Kırsal Bölgede 0-6 Aylık Bebeği Olan Annelerin Covid-19'a Yönelik Korku, Kaçınma Tutumu, Aşılanma ve Emzirme Öz Yeterliliği*

Fear, Avoidance Attitudes And Vaccination Towards Covid-19 And Breastfeeding Self-Efficacy Of Mothers With 0-6 Months Old Infants In Rural Area

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Özet: Amaç: Kırsal bölgede 0-6 aylık bebeği olan ve emziren annelerde COVID-19'a yönelik korku ile kaçınma tutumu, aşılanma durumu ve emzirme özyeterliliği arasındaki ilişkinin belirlenmesidir. **Gereç ve Yöntem:** Kesitsel ve tanımlayıcı tiptedir. Örneklemini 0-6 aylık bebeği olan 297 anne oluşturmuştur. Veriler Tanıtıcı Bilgi Formu, COVID-19 Korkusu Ölçeği, COVID-19'dan Kaçınma Tutumları Ölçeği, Emzirme Özyeterliliği Ölçeği ile toplanmıştır. **Bulgular:** Korku ile bilişsel kaçınma (r=0.45) ve davranışsal kaçınma (r=0.48) arasında pozitif korelasyon saptanmıştır. Annelerin koronavirüs korkusunun kaçınmayı %32, bilişsel kaçınmayı %21, davranışsal kaçınmayı %23 oranla anlamlı şekilde yordadığı belirlenmiştir. Korku ile emzirme özyeterliliği arasında anlamlı ilişki saptanmamıştır. Emzirme özyeterliliği hiç aşı olmayanlarda daha yüksek belirlenmiştir. Annelerin %19.2'si bu gebeliğinde COVID-19 aşısı olmuştur. Emzirme özyeterliği bu gebeliğinde COVID-19 aşısı olmayanlarda daha yüksektir. **Sonuç:** Koronavirüs korkusunun annelerde kaçınmayı neden olduğu, fakat korku ve kaçınmanın emzirme özyeterliliğini etkilemediği belirlenmiştir. Ayrıca aşılanmanın emzirme özyeterliliğini etkilediği belirlenmiştir.

Anahtar Kelimeler: Aşı, COVID-19, Emzirme özyeterliliği, Kaçınma tutumu, Korku

Abstract: Aim: This study aimed to determine the relationship between fear of COVID-19, and avoidance attitude, vaccination status, and breastfeeding self-efficacy in breastfeeding mothers with 0-6-month-old infants in rural areas. **Material and Method:** This is a cross-sectional and descriptive study. The sample consisted of 297 mothers with 0-6 month-old infants. Data were collected through the Introductory Information Form, Fear of COVID-19 Scale, Avoidance Attitudes from COVID-19, and Breastfeeding Self-Efficacy Scale. **Results:** A positive correlation was found between fear and cognitive avoidance (r=0.45), and behavioral avoidance (r=0.48). It was established that mothers' fear of coronavirus predicted coronavirus avoidance by 32%, cognitive avoidance by 21%, and behavioral avoidance by 23% significantly. No significant relationship was found between fear and breastfeeding self-efficacy. Breastfeeding self-efficacy is higher in those who have never been vaccinated. 19.2% of mothers received COVID-19 vaccine in this pregnancy. Breastfeeding self-efficacy is higher in those not vaccinated against COVID-19 in this pregnancy. **Conclusion:** It was determined that the fear of coronavirus causes avoidance in mothers, but fear and avoidance did not affect breastfeeding self-efficacy. In addition, it was determined that vaccination affected breastfeeding self-efficacy.

Keywords: Vaccination, COVID-19, Breastfeeding self-efficacy, Avoidance attitude, Fear

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INTRODUCTION

According to the World Health Organization (WHO), the new type of coronavirus disease emerged in Wuhan, China in December 2019, and was announced as the COVID-19 pandemic in February 2020. The current pandemic has adversely affected the mental health of the community and caused an increase in death rates due to the disease it causes (WHO, 2020a).

Studies show that uncertain situations such as illness, death, loss, isolation, and lack of treatment that occur with the COVID-19 epidemic cause the most fear in people, and if the fear continues, it affects the physical reactions, cognitive skills, and mental processes of individuals, causing an increase in psychosocial problems (Lum and Tambyah, 2020; Taylor et al., 2020; Harper et al., 2021). Individuals' perception of the pandemic as a condition that jeopardizes health and harms the environment of trust might lead to changes in their perceptions and attitudes, resulting in cognitive and behavioral avoidance (Çırakoğlu, 2011; Lum and Tambyah, 2020; Piltch-Loeb and Abramson, 2020). Cognitive avoidance behaviors such as distraction from the news about COVID-19, avoiding the subject, or thinking about other things are observed in individuals, as behavioral avoidance symptoms such as not participating in social activities and not shaking hands are reported (Çırakoğlu, 2011; Geniş et al., 2020). This indicates that people are attempting to protect themselves from the pandemic's negative effects.

