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The Relationship Between Fear of Covid-19 and Breastfeeding Attitudes of Mothers Whose Infants are Hospitalized in The Neonatal Intensive Care Unıt

Yenidoğan Yoğun Bakım Ünitesinde Bebeği Yatan Annelerin Covid-19 Korkusu ile Emzirme Tutumları Arasındaki İlişki

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THE RELATIONSHIP BETWEEN FEAR OF COVID-19 AND BREASTFEEDING ATTITUDES OF MOTHERS WHOSE INFANTS ARE HOSPITALIZED IN THE NEONATAL INTENSIVE CARE UNIT

ABSTRACT

Aim: This study was conducted to determine the fear of COVID-19 in mothers whose babies were in the neonatal intensive care unit and to investigate the relationship between fear levels and breastfeeding attitudes.

Method: The study was implemented with 133 mothers in NICUs in a city in the north of Turkey between February 5 - July 5, 2021. Data were collected using an Introductory Information Form, the FCV-19S and the BAES Scale. Number, percentage, mean, standard deviation, independent t test, ANOVA variance test, MWU test, KW test and Pearson correlation analysis were used to analyze the data. Before starting the research, study approval was obtained from the Ministry of Health of the Republic of Turkey (Decision No: 2021-01-25T20_58_17) and ethical approval from the Ethics Committee of a university (04 February 2021/818295.903/141/13).

Results: The mean FCV-19S score of the mothers was found to be 20.20±5.56, and the mean BAES score was found to be 111.27±11.28. FCV-19S scores of mothers who were afraid of infecting their infants with COVID-19 were significantly higher ($p<0.05$). The BAES scores of mothers afraid of contact with their infants were significantly lower ($p<0.05$). A low-level, negative and statistically significant relationship was found between the FCV-19S scores of the mothers and their BAES scores ($p<0.05$).

Conclusions and Suggestions: As mothers' fears about COVID-19 increased, their breastfeeding attitude levels decreased negatively. It is important to minimize the level of negative impact on others and newborns from situations that disrupt the normal flow of life, such as pandemics.

Keywords: Attitude; Breastfeeding; COVID-19 Fear; Mother; NICU.

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YENİDOĞAN YOĞUN BAKIM ÜNİTESİNDE BEBEĞİ YATAN ANNELERİN COVİD-19 KORKUSU İLE EMZİRME TUTUMLARI ARASINDAKİ İLİŞKİ

ÖZ

Amaç: Bu çalışma, bebeği yenidoğan yoğun bakım ünitesinde yatan annelerde covıd-19 korkusunun belirlenmesi ve korku düzeyleri ve emzirme tutumları arasındaki ilişkinin araştırılması amacıyla yapıldı.

Yöntem: Araştırma, 5 Şubat-5 Temmuz 2021 tarihleri arasında Türkiye'nin kuzeyindeki bir ildeki YYBÜ'lerde bulunan 133 anne ile gerçekleştirildi. Veriler Tanıtıcı Bilgi Formu, FCV-19S ve BAES Ölçeği kullanılarak toplandı. Verilerin analizinde sayı, yüzde, ortalama, standart sapma, bağımsız gruplarda t testi, ANOVA varyans analizi, MWU testi, KW testi ve Pearson korelasyon analizi kullanılmıştır. Araştırmaya başlamadan önce T.C. Sağlık Bakanlığı'ndan çalışma onayı (Karar No: 2021-01-25T20_58_17) ve bir üniversitenin Etik Kurulu'ndan etik onayı alındı (5 Şubat 2021/818295.903/141/13).

Bulgular: Annelerin FCV-19S skor ortalaması 20.20±5.56, BAES skor ortalaması 111.27±11.28 olarak belirlendi. Bebeğine COVID-19 bulaştırmasından korkan annelerin FCV-19S skorları anlamlı derecede yüksekti ($p<0.05$). Bebeğiyle temastan korkan annelerin BAES puanları anlamlı düzeyde düşük bulundu ($p<0.05$). Annelerin FCV-19S puanları ile BAES puanları arasında düşük düzeyde, negatif ve istatistiksel olarak anlamlı, bir ilişki bulundu ($p<0.05$).

