Turkish language was conducted by Aluş Tokat in 2017 (22). The Cronbach's alpha value of the adapted version was found to be 0.86. In this study, Cronbach's alpha value was found to be 0.81.

The data were obtained through telephone interviews with individuals sampled between April and December 2021, following the necessary administrative and ethical permissions. The principle of voluntarism was adopted in the research, and after explaining the purpose of the study to the participants, the questions in the data collection form were asked. The questionnaires were filled out based on the answers given. An average of 20 minutes of interview was conducted for each participant.

2.3. Statistical Analysis

The data obtained were saved and analyzed using IBM SPSS Statistics v.22.0 (IBM Corp.; Armonk, NY, USA) software package. Mean \pm standard deviation, minimum-maximum values were used for continuous variables and frequency and percentages for nominal variables in statistical analyses. The suitability of continuous variables for normal distribution was determined by examining the Kolmogorov-Smirnov test, normal distribution graphs, skewness, and kurtosis coefficients together. The significance of the difference in terms of continuous variables was investigated using independent samples t-test and F-test (One-way ANOVA). Pearson correlation analysis was used to determine the degree and direction of the relationship between two numerical variables. A p-value less than .05 was considered statistically significant for all analyses.

2.4. Limitations

Although the participants of the study were determined through a sampling conducted within a single province, no stratification was performed based on the regions and characteristics of the settlements within the province. This did not provide us the opportunity to observe the differences in health behavior patterns adopted by cultural characteristics in this province. Additionally, we believe that evaluating the behavioral tendencies regarding breastfeeding before and after the pandemic would better explain the possible effects of being diagnosed with COVID-19 on breastfeeding behavior.

3. RESULTS

When examining the distribution of information regarding the sociodemographic characteristics of the mothers participating in the study, the average age was found to be 29.39 ± 5.34 years (Min-max: 19-42). While 86.0% of the mothers reside in the city/district center, 79.6% live in nuclear families. Moreover, 77.5% of the mothers do not work in any income-generating occupation and 19.7% of the participants have not received any formal education. However, participant mothers described their perception of the family's economic situation as "Our income is less than our expenses" with a rate of 63.3% (Table 1).

Table 1. Distribution of participants' sociodemographic characteristics

n:142	$\bar{X} \pm SD$ (Min-Max)	
Maternal age (Years)	29.39 ± 5.34 (19-42)	
	n	%
Place of living		
City/district center	122	86.0
Village/County	20	14.0
Family type		
Nuclear Family	113	79.6
Extended Family	29	20.4
Employment status of mother		
Yes	32	22.5
No	110	77.5
Educational level of mother		
Illiterate/Literate	28	19.7
Elementary and Secondary School	78	54.9
University and Higher	36	25.4
Economic condition perception of mother for the family		
Income lower than expenses	90	63.3
Income equals expenses	40	28.2
Income higher than expenses	12	8.5

\bar{X} : Mean, SD : Standard Deviation, **Min**: Minimum, **Max**: Maximum

When examining the distribution of information regarding the obstetric history of the mothers, the average age of the participants at their first childbirth was found to be 22.79 ± 4.08 years (Min-max: 16-38). The average total

number of pregnancies for the mothers was 3.46 ± 2.34 (Min-max: 1-13), and the average number of living children was 2.80 ± 1.79 (Min-max: 1-10). The rate of receiving prenatal care among mothers was determined to be 67.6%. It was determined that 75.4% of the recent pregnancies were planned, and 53.5% of the births were performed via cesarean section. Furthermore, 18.3% of the infants in the last birth had a health problem (Table 2).

Table 2. Distribution of participants' obstetric history, babies' personal characteristics, and breastfeeding-related knowledge and behaviors

