ORİJİNAL ARAŞTIRMA ORIGINAL RESEARCH

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The Effect of Fathers' Support for Breastfeeding Process on Mothers' Breastfeeding Self-Efficacy and Father-Baby Attachment: A Cross-Sectional and Correlational Study

Babaların Emzirme Sürecine Destek Olma Durumlarının, Annelerin Emzirme Öz Yeterlilikleri ve Baba Bebek Bağlanması Üzerindeki Etkisi: Kesitsel ve İlişki Arayıcı Bir Çalışma

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ABSTRACT Objective: The purpose of the study is to examine the effects of father's support to breastfeeding process on breastfeeding self-efficacy of mothers and attachment of father and infant. **Material and Methods:** The research is in cross-sectional type. The sample of the study consisted of 400 parents living in different cities in Türkiye (n=400). Online data collection forms that participants could apply themselves were created in the web and delivered to parents by using social media accounts, internet and social media sharing platforms about breastfeeding. Percentage, average, standard deviation, student t, one-way ANOVA (post hoc: Bonferroni), Pearson correlation tests were used for data analysis. **Results:** It was determined that 35.4% of mothers and 36.9% of fathers participated in the study. In the study, the mean breastfeeding self-efficacy score of the mothers was 55.30±9.28, the mean breastfeeding support score of the fathers was 131.42±28.69, and the mean father-baby attachment score was 75.11±9.41. It is observed that there is a highly positive, weak linear relationship between mothers' breastfeeding self-efficacy scores and fathers' understanding of breastfeeding, helping, valuing, readiness, sensitivity sub-dimensions, total score and median attachment scores (p<0.001). In this study, it was determined that fathers' support to breastfeeding effects mothers' breastfeeding self-efficacy and father infant attachment positively (p<0.001). **Conclusion: I**n this study, it was determined that fathers' support for breastfeeding positively affected mothers' breastfeeding self-efficacy and father-infant attachment. Health professionals should support fathers to provide them supporting their wifes for breastfeeding.

Keywords: Breastfeeding; paternal support; breastfeeding self-efficacy; paternal-infant attachment

ÖZET Amaç: Çalışmanın amacı; babaların emzirme sürecine destek olma durumlarının, annelerin emzirme öz yeterlilikleri ve baba bebek bağlanması üzerindeki etkisinin incelenmesidir. **Gereç ve Yöntemler:** Araştırma kesitsel tiptedir. Araştırmanın örneklemini Türkiye'nin farklı illerinde yaşayan 400 ebeveyn oluşturmuştur (n=400). Verileri toplamak için web üzerinden, katılımcıların kendi kendine uygulayabildiği çevrim içi veri toplama formu oluşturulmuş ve ebeveynlere sosyal medya hesapları, emzirme konusundaki internet ve sosyal medya alanlarındaki paylaşım platformları aracılığıyla gönderilmiştir. Verilerin analizinde; yüzdelik, ortalama, standart sapma, Student t, one-way ANOVA ("post hoc": Bonferroni), Pearson korelasyon testleri kullanılmıştır. **Bulgular:** Annelerin %35,4'ünün, babaların ise %36,9'unun çalışmaya katıldığı belirlenmiştir. Çalışmada, toplam annelerin emzirme öz yeterlilikleri puan ortalaması 55,30±9,28, babaların emzirmeye desteği puan ortalaması 131,42±28,69 ve baba-bebek bağlanma puan ortalaması 75,11±9,41 olarak bulunmuştur. Annelerin emzirme öz yeterliliği puanları ile babaların emzirmeyi anlama, yardım, değer verme, hazır bulunuşluk, duyarlılık alt boyutları, toplam puan ve bağlanma puan ortancaları arasında ileri derecede pozitif, zayıf doğrusal bir ilişki olduğu görülmektedir (p<0,001). Bu çalışmada, babaların emzirmeye desteğinin, annelerin emzirme öz yeterliklerini ve baba-bebek bağlanmasını olumlu yönde etkilediği belirlenmiştir (p<0,001). **Sonuç:** Bu çalışmada, babaların emzirmeye desteğinin annelerin emzirme öz yeterliliklerini ve baba-bebek bağlanmasını olumlu yönde etkilediği saptanmıştır. Sağlık profesyonelleri, babaları eşlerinin emzirmelerini desteklemeleri konusunda teşvik etmelidir.