During the postpartum period, the infant must be fed only with breast milk for the first six months. Because the protective and supportive factors in its content protect infants against diseases and help them grow and develop (WHO, 2020b). Fear of death, sudden illnesses, not being able to see their infant, not being able to breastfeed, not being able to hold their infant and similar circumstances have been linked to the anxiety and uncertainty experienced by nursing mothers throughout the pandemic process (Liu et al., 2020).

Uncertainties in the continuation of breastfeeding in this process arouse fear and anxiety in the mother. Thus, the lactation process will be adversely affected (such as fear, lack of milk, and changes in hormones), causing mothers to avoid feeding their infants exclusively with breast milk and breastfeeding for the first six months (Asadi et al., 2020; Davanzo et al, 2020). The WHO states that there is no reason to prevent or stop breastfeeding in extraordinary situations such as an epidemic. Due to the immune system strengthening and anti-infective effects of breast milk, it is reported that breastfeeding should be continued and supported in all cases of the COVID-19 pandemic (WHO, 2020a; WHO, 2020b). One of the important factors affecting the breastfeeding process is breastfeeding self-efficacy. Breastfeeding self-efficacy reflects a mother's self-confidence in breastfeeding (Brockway et al., 2017; Gokceoglu and Küçükoğlu, 2018).

Negative emotions such as stress and fear perceived by mothers in the postpartum period significantly reduce lactation hormones and milk production and negatively affect mothers' breastfeeding success. This will cause mothers to avoid exclusive breastfeeding behaviors for the first six months, thus negatively affecting breastfeeding self-efficacy (Liu et al., 2020).

No research has been found in the literature examining the fear and avoidance attitudes towards COVID-19 and breastfeeding self-efficacy of breastfeeding mothers with a 0-6 month-old infant during the COVID-19 pandemic. Therefore, this study aimed to determine the relationship between fear of COVID-19, and avoidance attitude, vaccination status, and breastfeeding self-efficacy in breastfeeding mothers with 0-6 month-old infants in rural areas.

Research Questions:

1. What is the case in mothers' fears of COVID-19, avoidance attitudes from COVID-19 and breastfeeding self-efficacy?
2. Is there a significant relationship between mothers' fear of COVID-19, their attitudes to

avoid COVID-19 and breastfeeding self-efficacy?

MATERIALS AND METHODS

Type of research
The study is a cross-sectional and descriptive study.

Variables of the research
Dependent variables of the study are the Fear of COVID-19 Scale, Avoidance Attitudes from COVID-19, and Breastfeeding Self-Efficacy Scale mean scores. Independent variables of the study are sociodemographic and obstetric characteristics of mothers and infant characteristics.

Inclusion-exclusion criteria
Inclusion criteria: Mothers with infants aged 0-6 months who presented to the Paediatrics Outpatient Clinic, who had no previous psychiatric history or diagnosis, and who voluntarily participated in the study were included.

Exclusion criteria: Mothers who did not meet the research criteria and completed the questionnaire questions incompletely or incorrectly were excluded.

Place and time of research
This research was carried out on mothers with 0-6 month-old infants who applied to Mus State Hospital Pediatrics Outpatient Clinic between 8 June and 8 July 2022.

Population and sample
The population of the study consisted of mothers with 0-6 month-old infants who applied to the Muş State Hospital Pediatrics Outpatient Clinic. In the literature, correlation coefficients are interpreted as 0.10-0.29 low, 0.30-0.49 medium, 0.50-1.00 high-level effect sizes regardless of sign (Cohen, 1992a; Field, 2009). Therefore, the sample size was calculated by using a low effect size in the study. The sample size of the study was determined according to the sample size calculation made using the GPower 3.1.9.2 program with 90% power by taking the type I error of 0.05 and the low

correlation coefficient of 0.2. It was calculated that a minimum of 255 people for correlation analysis (Cohen, 1992b; Faul et al., 2007). A total of 297 people who applied to the outpatient clinic within the relevant dates and met the inclusion criteria of the study were reached. All women who applied to the outpatient clinic and fulfilled the research criteria were included in the study without using any sampling method.