n:142	$\bar{X} \pm SD$ (Min-Max)	
Maternal age of first birth (Year)	22.79 ± 4.08 (16-38)	
Total number of pregnancies	3.46 ± 2.34 (1-13)	
Number of living children	2.80 ± 1.79 (1-10)	
Number of dead/stillbirths	0.67 ± 1.03 (0-6)	
Last baby's gestational week of birth	38.51 ± 1.84 (26-42)	
Age of the last baby (month)	13.82 ± 1.73 (5-19)	
Birthweight of the last baby (gram)	3149 ± 626 (900-5000)	
Mother's mean breastfeeding duration for other babies (month)	11.60 ± 9.85 (0-36)	
	n	%
Prenatal care		
Yes	96	67.6
No	46	32.4
Last pregnancy was planned		
Yes	107	75.4
No	35	24.6
Birth method of the last baby		
NSVB	66	46.5
C/S	76	53.5
Health problem at birth for the last baby		
Yes	26	18.3
No	116	81.7
Gender of baby		
Female	58	40.8
Male	84	59.2
Current feeding situation of baby		
Only breastmilk	3	2.1
Breastmilk and formula	7	4.9
Breast milk and supplementary nutrition	80	56.3
Other (without breastmilk)	52	36.7
Feeding method (n:139)		
Spoon	97	69.8
Feeding bottle	22	15.8
Both	20	14.4
Mother's belief in the benefit of breastmilk		
Yes, beneficial	140	98.6
No, not	2	1.4
Should the baby be fed only on breastmilk for the first 6 months?		
Yes	95	66.9
No	47	33.1
Breastfeeding training		
Yes	44	31.0
No	98	69.0

Source of breastfeeding training (n:44)		
Physician/nurse/midwife	28	63.64
Written and/or visual sources of information	6	13.64
Family/Relatives	10	22.72
Is your knowledge of breastfeeding sufficient?		
Yes	131	92.3
No	11	7.7
Spousal support in breastfeeding		
Yes	132	93.0
No	10	7.0
Spousal support for baby care		
Yes	105	73.9
No	37	26.1
The person offering help in baby care after the birth		
Only mother	34	23.9
Only spouse	30	21.2
Spouse/Parents	78	54.9

\bar{X} : Mean, SD: Standard deviation, Min: Minimum, Max: Maximum, NSVB: Normal spontaneous vaginal birth, C/S: Cesarean

The distribution of information regarding the mothers' knowledge and attitudes toward breastfeeding is presented in Table 2. The average duration of breastfeeding for their previous infants is 11.60 ± 9.85 months (Min-max: 0-36). 98.6% of the mothers stated that breast milk is a beneficial source of nutrition. The rate of participants who believe that exclusively breastfeeding, including water, is sufficient for the first 6 months, is 66.9%, 31.0% of the participants declared that they received any education about breastfeeding, 92.3% of the mothers reported that they have sufficient knowledge about breastfeeding, 93.0% of the mothers stated that their partner supports them in breastfeeding, and 73.9% declared that their partner helps them in taking care of the baby after birth.

The distribution of some characteristics of the participating mothers regarding COVID-19 infection is presented in Table 3. The number of mothers requiring hospitalization after diagnosis is 3 (2.1%), and the rate of medication use for treatment is 40.8%. During this period, 96 (67.6%) mothers reported being concerned about transmitting the infection to their babies, 26.1% of the mothers stopped breastfeeding after being diagnosed with COVID-19. 66.9% of the mothers stated that they use personal protective equipment, and 68.3% of the participants reported receiving information about breastfeeding during the COVID-19 disease from any source. The rate of those who reported being supported in breastfeeding during the infection process was 45.1%. The mothers stated that, during the illness, 57.0% of them were in the same room but away from the bed, 23.2% were in a different room, 16.3% were next to the bed, and 3.5% were in different houses from their babies. Moreover, 59.9% of the mothers stated that there was no decrease in their breast milk during the illness. 89.4% of the mothers did not receive the COVID-19 vaccine, while 10.6% were vaccinated. 55.9% of the mothers stated

that they did not receive the vaccine due to the lack of priority, 33.1% expressed hesitation/ lack of trust in the vaccine, 7.1% believed that it would harm their baby while breastfeeding and 3.9% mentioned that they did not receive the COVID-19 vaccine because they were pregnant.