Anahtar Kelimeler: Emzirme; baba desteği; emzirme öz etkililiği; baba-bebek bağlanması

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Breastfeeding is important for the long-term health of mothers and babies. Fathers play an important role in the ultimate success of breastfeeding.[1,2] World Health Organization (WHO) recommends that babies should be breastfed only up to 6 months of age and that breastfeeding, supplemented with appropriate complementary foods, should continue for 2 years and more.[3] Exclusive breastfeeding during the first 6 months and maintaining breastfeeding until 2 years of age play an important role in preventing problems such as diarrhea, pneumonia, and nutritional insufficiency in children under 5 years of age. Breastfeeding behavior also contributes to maternal health by preventing iron deficiency anemia and contraception, controlling body weight, and protecting against diabetes and breast, ovarian, and endometrial cancer.[3,4] In Türkiye, 41% of children under 6 months are exclusively breastfed; 42% receive prelacteal (pre-breastfeeding) food and only 34% are breastfed until the age of two.[5]

WHO states that breastfeeding should be maintained. The prerequisites for ensuring this are that all mothers have correct knowledge and that they are provided support from their families, health systems, and society.[3] In addition to the intention of breastfeeding, its efficacy, mother's belief, and social support are important.[6,7] Breastfeeding is not just a process that concerns the mother and the baby. Supporting mothers throughout the breastfeeding process and the role of fathers in the success of breastfeeding are also very important. Fathers' breastfeeding knowledge, their attitudes, participation in the decision-making process, and practical and emotional support are extremely important for initiating and maintaining breastfeeding and for mothers' coping with breastfeeding problems. The father's support greatly affects the feeding process and breastfeeding time. While the self-efficacy of mothers who are supported in this regard increases, they prefer more breastfeeding and breastfeed for a longer duration.[2,8,9] It is very important for fathers to play an active role by participating in the pregnancy, childbirth, and postpartum process in terms of the mother, baby's health, and breastfeeding process.[1,10] A study determined that the inclusion of fathers in breastfeeding education increased the self-efficacy of mothers, their success of breastfeeding, and father-infant attachment.[11] Fathers should fulfill the responsibilities of his child in terms of establishing a father-infant bond. While the father's taking responsibility and participating in the baby's care support the baby to bond with the father, it also allows the father to establish a bond with the baby.[12] In the literature, it is stated that breastfeeding and infant attachment are positively related to each other in mothers.[13] However, studies on understanding breastfeeding, helping, appreciation, presence, responsiveness, and paternity roles of fathers and on father-infant attachment are limited.[9,14,15]

AIM

The aim of this study is to examine the effect of fathers' behavior in supporting the breastfeeding process on the self-efficacy of the mother and on father-infant attachment.

STUDY QUESTIONS

What are the mean scale scores of the mothers' Breastfeeding Self-Efficacy Scale (BSES), Partner Breastfeeding Influence Scale (PBIS), and Postnatal Paternal-Infant Attachment Questionnaire (PPAQ)?

1. Is there a statistical difference between the BSES scores based on the introductory characteristics of parents?

2. Is there a statistically significant difference between the PBIS and PPAQ scores based on the introductory characteristics of fathers?

3. Is there a relationship between the mothers' BSES, PBIS, and PPAQ scores?

MATERIAL AND METHODS

Desig

Cross-sectional and correlational study.

Setting

The population of the study consisted of breastfeeding mothers and their partners living in different provinces of Türkiye, who had at least one child between 1-24 months at the time of the study.