Sonuçlar ve Öneriler: Annelerin COVID-19 ile ilgili korkuları arttıkça emzirme tutum düzeyleri olumsuz yönde azaldı. Pandemi gibi hayatın normal akışını bozan durumlardan anne ve yenidoğanın olumsuz etkilenme düzeyinin en aza indirilmesi önemlidir.

Anahtar Kelimeler: Tutum; Emzirme; COVID-19 Korkusu; Anne; YYBÜ.

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INTRODUCTION

The disease, called "severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2)" or "Coronavirus disease-2019 (COVID-19)", which appeared in Wuhan city of China, is contagious in humans and spread in a short time all over the world through human relations or respiratory materials which spread around from infected people (Dao et al., 2021; Yüce et al., 2021). "The World Health Organisation (WHO) General Director" declared the COVID-19 outbreak a "pandemic" in March 2020, as a result of which the infection also spread outside China (WHO, 2020a). As of March 19, 2023, SARS-Cov-2 cases detected worldwide are 682.454.253, with 6.819.383 deaths and approximately 655 million who have recovered (Worldometer, 2023).

COVID-19 is a disease of the respiratory system such as the flu with severe headache, fever, dry cough and fatigue and similar symptoms (Taleghani & Taghipour, 2021). This infection, which can also progress asymptomatically, has contributed to the rapid transmission of the disease, with vague clinical symptoms and poor knowledge of transmission prevention contributing to the rapid transmission of the disease and creating a major challenge in controlling it globally (Gao et al., 2021). All people are susceptible to COVID-19. It can be passed from mother to baby during pregnancy, at birth or while breastfeeding. Besides, knowledge about COVID-19 in infants or childhood remains inadequate. Although there are studies on the ability of mothers with COVID-19 infection to breastfeed their infants, there is no data that the virus is transmitted through mother's milk (Asadi et al., 2020). The main risk of breastfeeding for infants is the transmission of viral droplets to the infant due to direct contact with a mother with COVID-19 (Centeno-Tablante et al., 2021; Lu & Shi, 2020; Zhu et al., 2020). Longer follow-up studies are needed on mothers' baby feeding methods and whether the virus is present in breast milk (Centeno-Tablante et al., 2021).

On 27 May 2020, WHO updated the "Interim Guidelines for the Clinical Management of COVID-19" and recommended that infants be purely breastfed for the first 6 months and support breastfeeding with complementary feeding up to the age of 2, and interventions for infection control and prevention in infants born from mothers confirmed or suspected to have COVID-19 (WHO, 2020b). This recommendation is based on the positive effects of breastfeeding on both maternal and infant health and the fact that the disease has been asymptomatic and relatively mild in infant cases reported up to the present (Centeno-Tablante et al., 2021).

Although there are many demographic, biological, psychological and social factors affecting the continuation of breastfeeding, the mother's attitude on this issue is the most important determinant. It is observed that the rate of starting formula and complementary foods increases in mothers with negative breastfeeding attitu-

des (Asadi et al., 2020; Kanber, 2021). Additionally, mothers' attitudes may change depending on the changing environment, their personalities, the events experienced, the characteristics of the changing living conditions (Kanber, 2021). Infant feeding approaches are an issue of concern for parents and healthcare professionals, especially during pandemics such as this one, due to the risks associated with food and nutrition safety (Centeno-Tablante et al., 2021). Both the contagious and relatively lethal nature of COVID-19 and the sudden and unprecedented restrictions imposed by governments pose a risk to the mental health of individuals not only in Turkey but in almost all countries of the world. The COVID-19 pandemic is a potential risk of stress for mothers, causing various psychological distress. While the hospitalization of their newborn infant causes mothers to experience negative emotions, they are likely to be more affected by this situation in an uncertain and frightening period such as a pandemic.

In light of all this information, this study was conducted to examine the level of COVID-19 fears of mothers in the NICU, what they experienced about not being able to pay attention to social distancing due to close contact while breastfeeding their newborn infants, and the relationship between this situation and breastfeeding attitudes.