Data collection process
The data were obtained by face-to-face interviews with the mothers of 0-6 month-old infants who applied to the Hospital's Child Health and Diseases Polyclinic. Before data collection, the aim and objectives of the study were explained to the mothers, and then written and verbal informed consent was obtained from the mothers who voluntarily participated in the study.
The interview with each mother lasted 15-20 minutes.

Data collection tools
Data were collected through the Introductory Information Form, Fear of COVID-19 Scale, Avoidance Attitudes from COVID-19, and Breastfeeding Self-Efficacy Scale.

Introductory information form
This form, which was developed by the researchers in line with the literature, consists of a total of 12 questions, seven of which question the socio-demographic and obstetric characteristics of mothers, two questions about having COVID-19 disease and vaccination, and three questions about the infant (Lum and Tambyah, 2020; Taylor et al., 2020; Harper et al., 2021).

Fear of COVID-19 Scale (FC-19S)
The scale was developed by Ahorsu et al (2022), and adapted into Turkish by Bakioğlu et al. (2021) It consists of one dimension and seven items. There is no reverse item in this scale. The total score obtained from all items of the scale reflects the level of fear of Coronavirus (COVID-19) experienced by the individual. A minimum of 7 and a maximum of

35 points can be obtained from the scale. A high score on the scale indicates a high level of fear of coronavirus. The Cronbach alpha coefficient of the scale is 0.87 (Bakioğlu et al., 2021; Ahorsu et al., 2022). In this study, this coefficient was found to be 0.87.

Avoidance Attitudes from COVID-19 (AA-COVID-19)

It was developed by Çırakoğlu (2011) to evaluate the disease avoidance attitudes of people during the Swine Flu (H1N1) epidemic. It was adapted to the COVID-19 pandemic process by Geniş et al. (2020) It is in a five-point Likert structure and consists of 10 items and two sub-dimensions (cognitive and behavioral). There is no reverse item in the scale. The average value between 1-5 is obtained by dividing the total scores obtained by summing the item scores in the scale and its sub-dimensions by the number of items in the scale and its sub-dimensions. High scores indicate high avoidance. The Cronbach's alpha value of the scale is 0.88. Cognitive sub-dimension Cronbach's alpha value is 0.92 and behavioral sub-dimension Cronbach's alpha value is 0.97 (Geniş et al., 2020). In this study, the Cronbach alpha value of the scale was 0.83. Cronbach alpha value of cognitive and behavioral sub-dimensions of the scale were found to be 0.85 and 0.81, respectively.

Breastfeeding Self-Efficacy Scale (BSES)

The scale assessing breastfeeding self-efficacy was developed by Dennis (2003) Turkish validity and reliability study was carried out by Aluş Tokat et al. (2010) in the Turkish version. It is a five-point Likert type and consists of 14 items. A minimum of 14 and a maximum of 70 points can be obtained from the scale. All items are positive. As the score obtained from the scale increases, the level of breastfeeding self-efficacy increases (Dennis, 2003; Aluş Tokat et al., 2010). The Cronbach alpha coefficient of the scale is 0.86 (Aluş Tokat et al., 2010). This value was found to be 0.90 in the current study.

Statistical analysis

SPSS 26.0 (IBM SPSS Statistics Version 26, SPSS Inc., Chicago, Illinois, ABD, 2019) package program was used in the analysis of the data. Number, percentage, mean, standard deviation, minimum, and maximum values were calculated from descriptive statistics. The conformity of the data to the normal distribution was determined by Skewness and Kurtosis (-1<, <+1) and histogram charts (Leech et al., 2005). FC-19S (skewness = 0.01, kurtosis = -0.50); AA-COVID-19 (skewness = 0.02, kurtosis = 0.05); AA-COVID-19 cognitive subdimension (skewness = 0.13, kurtosis = -0.61); AA-COVID-19 behavioral subdimension (skewness = 0.06, kurtosis = -0.57); BSES (skewness = -0.40, kurtosis = 0.28); mother age (skewness = 0.89, kurtosis = 1.04).

While the mean scores of the scale are by the normal distribution, the maternal age does not fit the normal distribution. The difference in mean scale scores according to categorical variables (age group, marital status, family type, education status, economic situation, mother working status, the number of total pregnancies, status of contracting COVID-19, COVID-19 vaccination status, the number of COVID-19 vaccinations, COVID-19 immunization status in this pregnancy, infant's age (month), infant's gender, infant's birth type) was determined by independent sample t-test or Mann Whitney U test for two independent groups, and by One Way ANOVA or Kruskal Wallis- H Test for more than two groups.