Table 3. Distribution of participants' characteristics regarding COVID-19 infection

	n	%
Hospitalization status during treatment		
Yes	3	2.1
No	139	97.9
Medication use during treatment		
Yes	58	40.8
No	84	59.2
Concern about transmitting the infection to the baby		
Yes, does	96	67.6
No, doesn't	46	32.4
Continuation of breastfeeding after diagnosis		
Yes, I breastfed	105	73.9
No, I did not breastfeed	37	26.1
Reasons for not breastfeeding after diagnosis (n:37)		
Medication use	2	5.4
Concern about transmission	5	13.5
Belief that the baby can be adequately nourished with formula	30	81.1
Feeding method for the baby after diagnosis		
Breastfeeding only	45	31.7
Breastfeeding with complementary food and formula	59	41.5
Expressing breast milk and feeding with a bottle	1	0.7
Only complementary food and formula	37	26.1
Use of personal protection equipment after diagnosis		
Yes	95	66.9
No	47	33.1
Information-seeking status about breastfeeding after diagnosis		
Yes	97	68.3
No	45	31.7
Support received for breastfeeding during the infection process		
Yes	64	45.1
No	78	54.9
Proximity to the baby after the infection		
Beside the bed	23	16.3
In the same room but away from the bed	81	57.0
In a different room	33	23.2
In a different house	5	3.5
Feeling of decreased breast milk production during the infection process		
Yes	57	40.1
No	85	59.9
COVID-19 vaccination status		
Yes	15	10.6
No	127	89.4
Reasons for not getting the COVID-19 vaccine (n:127)		
Not being prioritized for vaccination	71	55.9
Concern that it would harm the baby	9	7.1
Being pregnant	5	3.9
Hesitation/lack of trust towards the vaccine	42	33.1

Table 4. Comparison of breastfeeding self-efficacy scale mean scores with various characteristics of participants

	n	Test/p	$\bar{X} \pm SD$
Maternal age groups			
19-25 years	44	F: 0.442	53.61±7.23
26-35 years	79	p: 0.643	54.89±7.37
36 years and older	19		54.42±6.85
Mother's educational level			
Illiterate/Literate	28	F: 1.015	55.32±5.95
Elementary and secondary school	78	p: 0.365	53.65±7.37
University and higher	36		55.44±7.80
Family type			
Extended family	29	t: 0.084	54.51±5.24
Nuclear family	113	p: 0.934	54.41±7.68
Place of living			
City/district center	122	t: 2.433	55.02±7.29
Village	20	p: 0.016*	50.85±5.82
Employment status of mother			
Yes	32	t: 1.140	55.71±7.95
No	110	p: 0.256	54.06±7.00
Economic condition perception of mother for the family			
Income lower than expenses	90	F: 2.311	53.46±7.14
Income equals expenses	40	p: 0.103	55.92±7.24
Income higher than expenses	12		56.75±7.11
Total number of pregnancies			
1	27	F: 0.774	55.88±7.15
2	34	p: 0.463	53.61±6.70
3 and more	81		54.29±7.48
Was the last pregnancy planned?			
Yes	107	t: 2.416	55.26±6.70
No	35	p: 0.017*	51.91±8.26
Health problem in pregnancy			
Yes	36	t: -0.039	54.38±9.14
No	106	p: 0.969	54.45±6.51
Prenatal care			
Yes	96	t: 0.596	54.68±6.71
No	46	p: 0.552	53.91±8.26
Age of the last baby			
0-12 month	24	t: -0.138	54.25±5.83
3 months or older	118	p: 0.890	54.47±7.50
Gender of the baby			
Female	58	t: 0.191	54.58±8.73
Male	84	p: 0.849	54.33±6.03
Concern about transmitting the infection to the baby			
Yes	96	t: -2.977	53.21±7.24
No	46	p: 0.003*	56.97±6.58
Use of medication in treatment			
Yes	58	t: -2.558	52.60±6.65
No	84	p: 0.012*	55.70±7.38
Support in breastfeeding during the infection process			
Yes	64	t: 0.933	55.06±6.62
No	78	p: 0.352	53.92±7.70
Continuation of breastfeeding after diagnosis			
Yes, I breastfed	105	t: 4.038	55.81±7.05
No, I didn't breastfeed	37	p: 0.0001*	50.51±6.32

Use of personal protection equipment after diagnosis	95	t: 1.348	55.01±6.79
Yes	47	p: 0.180	53.27±8.00
No			
Covid-19 vaccine			
Yes	15	t: 0.657	55.60±8.06
No	127	p: 0.512	54.29±7.15
Breastfeeding training			
Yes	44	t: 0.470	54.86±7.33
No	98	p: 0.639	54.24±7.21
Perception of having sufficient knowledge about breastfeeding			
Yes	131	t: 1.829	54.75±7.22
No	11	p: 0.070	50.63±6.51

t: Independent sample t-test, F: F test, *p < 0.05, \bar{x} : Mean, SD: Standard deviation