METHOD

Study design and participants

This cross-sectional study was conducted between February 5 and July 5, 2021. The population of the research consists of mothers whose term infants were treated in the NICUs of hospitals located in a city in the north of Turkey, and the sample consisted of 133 mothers who met the inclusion criteria between the dates of the study without any sampling method. COVID-19 suspect-positive and positive mothers were excluded from the study. 17 mothers who refused to participate voluntarily and five mothers who underwent a preliminary application were not included in the study. The G*Power (3.1.9.4) program's post hoc power analysis results showed that the study's power was 0.99 (0.5 effect size, two-tailed, and 5% α value). This study led to the conclusion that the sample size was enough.

Criteria for Acceptance to Research;

- Mothers who gave birth after 37. weeks of gestation,
- Who breastfeed her infant,
- Whose infant has been in the NICU for at least 2 days,
- Who can speak and understand Turkish,
- Mothers who are willing to participate in the study.

Instruments

Introductory Information Form: It consists of 16 questions prepared by the researchers in accordance with the literature and questioning the socio-demographic, breastfeeding and COVID-19 related knowledge of the participants. (Kanber, 2021; Matsushima et al., 2021; Polat, 2022; Sevimli, 2021; Uzun et al., 2021).

Fear of Covid-19 Scale (FCV-19S): The fear that infectious diseases evoke sets them apart from other illnesses. Fear's contagiousness, morbidity, and death are all directly correlated. Other psychosocial issues including loss, discrimination, and stigmatization are also brought on by it. Because of these factors, COVID-19 spreads fear throughout the world, making it difficult for people to react with clarity and reason. (Ahorsu et al., 2022). The Fear of Covid-19 Scale was developed by Ahorsu et al. in 2022 The Turkish validity and reliability of the scale was performed by Bakioğlu et al. in 2021. The fact that the scale has 7 items and a single dimension was confirmed in the Turkish sample. The scale can be rated on a 5-point Likert type 1: "I strongly disagree" - 5: "I strongly agree". In the study of Ahorsu et al., it was reported that the item-total correlations of the scale were between 0.47-0.56, and the factor loadings of the items were between 0.66-0.74 (2022). The Cronbach alpha value of the original scale was reported as 0.82. Bakioğlu et al. found the Cronbach alpha value to be 0.88. The scale, which includes items such as "I cannot sleep because I'm worrying about getting coronavirus-19.", "My heart races or palpitations when I think about getting coronavirus-19.", has strong psychometric properties in assessing fear of COVID-19. The Turkish version of FCV-19S has shown strong psychometric properties. The low scores taken from the scale indicate that COVID-19 fear is at a low level, and the high scores taken from the scale indicate that COVID-19 fear is at a high level (Ahorsu et al., 2022; Bakioğlu et al., 2021). In this research, the Cronbach alpha coefficient of the scale was calculated as 0.78.

Breastfeeding Attitude Evaluation Scale (BAES): "The Breastfeeding Attitude Evaluation Scale" was developed by Özkan in 1997. However, since the journal in which it was published was out of print and could not be monitored electronically, Özkan re-published the scale and the sections related to its evaluation in 2015. The scale consists of 46 questions in a 5-point Likert type and includes 22 positive-24 negative items. The "score of the positive items" is 88, and the "score of the negative items" is 96. Since positive attitude items are scored as "completely agree (4), agree (3), undecided (2), slightly agree (1), and strongly disagree (0)", and negative attitude items are scored as "completely agree (0), agree (1), undecided (2), slightly agree (3), and strongly disagree (4)", the maximum score that can be obtained in this scale is 184. As the score obtained from the scale increases, mothers' attitudes towards breastfeeding are evaluated positively (Özkan, 2015). In this research, the Cronbach alpha coefficient of the scale was calculated as 0.74.