Correlation analysis was used for the relationship between the scale mean scores. Correlation coefficients are interpreted as 0.10-0.29 low, 0.30-0.49 medium, and 0.50-1.00 high-level effect sizes regardless of sign (Cohen, 1992; Field, 2009). Linear regression analysis was used to find the effect of fear on avoidance. The statistical significance of the study was accepted as $p<0.05$, with a confidence interval of 95%.

Ethical considerations

Ethics committee permission from Mus Alparslan University Scientific Research and Publication

Ethics Committee (decision no = 30.05.2022-8/45), and institutional permission from Mus Provincial Health Directorate (decision numbered 02/06/2022-2646) was taken to conduct the research. Written informed consent was obtained from the mothers participating in the study.

RESULTS

The findings related to the sociodemographic, obstetric, and infant characteristics of the women are given in Table 1. The average age of the mothers participating in the study is 28.7±5.8. 49.5% of the mothers had COVID-19 disease, 41.1% had two doses of COVID-19 vaccine, 19.2% had COVID-19 vaccine in their last pregnancy (Table 1).

Table 1. Findings on the descriptive characteristics of mothers and infants

Features	Total women (n=297)
	Mean (±SD) / % (n)
Age	28.7 (±5.8)
19-25 years old	27.9 (83)
26-35 years old	59.6 (177)
36 and above	12.5 (37)
Marital status	
Married	95.3 (283)
Single	4.7 (14)
Family type	
Nuclear	72.4 (215)
Extended	27.6 (82)
Education status	
İlliterate	10.4 (31)
Literate	10.1 (30)
Primary	14.8 (44)
Middle	21.9 (65)
High	18.9 (56)
University	23.9 (71)
Economic situation	
Income < expense	27.6 (82)
Income = expense	58.2 (173)
Income > expense	14.1 (42)
Mother working status	
Yes	25.9 (77)
No	74.1 (220)
Number of total pregnancy	2.4 (±1.5)
One	30.3 (90)
Two	29.3 (87)
Three	20.5 (61)
Four and above	19.9 (59)
Status of contracting COVID-19	
Yes	49.5 (147)
No	50.5 (150)
COVID-19 vaccination status	
Yes	62.3 (185)
No	37.7 (112)
Number of COVID-19 vaccinations	1.33 (±1.14)
Zero	37.7 (112)
One	7.1 (21)
Two	41.1 (122)
Three	12.8 (38)
Four	1.3 (4)

COVID-19 immunization status in this pregnancy	
Yes	19.2 (57)
No	80.8 (240)
Infant's age (month)	3.6 (±1.8)
One	18.2 (54)
Two	15.8 (47)
Three	10.8 (32)
Four	13.8 (41)
Five	19.2 (57)
Six	22.2 (66)
Infant's gender	
Girl	48.8 (145)
Male	51.2 (152)
Infant's birth type	
Vaginal	71.4 (212)
Cesarean section	28.6 (85)

SD: Standard Deviation; Min: Minimum, Max: Maximum,

The mean FC-19S score of the mothers was 18.4±5.8, the mean AA-COVID-19 score was 2.7±0.7, the AA-COVID-19 cognitive sub-dimension mean score was 2.6±0.8, the AA-COVID-19 behavioral sub-dimension mean score was 2.8± 0.8 and the BSES mean score was found as 51.6±9.3 (Table 2).

Table 2. Findings regarding Fear of COVID-19 Scale, Avoidance Attitudes from COVID-19 and Breastfeeding Self-Efficacy Scale mean scores of the mothers

Scales	Mother (n=297)	
	Mean (±SD)	Min-Max (Median)
FC-19S	18.4 (±5.8)	7-34 (18)
AA-COVID-19	2.7 (±0.7)	1-5 (2.8)
➤ AA-COVID-19 cognitive subdimension	2.6 (±0.8)	1-5 (2.4)
➤ AA-COVID-19 behavioral subdimension	2.8 (±0.8)	1-5 (2.8)
BSES	51.6 (±9.3)	17-70 (53)

SD: Standard Deviation; Min: Minimum, Max: Maximum, FC-19S: Fear of COVID-19 Scale, AA-19S: Avoidance Attitudes from COVID-19; BSES: Breastfeeding Self-Efficacy Scale

There was a statistically significant difference between the mean BSES scores of mothers according to the number of COVID-19 vaccination doses (*p=0.01*). Accordingly, the mean BSES scores were highest among mothers who had never been vaccinated and lowest among those who had had four doses of vaccination. Mothers who received COVID-19 vaccination during this pregnancy had a lower mean BSES score than those who did not (p<0.05) (Table 3).