The average score of the mothers on the Breastfeeding Self-Efficacy Scale is 54.4±7.2 (min: 34, max: 70). The comparison between the average scores of the Breastfeeding Self-Efficacy Scale with various characteristics of mothers, who had a COVID-19 infection, is presented in Table 4. There was no significant difference in the scale score averages between age groups, but the lowest score average was observed in those aged between 19 and 25 years (p>.05). The average self-efficacy score of mothers residing in the city/district center was found to be higher (p<.05). Mothers with only one pregnancy had a higher total scale score average compared to those who had multiple pregnancies (p>.05). Mothers who had a planned and desired pregnancy had a higher average self-efficacy score for breastfeeding (p<.05). The average total scale score was significantly higher for mothers who did not have concerns about transmitting the infection to their babies (p<.05). Mothers who did not use medication for treatment after the diagnosis and continued breastfeeding had a statistically significantly higher self-efficacy score for breastfeeding (p<.05). Participants who considered their knowledge about breastfeeding sufficient had a higher total score (p>.05).

Table 5. Comparison of sociodemographic, fertility, and infant characteristics by maternal breastfeeding self-efficacy scale scores

Characteristics*	Maternal Breastfeeding Self-Efficacy Scale Score	
	r	p
Maternal Age (years)	0.046	0.586
Baby's age (months)	0.087	0.302
Mother's age of first birth (years)	0.071	0.400
Gestational week of birth (week)	-0.057	0.500
Weight at birth (gram)	0.079	0.348
Total number of pregnancies	-0.056	0.510
Number of living children	-0.025	0.771
Mean breastfeeding duration (months)	0.061	0.470

*Pearson's correlation analysis, r: correlation coefficient

The comparison of sociodemographic, fertility, and baby-related characteristics according to the scores of the

Breastfeeding Self-Efficacy Scale is presented in Table 5. The correlation analysis showed that the mother's age and the baby's age did not cause a significant change in the total scale score. Similarly, the mother's age at first birth, birth weight of the last baby, total number of pregnancies, and average duration of breastfeeding did not lead to a significant differentiation in the scale score average.

4. DISCUSSION

In this study carried out to identify the behaviors of mothers diagnosed with COVID-19 regarding breastfeeding and the factors influencing breastfeeding, 73.9% of the participants continued to breastfeed their babies after diagnosis. However, the rate of breastfeeding during the course of the infection was reported to be 54.5% in another study (20) and it was emphasized that the rate of breastfeeding in the first 6 months of the pandemic was not at the desired level in another study (18). There are limited studies in the literature that determine the breastfeeding rates of mothers diagnosed with COVID-19. Regarding this issue, WHO has recommendations during the pandemic for mothers diagnosed with COVID-19 to continue using breast milk, (23) and the rate of breast milk usage is considered to be low according to previous studies. Evaluating the physical, psychological, and sociological factors that prevent individuals from engaging in breastfeeding behavior during this process both before and after the pandemic will be more helpful in identifying the problem.

It is important for mothers and babies to be together as much as possible and share the same room in order to meet their physiological and psychological needs and to establish a secure attachment between them. In addition, it is necessary for the continuity of breastfeeding (24,25). In this study, 73.3% of the mothers preferred to be in the same room with their babies during the illness period. This situation can be considered to be one of the reasons for the higher rates of breastfeeding when compared to similar studies in the literature (18,20).

The most common reason for mothers diagnosed with COVID-19 to discontinue breastfeeding during the illness process is seen to be the fear of transmitting the infection (26–28). In this study, however, mothers stated that they did not breastfeed because they believed that formula feeding would be sufficient temporarily, followed by fear of transmission and fear of harming the baby due to medication use. In addition to the lack of concrete evidence showing vertical transmission of COVID-19 through breast milk and the fact that it can be a protective factor for the baby and can potentially alter the course of the disease, authorities recommend breastfeeding the baby by taking precautions (7,8). Another factor that hinders breastfeeding is the use of medication during the illness. In this study, the percentage of mothers who stated that they discontinued breastfeeding due to the belief that medication use would cause side effects was 5.4%, whereas this rate was reported as 62.5% in a similar study (20). Examining the recommendations

of health authorities and the studies carried out, it can be seen that the dominant reasons for mothers to discontinue breastfeeding during the illness process are different. This can be attributed to different cultural approaches of societies, the perception of the severity of the disease, and the general view of breastfeeding behavior.