Data Collection

Data were collected from mothers who came to visit their infants in the NICU by paying attention to mask and social distancing rules. In accordance with these rules, mothers were admitted to the unit for breastfeeding their infants whenever they cried. In order to evaluate the comprehensibility and comprehensiveness of the Introductory Information Form, a pre-application was made by interviewing with five mothers. As a result of the pre-application, necessary changes were made and the form was finalized. The aim of the study was explained to the mothers and data collection began after their written consent was obtained. The Introductory Information Form was filled with the information obtained from the infants' files and the information obtained from the mothers of the infants. All data were collected in family interview rooms using face-to-face interview technique within approximately 20 mins.

Statistical Analysis

Quantitative analysis method was utilised to analyze the research data. In this context, inferential and descriptive statistical methods were used to analyze the survey data using the SPSS 22.0 package program. Frequency, mean and standard deviation distributions are given in the analysis of socio-demographic data. Independent t-test and Mann Whitney U-test were used to compare paired groups, One Way Anova test and Kruskal- Wallis test were used to compare more than two groups, and Spearman Correlation Test was used to reveal the correlation between scale scores. The evaluation of the data was made within the $p \leq 0.05$ significance level.

Ethics

Ethics committee approval on the appropriateness of conducting the study was obtained from the ethics committee of a university on 04 February 2021 with the official letter numbered 818295.903/141/13. Necessary permission was obtained from the Scientific Research Platform of the Ministry of Health of Turkey (Decision No: 2021-01-25T20_58_17). Permission was obtained via e-mail from the researchers who conducted the validity and reliability studies of the scales used in the study. The study group was aware about the purpose and content of the research, the confidentiality of the data and how the data will be collected. The identity information of the mothers was not taken and their consent was obtained.

RESULTS

As shown in Table 1, the avarage age of the mothers in the study was 27.77±5.64 years (min: 18; max: 41). It was determined that 36.1% of the mothers were graduated from secondary school, 88.0% of them were not working in an income-generating job, 75.9% lived in a nuclear family, 57.1% lived in a district and 69.9% perceived their income status as moderate. It was determined that 59.4% of the mothers had normal delivery and 36.8% had 3 or more children (Table 1).

Table 1. Demographic characteristics of mothers

Characteristics		**N**	**%**
Mean Age (year): 27.77±5.64 (min: 18; max: 41)			
Educational Level	Primary school	33	24.8
	Secondary school	48	36.1
	High school	31	23.3
	Faculty	21	15.8
Working status	Working	16	12.0
	Not working	117	88.0
Family Type	Nuclear	101	75.9
	Wide	32	24.1
Living place	Province	17	12.8
	District	76	57.1
	Village	40	30.1
Income level	Low	15	11.3
	Moderate	93	69.9
	High	25	18.8
Delivery type	Normal	79	59.4
	Cesarean	54	40.6
Delivery number	1	42	31.6
	2	42	31.6
	3 and above	49	36.8

As shown in Table 2, 57.1% of the mothers stated that they had not received any professional education about breast milk or breastfeeding. 86.5% of the mothers felt competent in breastfeeding and 51.9% of them were anxious about breastfeeding their infant in the NICU. 57.9% of them thought that COVID-19 would not be transmitted through breast milk. 80.5% of mothers did not suffer from COVID-19 during pregnancy and 78.9% did not come into with someone with COVID-19

during or after pregnancy. Although 84.2% of mothers were not afraid of contact with their infants, 85.0% of them were afraid of infecting their infants with COVID-19 (Table 2).

Table 2. Distribution of mothers' answers to the questions about breastfeeding and COVID-19

Characteristics		N	%
Received any professional education on breast milk/ breastfeeding	Yes	57	42.9
	No	76	57.1
Feeling competent in breastfeeding	Yes	115	86.5
	No	18	13.5
Anxious about breastfeeding their infants	Yes	64	48.1
	No	69	51.9
Transmission of COVID-19 through breast milk	Yes	56	42.1
	No	77	57.9
Suffered from COVID-19 during pregnancy	Yes	26	19.5
	No	107	80.5
Contact with someone with COVID-19 during or after pregnancy	Yes	28	21.1
	No	105	78.9
Afraid to contact with their infants	Yes	21	15.8
	No	112	84.2
Afraid of infecting their infants	Yes	113	85.0
	No	20	15.0

As shown in Table 3, the mean FCV-19S score of the mothers was 20.20±5.56 and the mean BAES score was 111.27±11.28.