A moderate positive correlation was found between the mean FC-19S score and the mean AA-COVID-19 score *(r=0.57, p<0.01)*, AA-COVID-19 cognitive sub-dimension score *(r=0.45, p<0.01)*, and AA-COVID-19 behavioral sub-dimension score *(r=0.48, p<0.01)*. A positive and slightly significant relationship was found between maternal age and the mean FC-19S score *(r=0.3, p=0.01)* (Table 4).

Table 3. Findings on the mean scores of Fear of COVID-19 Scale, Avoidance Attitudes from COVID-19, Breastfeeding Self-Efficacy Scale according to the sociodemographic characteristics of the mothers

Features	FC-19S		AA-COVID-19 Total		AA-COVID-19 Cognitive subdimension		AA-COVID-19 Behavioral subdimension		BSES	
	Mean (±SD)	Test/p	Mean (±SD)	Test/p	Mean (±SD)	Test/p	Mean (±SD)	Test/p	Mean (±SD)	Test/p
Age										
19-25 years old	17.4 (5.7)	F:2.5	2.7 (0.7)	F:1.2	2.7 (0.9)	F:2.9	2.8 (0.9)	F:0.01	49.9 (10.6)	F:2.6
26-35 years old	18.5 (5.8)	p:0.07	2.7 (0.7)	p:0.2	2.6 (0.8)	P:0.05	2.8 (0.8)	P:0.9	52.6 (8.9)	p:0.07
36 and above	20.0 (5.5)		2.9 (0.6)		3.0 (0.7)		2.8 (0.8)		50.8 (7.0)	
Marital status										
Married	18.4 (5.8)	t:-0.06	2.7 (0.7)	U:1911.5	2.6 (0.8)	U:1896	2.8 (0.8)	U:1745.5	51.8 (9.3)	t:1.6
Single	18.5 (5.6)	p:0.9	2.7 (0.8)	p:0.8	2.7 (1.0)	p:0.7	2.7 (0.9)	p:0.4	47.6 (7.8)	p:0.09
Family type										
Nuclear	18.2 (5.8)	t:-0.9	2.7 (0.7)	t:0.3	2.6 (0.9)	U:8763.5	2.8 (0.8)	t:0.5	52.1 (9.2)	t:1.3
Extended	18.9 (5.6)	p:0.3	2.7 (0.6)	p:0.7	2.6 (0.8)	p:0.9	2.7 (0.8)	p:0.5	50.5 (9.4)	p:0.1
Education status										
Illiterate	17.3 (6.6)	H:5.3	2.7 (0.7)	H:0.8	2.6 (0.7)	H: 4.7	2.8 (0.8)	F:0.3	51.5 (10.8)	H:1.6
Literate	17.7 (6.0)	p:0.3	2.7 (0.7)	p:0.9	2.9 (0.7)	p:0.4	2.6 (0.8)	p:0.8	51.5 (9.4)	p:0.8
Primary	20.1 (5.7)		2.7 (0.7)		2.7 (0.8)		2.7 (0.8)		51.0 (9.4)	
Middle	18.6 (5.8)		2.7 (0.6)		2.6 (0.9)		2.8 (0.8)		52.0 (9.3)	
High	18.1 (4.7)		2.8 (0.6)		2.7 (0.8)		2.8 (0.8)		51.0 (8.6)	
University	18.0 (5.9)		2.7 (0.8)		2.5 (0.9)		2.8 (0.9)		52.3 (9.2)	
Economic situation										
Income < expense	18.5 (5.9)	F:0.7	2.7 (0.7)	F:0.4	2.6 (0.9)	F:0.5	2.8 (0.9)	F: 0.1	51.8 (10.1)	H:2.3
Income = expense	18.1 (5.6)	p:0.4	2.7 (0.6)	p:0.6	2.7 (0.8)	p:0.6	2.8 (0.8)	p:0.8	51.2 (8.9)	p:0.3
Income > expense	19.2 (6.2)		2.8 (0.9)		2.7 (0.9)		2.8 (0.9)		53.2 (9.3)	
Mother working status										
Yes	17.8 (6.2)	t:-0.9	2.7 (0.8)	t:-0.3	2.7 (1.0)	t:0.2	2.7 (0.9)	t:-1.0	51.5 (9.2)	U: 8453.5