Sample

The study was completed with 400 parents (400 mothers and fathers) who agreed to participate in the study (n=400). At this stage, post-hoc power analysis

was performed. In the post-hoc power analysis performed in the computer environment, the power of the research was found to be 99%, with an effect size of 0.3 and a confidence level of 95%.

Inclusion Criteria

The following parents were included:

- Having at least one baby 1-24 months of age during the research period,
- Without the diagnosis of mental illness in the postpartum period or disabled parents,
- Without obstacles to breastfeed due to reasons pertaining to the infant, (allergy, preterm infants, infants with very low birth weight/low birth weight, etc.),
- Without obstacles to breastfeed due to reasons pertaining to the mother (human immunodeficiency virus+, herpes simplex virus-1+, drug use, mastitis, etc.),
- Without a communication limitation in writing,
- Who can use a smartphone,
- Who volunteered to participate.

Measurement

Data were collected using the Personal Information Form, BSES, PBIS, and PPAQ.

Personal Information Form

This form, prepared by the researchers, contains 27 questions about the sociodemographic characteristics of parents and their characteristics regarding breastfeeding.

Breastfeeding Self-Efficacy Scale

The BSES-Short Form contains 14 items assessing the self-efficacy of breastfeeding. It is a 5-point Likert scale, ranging from 1 "not at all confident" to 5 "always confident." The lowest possible score for the scale is 14 and the highest possible score is 70. The scale has no breakpoint, and the increase in the score means higher breastfeeding self-efficacy. The Turkish adaptation of the scale was developed by Aluş Tokat et al. The Cronbach alpha value of the scale was 0.86 and was determined to be reliable.[16] In this study, the alpha value of Cronbach value was 0.89.

Partner Breastfeeding Influence Scale

PBIS was developed by Rempel and Rempel (2011). This scale, containing 37 items, evaluates the activity of the spouse when the mother is breastfeeding and how often he does that using a 5-point Likert-type grading system. The scale itself has 5 subscales; breastfeeding savvy, helping, appreciation, breastfeeding presence, and responsiveness. The lowest possible score is 37 and the highest possible score is 185. An overall high score obtained from the entire scale indicates that the father has a high influence on breastfeeding. The validity and reliability study of the scale in Türkiye was conducted by Buldur and the Cronbach alpha value was determined as 0.95.[14] In this study, the Cronbach alpha value was 0.97.

Postnatal Paternal-Infant Attachment: Development of a Questionnaire

PPAQ was developed by Condon to assess postnatal father-infant attachment.[17] PPAQ contains 19 items. The scale is interpreted on total and subscale scores, and a high score indicates that the attachment is high.[17] PPAQ was adapted to Turkish by Güleç and Kavlak. Considering the fact that the adoption of the infant by the father in item 16 is not evaluated emotionally but in a physiological sense in the Turkish society and culture and because the item shows a negative correlation, this item was removed from the scale. The Cronbach alpha coefficient of the scale was 0.89.[18] In this study, the Cronbach alpha value was 0.84.

DATA COLLECTION

Data collection forms were prepared as online questionnaires. Before the link created was sent to the participants, to understand whether it is understandable, it was provided in hardcopy to 5 parents outside the sample group that meet the criteria for inclusion in the research as well as to 5 parents online. The final version was made by making necessary corrections (such as reducing open-ended questions, making changes in some question statements, etc.). Online forms were designed so that participants could fill them out only once. Before survey forms, participants were given information about the purpose of the research and the consent option was added, indicating parents wish to participate in the survey.