Table 3. Mean FCV-19S and BAES Scores of the Mothers

Scales	n	Min.	Max.	Mean	SD
FCV-19S	133	7	82	20.20	5.56
BAES	133	35	133	111.27	11.28

As shown in Table 4, it was found that there was no statistically significant difference in FCV-19S scores and BAES scores according to education, employment, family type, place of residence, income level, mode of delivery and number of births ($p>0.05$).

Table 4. Comparison of mean scale scores according to demographic characteristics of mothers

Characteristics		n M±SD	FCV-19S		BAES	
			test and p	M+SD	test and p	
Educational Level	Primary school	33	20.93±5.03	KW: 4.771 p: 0.312	112.03±11.66	F: 1.297 p:0.275
	Secondary school	48	20.25±4.62		108.70±11.05	
	High school	31	19.58±6.59		112.00±12.58	
	Faculty	21	19.00±6.04		114.23±8.43	
Working status	Working	16	19.18±5.96	t: -0.852	113.12±11.84	t:0.699
	Not working	117	20.45±5.52	p:0.195	111.01±11.24	p:0.486
Family Type	Nuclear	101	19.78±5.65	t: -1.809	111.27±11.26	t:0.018
	Wide	32	21.81±5.13	p: 0.073	111.31±11.73	p:0.985
Living place	Province	17	20.00±4.13	F: 1.180 p:0.311	113.29±12.08	F: 0.849 p:0.430
	District	76	19.77±5.84		111.78±11.30	
	Village	40	21.42±5.51		109.47±10.95	
Income level	Low	25	20.20±4.79	F: 0.011 p:0.989	114.24±10.65	F: 1.296 p:0.277
	Moderate	93	20.30±5.80		110.29±11.28	
	High	15	20.46±5.59		112.40±12.09	
Delivery type	Normal	79	19.75±4.94	t: -1.360	111.94±10.78	t:0.838
	Cesarean	54	20.09±6.34	p:0.176	110.27±12.01	p:0.404
Delivery number	1	42	19.33±6.20	F: 0.876 p:0.499	108.26±10.62	F: 1.855 p:0.107
	2	42	19.92±4.89		114.76±12.28	
	3 and above	49	21.74±5.34		111.93±9.98	

As shown in Table 5, there was no statistically significant difference (p>0.05) between the comparison of the mean scale scores and the status of receiving professional education about breastfeeding, feeling competent about breastfeeding, feeling anxious about breastfeeding, thinking that COVID-19 is transmitted through breast milk, having COVID-19 during pregnancy, and having contact with someone with COVID-19 during or after pregnancy. A statistically significant difference was found between the mothers' fear of contact with their infants and FCV-19S scores (p<0.05). A statistically significant difference was found between the fear of transmitting COVID-19 to their infants and their BAES scores (p<0.05) (Table 5).

Table 5. Comparison of the mean scale scores according to the mothers' answers to the questions about breastfeeding and COVID -19

Characteristics		N M±SD	FCV-19S		BAES	
			test p	M+SD	test p	
Received any professional education on breast milk/ breastfeeding	Yes	57	20.04±6.60	t: -0.254	109.83±12.98	t: -0.688
	No	76	20.35±5.34	p: 0.802	111.58±10.92	p: 0.493
Feeling competent in breastfeeding	Yes	115	20.36±5.38	t: 0.336	111.68±11.03	t: 1.075
	No	18	19.88±6.80	p: 0.737	108.61±12.82	p: 0.284
Anxious about breastfeeding their infants	Yes	64	20.93±5.65	t: 1.273	110.85±10.83	t: -0.403
	No	69	19.71±5.13	p: 0.205	111.65±11.76	p: 0.687
Transmission of COVID-19 through breast milk	Yes	56	20.92±5.07	t: -1.110	110.05±11.50	t: 1.061
	No	77	19.85±5.80	p: 0.269	112.15±11.21	p: 0.291
Suffered from COVID-19 during pregnancy	Yes	26	19.96±6.93	t: -0.345	108.61±8.28	t: -1.341
	No	107	20.38±5.22	p: 0.731	111.91±11.84	p: 0.182
Contact with someone with COVID-19 during or after pregnancy	Yes	28	21.46±6.37	MWU:1.241.000	111.88±8.49	t: 0.308
	No	105	20.01±5.34	p: 0.393	111.12±11.89	p: 0.759
Afraid to contact with their infants	Yes	21	21.90±5.20	t: 1.444	106.52±12.26	**t=2.804**
	No	112	20.00±5.60	p: 0.139	112.15±11.12	**p=0.006**
Afraid of infecting their infants	Yes	113	20.76±5.53	**t: 2.348**	110.65±10.57	t: -1.502
	No	20	17.64±5.11	**p: 0.02**	114.75±14.51	p: 0.135