No	18.5 (5.6)	p:0.3	2.7 (0.6)	p:0.6	2.6 (0.8)	p:0.8	2.8 (0.8)	p:0.3	51.7 (9.3)	p:0.9
Number of total pregnancy										
One	17.6 (5.9)	F:9.8	2.7 (0.8)	F:0.1	2.7 (0.9)	F.0.1	2.8 (0.9)	F:0.8	50.3 (10.1)	F:1.6
Two	18.5 (5.4)	p:0.4	2.7 (0.7)	p:0.9	2.7 (0.8)	p:0.9	2.7 (0.8)	p:0.4	52.7 (9.6)	p:0.1
Three	19.2 (5.4)		2.7 (0.6)		2.6 (0.8)		2.9 (0.7)		50.7 (7.8)	
Four and above	18.5 (6.5)		2.7 (0.6)		2.6 (0.8)		2.8 (0.8)		53.0 (8.8)	
Status of contracting COVID-19										
Yes	18.8 (5.7)	t:1.2	2.7 (0.7)	t:-0.7	2.7 (0.8)	t:0.6	2.7 (0.9)	t:-1.9	50.8 (9.2)	t:-1.5
No	18.0 (5.8)	p:0.2	2.7 (0.6)	p:0.4	2.6 (0.8)	p:0.5	2.9 (0.8)	p:0.05	52.5 (9.3)	p:0.11
COVID-19 vaccination status										
Yes	18.6 (5.7)	t:0.8	2.7 (0.7)	t:-0.002	2.7 (0.8)	t:0.8	2.8 (0.8)	t:-0.8	51.1 (9.3)	U:9052.5
No	18.0 (5.9)	p:0.4	2.7 (0.7)	p:0.9	2.6 (0.9	p:0.4	2.8 (0.9)	p:0.4	52.5 (9.2)	p:0.06
Number of COVID-19 vaccinations										
Zero	18.0 (5.9)	H:4.7	2.7 (0.7)	H:7.7	2.6 (0.9)	H:6.5	2.8 (0.9)	H:6.2	52.5 (9.2)	H:13.4
One	19.5 (5.0)	p:0.3	2.5 (0.5)	p:0.1	2.3 (0.4)	p:0.1	2.6 (0.8)	p:0.1	47.4 (9.7)	**p<0.01**
Two	18.9 (5.7)		2.8 (0.7)		2.6 (0.8)		2.8 (0.8)		52.2 (8.7)	
Three	17.3 (5.9)		2.6 (0.8)		2.6 (1.0)		2.7 (0.9)		51.2 (9.9)	
Four	15.0 (3.5)		2.1 (0.5)		2.3 (0.6)		1.9 (0.6)		37.0 (5.3)	
COVID-19 immunization status in this pregnancy										
Yes	18.8 (5.4)	t:0.6	2.8 (0.6)	t:1.2	2.8 (0.8)	t:1.7	2.8 (0.8)	t:0.4	49.1 (9.4)	t:-2.2
No	18.3 (5.8)	p:0.5	2.7 (0.7)	p:0.1	2.6 (0.8)	p:0.08	2.8 (0.8)	P0.6:	52.2 (9.2)	**p:0.02**
Infant's age (month)										
One	18.2 (6.2)	F:0.1	2.7 (0.6)	F:0.2	2.5 (0.7)	H:4.2	2.9 (0.8)	F:0.7	50.8 (8.4)	H:2.4
Two	18.0 (5.0)	p:0.9	2.8 (0.7)	p:0.9	2.8 (0.8)	p:0.5	2.9 (0.8)	p:0.9	51.1 (9.4)	p:0.7
Three	18.1 (5.5)		2.7 (0.8)		2.6 (1.0)		2.7 (0.9)		53.0 (9.3)	
Four	18.7 (6.0)		2.7 (0.6)		2.6 (0.9)		2.8 (0.8)		51.5 (6.5)	
Five	18.3 (6.3)		2.7 (0.8)		2.6 (0.9)		2.8 (0.8)		52.3 (11.3)	
Six	18.8 (5.6)		2.7 (0.6)		2.7 (0.8)		2.7 (0.8)		51.6 (9.7)	
Infant's gender										
Girl	18.2 (5.7)	t:-0.5	2.7 (0.7)	t:0.1	2.6 (0.8)	t:-0.3	2.8 (0.8)	t:0.5	51.2 (9.3)	t:-0.8
Male	18.5 (5.8)	p:0.6	2.7 (0.7)	p:0.8	2.7 (0.9)	p:0.7	2.8 (0.9)	p:0.5	52.1 (9.2)	p:0.4
Infant's birth type										
Vaginal	18.2 (5.9)	t:-0.5	2.7 (0.7)	t:-0.7	2.6 (0.9)	t:-0.03	2.8 (0.8)	t:-1.2	52.3 (9.2)	t:1.9
Cesarean section	18.7 (5.3)	p:0.5	2.8 (0.6)	p:0.4	2.6 (0.8)	p:0.9	2.9 (0.8)	p:0.2	50.0 (9.4)	p:0.05