Data collection was conducted in two ways. The first way was that mothers and their spouses were reached using the snowball and chain method of purposeful sampling methods. The second way was sharing platforms in the internet and social media areas on breastfeeding. These platforms were accessed via Facebook and Instagram (Meta, Inc., Kaliforniya, ABD). Taking into account the purpose of the study, the presence of labels related to breastfeeding were looked in sharing platforms on the internet environment and a purposeful sampling was done. Because breastfeeding covers many areas, such as "feeding, baby care, mother's milk, breast wound, mastitis, formula food, and breast pump," internet sharing platforms where these issues are addressed were found. Finally, 4 platforms were selected in accordance with the scope of the research: "*Breastfeeding Moms, Nursing Mothers Group, Breastfeeding Support Team, and My Breastfeeding Consultant*." By contacting the manager of these platforms online, the survey forms were shared on platforms and directed to the followers. Data collection was completed online from May 1 to June 1, 2020.

DATA ANALYSIS

Descriptive statistics were used on the data collected to evaluate the number, percentage, and mean median scores. The chi-square test was used to compare categorical variables. Normal distribution of the data was analyzed by the Shapiro-Wilk test. The Student t and parametric tests were used to compare quantitative continuous data between two independent variables, and one-way ANOVA (post hoc: Bonferroni), was used for instances with more than two independent variables.

The relationships between the scores obtained from the scales used in the study were examined using Pearson correlation analysis. Cronbach α value was calculated for the scales used in the study. The significance level was accepted as $p<0.05$.

Ethical Considerations

Before initiating the study, approvals from the Akdeniz University Faculty of Medicine Clinical Research Ethics Committee (date: February 19, 2020, no: 70904504/59) were obtained. In addition, information regarding the purpose, plan, and duration of the study were explained to the participants, written and verbal consents of the participants were obtained with informed consent forms prepared according to the Declaration of Helsinki (as revised in Brazil 2013). Approvals were also obtained from the authors of the scales used in the study.

RESULTS

It was determined that 35.4% of mothers and 36.9% of fathers participating in the study were in the 30-34 age group, 59.6% of mothers and 58.6% of fathers were university graduates, 41.9% of mothers and 24.9% of fathers were government officials, and 77.6% of fathers worked during the day. In addition, 91.5% of participants had a nuclear family structure, 63.3% expressed that their income was equivalent to their expense, and 52.7% have a child. Moreover, 51.4% of breastfeeding children were girls, 28.2% were 7-12 months, 58.6% were the first child, and 47.4% had been introduced to additional food in the sixth month.

Table 1 shows the knowledge status of parents regarding mother's milk and breastfeeding. According to the table, the majority of mothers (95.3%, 95.8%, 92.6%, 97.8%, 97.8%, 92.8%, 92.8%, 88.0%, and 88.0%) and fathers (82.3%, 87.7.5%, 86.8%, 95.0%, 93.8%, and 74.1%, respectively) were determined to have given correct answers to the propositions related to mother's milk and breastfeeding and that the relationship between them was meaningful ($p<0.001$).

Table 2 shows the mothers' BSES, PBIS, and PPAQ mean scale scores. The mothers' total mean BSES score was 55.30±9.28, total mean PBIS score was 131.42±28.69, and total mean PPAQ scale score was 75.11±9.41.

Based on the introductory characteristics of the parents, the mothers' mean BSES scores are given in Table 3. The mean scores of mothers who were university graduates working in the professional group of cleaning, child care, craftsmen etc. and expressing income status as equivalent to their expenses were found to be higher than those observed in others, and the difference between them was statistically significant (respectively $p=0.003$, $p=0.001$,$p=0.442$).

TABLE 1: Distribution of parents' knowledge status about breastfeeding and breastfeeding according to some variables (n=400).