A statistically significant, negative and low-level relationship was found between the FCV-19S total scores of the mothers and the total scores of the BAES (r=-0.317, p=0.000).

DISCUSSION

Breast milk is an irreplaceable and unique nutrient for the infant and strengthens the infant's immunity. It has not been shown that COVID-19 is transmitted to the baby through breast milk. WHO and CDC recommend that mothers should breastfeed their infants when appropriate conditions are provided to prevent transmission (CDC, 2023; Pang et al., 2022; WHO, 2020c). Additionally, the Turkish Neonatology Association recommends that each baby and mother couple be individually evaluated regarding breastfeeding and that breastfeeding decisions be made as a result of this evaluation (Erdeve et al., 2020). This study was carried out to examine the levels of fear and breastfeeding attitude towards COVID-19 disease in the postpartum period and the relationship between these two variables among mothers in the NICU during the pandemic period.

In the study, it was found that the mothers had a mean score of 20.20±5.56 on the FCV-19S scale (Table 3). In studies conducted with mothers with similar characteristics in the literature, the mean scores of this scale ranged between 17.53±5.12 and 23.33±4.19 (Çağan et al., 2022; Ergün et al., 2022; Kanber, 2021; Matsushima et al., 2021; Polat, 2022; Sevimli, 2021; Uzun et al., 2021;). In these studies, similar to our study, it was found that mothers' fear of COVID-19 was moderate and close to each other. Uncertainties caused by the COVID-19 pandemic increased anxiety and fear in individuals (Çağan et al., 2022; Ergün et al., 2022; Kanber, 2021; Matsushima et al., 2021; Polat, 2022; Sevimli, 2021; Uzun et al., 2021). The moderate level of fear of COVID-19 among mothers whose infants are hospitalized in the NICU may be thought to be related to the possibility that the number of cases in the COVID-19 pandemic is increasing day by day, the news about it and the inability to have adequate contact with their infants and unit staff due to the necessity of social isolation, and even if they do, they may expose their infants to the risk of disease.

The rapid spread, high morbidity and mortality of the COVID-19 virus has caused it to seriously affect life. Guidelines developed and scientific studies have reported that breastfeeding has various benefits in terms of maternal and newborn health during the COVID-19 pandemic and that even mothers who are COVID-19 positive or contacted can breastfeed by taking necessary protective measures (Aydın & Aktaş, 2021; Özçalkap & Uçar, 2022). In the study, it was found that mothers received a mean score of 111.27±11.28 on the BAES scale (Table 3). In a study in which the relationship of maternal attachment and breastfeeding attitude with COVID-19 phobia was determined in postpartum mothers, the mean score of the BAES was found to be 103.77±12.84 and evaluated as high (Özçalkap & Uçar, 2022). Again, in a study examining the attitudes of women in the postpartum period towards breastfeeding, the mean score of the BAES was found to be 100.38±18.88 (Topaloğlu Ören et al., 2023). Furthermore, in a study examining breastfeeding attitudes during pregnancy and the postnatal breastfeeding process, the mean score of the BAES was 107.95±12.74 (Güney, & Uçar, 2018). In our study, it was evaluated positively that the mothers' BAES scores were close to the literature and even higher. This is thought to be due to the mothers' knowledge that breast milk is protective against this disease and strengthens immunity.