SD: Standard Deviation; FC-19S: Fear of COVID-19 Scale; AA-19S: Avoidance Attitudes from COVID-19; SES: Breastfeeding Self-Efficacy Scale. T: Independent Sample t Test; U: Man Whitney U Test; F: One Way ANOVA; H: Kruskal Wallis H Test

Table 4. Relationship between mothers' mean scores of Fear of COVID-19 Scale, Avoidance Attitudes from COVID-19, Breastfeeding Self-Efficacy Scale

Scales	Mother (n=297)				
	1	**2**	**3**	**4**	**5**
1. FC-19S	1				
2. AA-COVID-19	r:0.57 **p<0.01**	1			
3. AA-COVID-19 cognitive subdimension	r:0.45 **p<0.01**	r:0.82 **p<0.01**	1		
4. AA-COVID-19 behavioral subdimension	r:0.48 **p<0.01**	r:0.82 **p<0.01**	r:0.36 **p<0.01**	1	
5. BSES	r:0.05 p:0.38	r:0.11 p:0.05	r:0.08 p:0.16	r:0.10 p:0.07	1
Mother age*	r:0.13 **p:0.01**	r:0.04 p:0.4	r:0.02 p:0.6	r:0.02 p:0.6	r:0.01 p:0.7

FC-19S: Fear of COVID-19 Scale; AA-19S: Avoidance Attitudes from COVID-19; BSES: Breastfeeding Self-Efficacy Scale * Spearman correlation

It was determined that fear of COVID-19 significantly predicted avoidance 32% ($R=0.57$, $R^2=0.32$, $F(1,295)=144.49$, $p<0.05$). It was found that fear of COVID-19 significantly predicted cognitive avoidance with 21% ($R=0.45$, $R^2=0.21$, $F(1,295)=78.51$, $p<0.05$) and behavioral avoidance with 23% ($R=0.48$, $R^2=0.23$, $F(1,295)=91.83$, $p<0.05$) (Table 5).

Table 5. Regression Analysis and Beta Correlation Coefficients of Variables and Significance Levels

Part 1	Variable	B	SE	β	t	p
Cognitive avoidance from COVID-19	Invariant[1]	1.39	0.15	-	9.09	**<0.01**
	Fear of COVID-19	0.07	0.008	0.45	8.86	**<0.01**
	R= 0.45 $F_{(1,295)}=78.51$	$R^2=0.21$			**p<0.01**	

Part 2	Variable	B	SE	β	t	p
Behavioral avoidance from COVID-19	Invariant[2]	1.47	0.14	-	9.90	**<0.01**
	Fear of COVID-19	0.07	0.008	0.48	9.58	**<0.01**
	R= 0.48 $F_{(1,295)}= 91.83$	$R^2=0.23$			**p<0.01**	

Part 3	Variable	B	SE	β	t	p
Avoidance from COVID-19	Invariant[3]	1.43	0.11	-	12.38	**<0.01**
	Fear of COVID-19	0.07	0.006	0.57	12.02	**<0.01**
	R= 0.57 $F_{(1,295)}= 144.49$	$R^2=0.32$			**p<0.01**	

Dependent variables part1: Cognitive avoidance from COVID-19, part2: Behavioral avoidance from COVID-19, part3: Avoidance from COVID-19, R^2: Coefficient of determination, the ratio of the independent variable to the dependent variable as a percentage (%), R: Simple correlation coefficient, B: Unstandardized Coefficients, SE: Standard Error, β: Standardized Coefficients Beta, t: Significance test of regression coefficients; p: Significance value <0.05

DISCUSSION

The findings of this study, which was conducted to determine the relationship between fear, and avoidance attitude towards COVID-19, vaccination status, and breastfeeding self-efficacy in breastfeeding mothers with 0-6-month-old infants in rural areas, were discussed in line with the literature.

In the study, the mean score of fear of COVID-19 was 18.4 and was found to be moderate. In studies conducted on different groups (individuals over 18 years of age, pregnant women, chronic patients, etc.), it was reported that the mean COVID-19 fear score was between 16.7-22.5 and was at a moderate level (Martinez-Lorca et al., 2020; Reznik et al., 2020; Salehi et al., 2020; Kurt, 2021). This shows that the COVID-19 outbreak causes fear in breastfeeding mothers.