	Mothers		Fathers		
Information conditions	**Number**	**%**	**Number**	**%**	**χ^{2***}**
First-mouth milk (colostrum) differs from mature milk					
Yes	382	95.3	330	82.3	
No	3	0.7	3	0.7	
I do not know	16	4.0	68	17.0	
First-milk should be given to the baby					
Yes	384	95.8	351	87.5	
No	-	-	1	0.2	p<0.001
I do not know	17	4.2	49	12.2	
Breast milk alone is sufficient in feeding the baby for the first 6 months					
Yes	371	92.6	348	86.8	
No	25	6.2	22	5.5	p<0.001
I do not know	5	1.2	31	7.7	
Breast milk is protective against infections for the baby					
Yes	392	97.8	381	95.0	
No	5	1.2	5	1.2	p<0.001
I do not know	4	1.0	15	3.7	
Breast milk contains hormones and vitamins necessary for baby growth					
Yes	391	97.5	376	93.8	
No	2	0.5	5	1.2	p<0.001
I do not know	8	2.0	20	5.0	
Breastfeeding has beneficial effects for the mother					
Yes	372	92.8	340	84.8	
No	9	2.2	5	1.2	p<0.001
I do not know	20	5.0	56	14.0	
This is equivalent to breast milk and formula					
Yes	14	3.5	31	7.7	
No	353	88.0	297	74.1	p<0.001
I do not know	34	8.5	73	18.2	
The first hour after birth of baby feeding method*					
Breast milk	326	81.3	-	-	
Formula	52	13.0	-	-	
Non-breast milk/formula (soda, molasses, sugar water)	23	5.7	-	-	
In the first six months of infant feeding method*					
Exclusively breastfeeding	219	54.6	-	-	-
Breast milk and water	44	11.0	-	-	-
Formula	108	26.9	-	-	-
-Breast milk and formula	27	6.7	-	-	-
-Breast milk and supplementary food	3	0.7	-	-	-
Resources related to breastfeeding					
No answer	254	63.3	135	33.7	
Nurse-midwives	87	21.7	143	35.7	
Physician	7	1.7	86	21.4	p<0.001
Social media/internet	15	3.7	2	0.5	
Friend/neighbor	2	0.5	4	1.0	
Family elders	36	9.0	31	7.7	

continue →

TABLE 1: Distribution of parents' knowledge status about breastfeeding and breastfeeding according to some variables (n=400) *(continued)*.

	Mothers		Fathers		
Information conditions	**Number**	**%**	**Number**	**%**	**χ^{2***}**
Breastfeeding the baby in the community (outside the home, neighbor, friend, park, garden, cafe, shopping center)*					
Yes	258	64.3	231	57.6	
No	53	13.2	48	12.0	p<0.001
In some cases	90	22.4	122	30.4	
The reason for not breastfeeding or in some cases breastfeeding the baby in the community**					
Peer jealousy	3	7.0	1	2.8	
Religion not appropriate/correct	6	14.0	5	13.8	
No comfortable, clean and safe environment	13	30.2	14	38.9	p<0.001
Preference for being alone with the baby/privacy	9	20.9	3	8.4	
Community pressure	12	27.9	13	36.1	

TABLE 2: Distribution of Mothers' Breastfeeding Self-Efficacy, Postnatal Paternal-Infant Attachment Questionnaire Scale, Partner Breastfeeding Influence Scale total and sub-dimension scores (n=400).

Scales	**Mean±SD**	**Minimum-maximum**
Breastfeeding Self-Efficacy Scale	55.30±9.28	14.00-70.00
Postnatal Paternal-Infant Attachment Questionnaire	75.11±9.41	37.50-90.00
Partner Breastfeeding Influence Scale		
Total score	131.42±28.69	51.0-185.00
Breastfeeding savvy	19.15±5.02	7.0-30.00
Helping	36.88±8.33	14.0-50.00
Appreciation	25.44±5.98	7.0-35.00
Breastfeeding presence	21.23±5.33	7.00-30.00
Responsiveness	25.62±5.41	9.00-35.00

SD: Standard deviation.