As the COVID-19 pandemic turned into a global crisis, this process of change has psychologically led to fear, insecurity, anxiety and various psychological disorders (Heiat et al., 2021; Özçalkap & Uçar, 2022). Close contact between the mother and the baby may pose a serious risk for the baby unless precautions are taken to prevent contamination. Although it is not yet clear whether transmission occurs through breast milk, it is known that it can be transmitted by inhalation from an infected mother during breastfeeding (Özçalkap & Uçar, 2022). In a study conducted in the USA, COVID-19 infected mothers breastfed their infants by wearing masks

and following hygiene rules, and no virus was detected in any of their infants. They were recommended that mothers with COVID-19 should breastfeed their infants by providing appropriate conditions (Salvatore et al., 2020). In our study, the FCV-19S scores of mothers who were afraid of transmitting COVID-19 to their infants were significantly higher ($p<0.05$, Table 5). In a study examining the relationship between the fear of COVID-19 and breastfeeding attitude of mothers with infants aged 0-6 months, 83.6% of mothers thought that the infant would be infected with the COVID-19 virus while breastfeeding (Kanber, 2021). The findings of our study are similar to the relevant literature.

It is known that negative emotions such as stress, anxiety and fear in mothers make breastfeeding ineffective and cause breastfeeding to be interrupted (Mezzacappa & Katkin, 2002; Uzun et al., 2021). In the study, the BAES scores of mothers who were afraid of contact with their infants were found to be significantly lower ($p<0.05$, Table 5). Previous studies have reported that maternal fear related to COVID-19 impacted breastfeeding practices (Uzun et al., 2021). Additionally, as maternal fear increased, the frequency of breastfeeding decreased (Polat, 2022). A study indicated that perinatal COVID-19 transmission is unlikely when proper hygiene measures are followed. Ensuring that mothers stay in the same room with their newborns and directly breastfeed—combined with effective parental education on contamination prevention—are considered safe methods (Salvatore et al., 2020). Moreover, it has been reported that education/information, appropriate communication, nursing care and follow-ups given to mothers who are concerned about postnatal transmission through breastfeeding and who refuse breastfeeding are effective in the continuation of breastfeeding and in comforting the mother (Mezzacappa & Katkin, 2002).

Furthermore, it was found in this study that breastfeeding attitude was negatively affected as the mothers' COVID-19 fear levels increased ($p<0.05$). In the literature, there are studies reported that mothers' concerns about the COVID-19 pandemic led to a decrease in the amount of breast milk and frequency of breastfeeding and that they even stopped breastfeeding (Brown & Shenker, 2021; Doshi et al., 2021; Vazquez-Vazquez et al., 2021;) It is thought that as the severity of fear experienced by mothers increases, they avoid breastfeeding their infants in order to protect their infants' health.

Limitations of the Study

The study is limited to the answers given by mothers whom adressed to the hospitals where the research was conducted. In addition, the ongoing COVID-19 pandemic, mothers' desire to keep their interview periods short and the data being collected cross-sectionally can be seen as another limitation.

CONCLUSION AND RECOMMENDATIONS

As a result, it was noteworthy that mothers whose infants were hospitalized in the NICU had a moderate level of fear of COVID-19 and a high level of breastfeeding attitude; however, the fear of infecting their infants with COVID-19 and having contact with their infants negatively affected their breastfeeding attitude. Concluding that the fear of COVID-19 affects breastfeeding attitudes in new mothers, it is recommended that ICU staff provide psychosocial support to mothers with high levels of fear, and provide individual trainings including up-to-date and scientific information about breastfeeding and COVID-19. It may also be recommended that other studies be conducted with different sample groups with various socio-economic and cultural characteristics.

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Conflict of interest:

The authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this study.

Credit Author Contributions

Design of Study: FKÖ (50%), KS (50%)

Data Acquisition: FKÖ (30%), KS (70%)

Data Analysis: FKÖ (70%), KS (30%)

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