In the study, it was determined that the fear of COVID-19 was higher in mothers in the older age group. Since the beginning of the pandemic, studies have reported that fear of coronavirus increases with age because COVID-19 affects individuals in the older age group more and that breastfeeding mothers are associated with situations such as separation from their infants due to COVID-19, having no one to take care of their infants, believing that it will be difficult to fight the disease, fear of death, fear of having a more severe coronavirus disease, chronic illness, and hospitalization (Qiu et al., 2020; Wu et al., 2020; Zhou et al., 2020; Kurt, 2021). This shows that age has a significant effect on the fear of COVID-19.

In the study, it was determined that the mean avoidance scores of breastfeeding mothers with 0-6-month-old infants were at a moderate level. Ataman Bor et al. (2021) reported that 91.9% of mothers restricted home visits during the pandemic. Çırakoğlu (2011) reported that students and non-students frequently avoided common areas and personal contact during the H1N1 swine flu pandemic (Çırakoğlu, 2011).

This situation shows that fear triggers cognitive and behavioral avoidance.

In the study, the mean breastfeeding self-efficacy score of mothers was determined to be at a moderate level. In a study evaluating mothers' perceptions of breastfeeding self-efficacy during the pandemic, breastfeeding self-efficacy scores were 58.1 (Beheshti et al., 2021), and in another study, it was found to be 58 in the COVID-19 patient group and 55.6 in the healthy group (Şahin Uysal et al., 2021). Ataman Bor et al. (2021) reported that the mean breastfeeding self-efficacy score of mothers was 46.4 (Ataman Bor et al., 2021). Nanishi et al. (2015) concluded that mothers with an average breastfeeding self-efficacy score below 50 were at a risky level in terms of breastfeeding. This shows that the pandemic process did not significantly change mothers' perceptions of breastfeeding self-efficacy.

In the study, it was determined that fear of COVID-19 predicted cognitive and behavioral avoidance in breastfeeding mothers, but fear did not affect breastfeeding self-efficacy. In other studies, it has been reported that the COVID-19 pandemic causes many cognitive and behavioral avoidance in individuals due to triggering fear and anxiety (Çırakoğlu, 2011; Lum & Tambyah, 2020; Piltch-Loeb & Abramson, 2020; Ataman Bor, 2021). Beheshti et al. (2021) reported that fear of COVID-19 decreased breastfeeding self-efficacy in mothers. In other studies, it has been reported that an increase in the level of fear affects the breastfeeding process (Milligan-Saville & Graham 2016; Tang & Graham 2020).

This shows that mothers in the pregnancy-breastfeeding process avoid the risk of transmission of the disease to both themselves and their infants, stay away from other individuals to prevent transmission and protect their infants, comply with hygiene and similar rules, exhibit high levels of avoidance and protection behaviors, and continue to breastfeed their infants despite fear.

WHO recommends COVID-19 vaccination during pregnancy and breastfeeding (WHO, 2021). In the study, it was determined that approximately half of the mothers received two doses of the COVID-19 vaccine and 19.2% received the COVID-19 vaccine during this pregnancy. In addition, it was found that the mean breastfeeding self-efficacy score decreased as the number of COVID-19 vaccine doses administered by mothers increased. In a study, it was reported that the COVID-19 vaccine had an effect on lactation in the early period and decreased both breastfeeding and milk production in breastfeeding mothers.

In addition, a significant correlation was reported between the negative effect of the vaccine on breastfeeding and the dose of the vaccine, regardless of the type of vaccine. Symptoms were reported to be more prevalent in breastfed infants after the second dose of vaccination, with a decrease in breast milk density (McLaurin-Jiang et al., 2021). Another study reported a decrease in milk production in the first seven days after vaccination (Bertrand et al., 2021), which is thought to affect breastfeeding self-efficacy depending on breastfeeding success.

Limitations

Since only breastfeeding mothers with 0-6 months infants are included in the scope of the research and access to mothers is limited due to epidemic conditions, the research is carried out only in X State Hospital Pediatrics Outpatient Clinic, which constitutes the limitations of the research. Therefore, it may be possible that the participants have similar socio-cultural, educational, and economic characteristics and may not represent the other mothers of the society.

CONCLUSION

It was determined that fear caused avoidance in breastfeeding mothers with 0-6 months infants during the pandemic, but fear did not affect breastfeeding self-efficacy. In addition, breastfeeding self-efficacy of mothers who were not vaccinated against COVID-19 was found to be higher than those who were vaccinated. It was noted that breastfeeding was tried to be continued despite both the belief that breastfeeding protects infants and the fear of the effects of the vaccine during breastfeeding. It may be recommended that breastfeeding mothers be given psychological support to reduce their level of fear and be supported in breastfeeding during the pandemic.

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