Table 4 shows the mean PBIS and PPAQ scale scores according to the introductory characteristics of the fathers. The appreciation subscale of the PBIS of the fathers in the 20-24 age group and the presence subscale of the fathers in the 25-29 age group were significantly higher (p=0.018). The mean scores of fathers who were university graduates on the savvy about breastfeeding, helping, and appreciation subscales of the PBIS were found to be higher than those observed in others (for each p<0.001), while the mean scores of postgraduate fathers on the presence and responsiveness subscales of the PBIS, total mean PBIS, and total mean PPAQ scale scores were higher than those observed in others (respectively p<0.001, p<0.001, p=0.021). The savvy about breastfeeding subscale of fathers who were government officials (p<0.001) and helping, appreciation, presence, and responsiveness subscales, and total mean PBIS scores of the fathers who were soldiers, polices, or security officers were higher than those observed in others (respectively p=0.002, p<0.001, p=0.002, p=0.002, p<0.001). The savvy about breastfeeding mean subscale scores of the fathers who had more income than expenses and the appreciation and responsiveness subscales and total mean PBIS scores of those whose income was equivalent to their expenses were higher than those observed in others (respectively p=0.001, p=0.003, p=0.014, p=0.008). The mean PBIS scores of families with nuclear family structure and one child were higher than those observed in others (for each p<0.001).

In the study, when the correlation between the BSES and PBIS subscales and PPAQ scale scores

TABLE 3: Distribution according to parents' descriptive characteristics of Mothers Breastfeeding Self-Efficacy Scale scores (n=400).

Descriptive characteristics	n	Scale score Mean±SD	Tests	p value
Age				
20-24	28	53.75±8.03	F= 1.021	0.396
25-29	139	54.73±10.05		
30-34	142	55.91±9.33		
35-39	78	55.10±8.50		
40 and more	14	**58.93±6.73**		
Mother's education level				
Primary school graduate	19	50.05± 11.19	F=3.990	
Secondary school graduate	27	50.81±12.66	e>b,a	
High school graduate	60	54.63±9.68	d,e>a	**0.003**
University graduate	239	56.09±8.43		
Postgraduate	56	**56.59±8.77**		
Mother's occupation				
House wife	160	53.28±10.65	F=5.875	
Employee	15	56.48±7.90	d>b	**0.001**
Officer	168	52.67±11.18		
Other*	58	**58.13±6.98**		
Family type				
Nuclear family	367	**55.77**±8.87	t=2.676	**0.011**
Extended family	34	50.18±11.90		
Income level				
Income lower than expenses	69	54.00±9.06	F=0.817	0.442
Income equal to expenses	254	**55.58±9.54**		
Income higher than expenses	78	55.52±8.62		
Number of children				
1	211	**55.76±8.87**	F=1.360	0.254
2	132	54.80±9.58		
3	50	55.60±9.82		
4 and more	8	49.50±10.83		

*Other (cleaning, childcare, trades, etc.); t: Student t-test; F: One-way ANOVA test; Post Hoc: Bonferroni; SD: Standard deviation.

were examined, there was a highly positive, weak linear relationship between the mothers' BSES scores and the savvy about breastfeeding, helping, appreciation, presence, and responsiveness mean subscale scores, total mean PBIS scores, and attachment scale scores (for each $p<0.001$) (Table 5). In addition, there was a highly positive, moderate linear relationship between the attachment scale and the total mean PBIS scores for fathers, while there was a highly positive, moderate linear relationship between the attachment scale and mean PBIS subscale scores for fathers (for each $p<0.001$).

DISCUSSION

Exclusively breastfeeding and breastfeeding are essential to maintain the short-term and long-term health of babies and mothers.[4] Nurses' practices and guidance and support that mothers receive from friends, family members, and health professionals can affect breastfeeding and its duration.[19] In this study, the effect of fathers' support for the nursing process with children between 1 month and 2 years of age on mothers' breastfeeding self-efficacy and father-infant attachment were examined.

TABLE 4: Distribution according to father's descriptive characteristics of PPAQ and PBIS total and sub-dimension scores.