In this study, 40.1% of the participants stated that they felt a decrease in breast milk secretion during the infection process. In a study examining the anxiety levels of breastfeeding mothers during the pandemic, (18) a significant inverse relationship was found between the frequency of breastfeeding their babies and their anxiety levels. In light of this information, controlling the level of anxiety caused by COVID-19 may be important for the continuity of breastfeeding.

In this study, the average self-efficacy score for breastfeeding among mothers diagnosed with COVID-19 was determined to be 54.4 ± 7.2 . In a study carried out by Durmuş and Öztaş (19) with breastfeeding mothers who were confirmed or had a history of contact with COVID-19, the average self-efficacy score for breastfeeding was reported to be 51.74 ± 10.47 . In another study that evaluated the breastfeeding status of healthy mothers during the pandemic, (18) the average self-efficacy score for breastfeeding was found to be 46.48 ± 12.58 . The findings of this study are similar to some studies in the literature.

A significant difference was found between the participants' continued breastfeeding status after diagnosis and their self-efficacy scores for breastfeeding ($p < .05$). The average self-efficacy score for breastfeeding among mothers who continued breastfeeding was higher compared to those who did not continue. In a similar study, (20) the average self-efficacy scores for breastfeeding among mothers who continued to breastfeed their babies were found to be higher. However, it was found that maternal age and educational status did not cause a significant difference in the self-efficacy scores for breastfeeding. On the other hand, it was found that the location where the mothers lived, specifically rural or urban areas, influenced breastfeeding self-efficacy. Mothers who reported living in the city center had higher breastfeeding self-efficacy scores. The idea of being able to easily access healthcare providers may cause this relationship to emerge.

Providing social support to mothers is an important issue for the sustainability of breastfeeding (29). It was reported that in the pandemic period when sufficient social support was not provided to breastfeeding mothers, criteria related to breastfeeding were negatively affected (30). In this study, 45.1% of the mothers stated that they received any support regarding breastfeeding. In a qualitative study carried out with 29 mothers, it was determined that mothers experienced stress regarding breastfeeding due to the illness and did not receive sufficient support from their relatives and healthcare personnel due to isolation (31). Another study carried out in the UK reported that there was a decrease in the quality and quantity of support received from relatives and healthcare

professionals during the COVID-19 quarantine period (32). In a similar study, (33) it was reported that support during the breastfeeding process was interrupted due to the restrictions on social distancing and the decrease in face-to-face meetings during the pandemic. These results explain the studies indicating a decrease in breastfeeding rates during the pandemic. This study should be guiding for healthcare providers in order to identify all the reasons that may cause interruptions in maternal and infant health and implement appropriate approaches within the framework of the safe motherhood program.

In this study, 10.6% of the mothers received the COVID-19 vaccine. The participants who did not receive the vaccine mostly stated that they did not receive priority for vaccination and had doubts about the vaccine. Although COVID-19 vaccination is recommended for pregnant and lactating women, the vaccination rates are found to be low. In a study examining the views on vaccine administration for non-pregnant, pregnant, and lactating women, it was found that non-pregnant women had a higher acceptance rate compared to pregnant or lactating women (34). The low vaccination rate in this study may be due to the ongoing efforts to develop vaccines and the prioritization of risk groups due to vaccine supply at the time when the data were collected.

5. CONCLUSIONS

In this study, it was determined that mothers with high breastfeeding self-efficacy scores continued breastfeeding after COVID-19 diagnosis. Providing counseling and education on breastfeeding to parents and conducting remote consultations via phone when face-to-face meetings are not possible are also recommended. It was recommended that studies should be carried out to develop strategies to facilitate breastfeeding in case of pandemics and infectious diseases.

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Research idea: ZK, HK, UA

Design of the study: ZK, HK, UA

Acquisition of data for the study: ZK, HK, UA

Analysis of data for the study: HK, UA

Interpretation of data for the study: ZK, HK, UA

Drafting the manuscript: ZK, HK, UA

Revising it critically for important intellectual content: ZK, HK, UA

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