	PBIS Sub-Dimension Scores						
	Savvy	**Helping**	**Appreciation**	**Presence**	**Responsiveness**	**PBIS total score**	**PPAQ total score**
Descriptive characteristics	**Mean±SD**	**Mean±SD**	**Mean±SD**	**Mean±SD**	**Mean±SD**	**Mean±SD**	**Mean±SD**
Age							
20-24 age[a]	20.00±3.03	39.83±2.31	28.17±1.72	21.67±2.58	26.17±1.94	138.83±6.68	72.32±8.62
25-29 age[b]	19.44±5.35	37.32±8.63	26.51±5.44	22.29±5.23	26.82±5.27	135.70±28.36	77.11±8.62
30-34 age[c]	19.48±5.18	37.70±7.81	25.53±6.36	21.78±5.33	25.60±5.76	133.28±28.98	75.18±8.78
35-39 age[d]	19.10±4.67	36.72±8.40	25.60±5.55	20.86±5.35	25.43±5.15	130.66±27.95	74.36±10.22
40 age ≤[e]	17.90±4.91	34.16±8.33	23.22±6.27	19.05±5.08	25.61±5.46	121.53±29.50	73.56±9.50
	F=1.173	F=3.192	F=3.017	F=3.841	F=1.794	F=2.468	F=1.515
	p=0.322	p=0.069	**p=0.018** **a**>e	**p=0.004** b,c>**e**	p=0.129	**p=0.044** **b**>e	p=0.197
Father's education level							
Primary school graduate[a]	13.81±4.24	26.69±8.56	17.00±5.88	14.81±5.15	19.44±6.10	94.00±27.52	68.23±11.01
Secondary school graduate[b]	18.15±5.04	34.56±10.08	24.74±6.36	20.33±6.01	23.67±5.97	124.59±32.68	74.79±9.76
High school graduate[c]	17.99±4.68	35.25±8.64	24.41±6.10	19.61±5.09	24.45±5.69	124.67±28.37	76.26±8.30
University graduate[d]	19.65±4.75	38.25±7.33	26.19±5.31	22.14±4.86	26.48±4.70	135.85±25.29	74.98±9.52
Postgraduate[e]	21.11±5.33	37.83±8.10	25.48±5.96	22.19±5.38	25.65±5.43	138.21±30.18	76.87±8.61
	F=8.885	F=9.887	F=11.450	F=10.889	F=9.617	F=11.509	F=2.928
	p=0.000	**p=0.000**	**p=0.000**	**p=0.000**	**p=0.000**	**p=0.000**	**p=0.021**
	e>c>a	**b,c,d,e**>a	**b,c,d,e**>a	**b,c,d,e**>a	**b,c,d,e**>a	**b,c,d,e**>a	**b,c,d,e**>a
	b,c,d>a						
Father's occupation							
Officer[a]	20.94±5.26	38.79±7.27	26.96±5.59	22.53±5.13	26.85±5.39	139.47±28.10	75.97±8.62
Teacher/scholar[b]	20.72±5.40	38.13±7.13	26.74±5.51	22.36±5.34	26.41±5.85	137.62±28.48	75.29±10.02
Health worker[c]	19.90±3.50	38.75±6.66	26.72±4.41	21.93±4.46	26.73±3.90	137.28±21.11	75.16±8.78
Soldier/police/security[d]	20.36±4.13	39.12±7.96	27.18±5.21	23.15±4.45	27.15±5.32	140.21±25.36	78.68±8.21
Self-employment[e]	17.85±5.92	34.85±8.30	24.58±6.32	19.75±4.89	25.30±5.68	125.23±29.13	75.12±10.53
Employee[f]	17.90±4.45	34.65±8.63	23.78±6.44	19.91±5.38	24.12±5.61	123.26±28.84	74.20±8.92
Other** [g]	17.81±5.46	35.06±9.71	23.78±6.76	20.19±6.04	24.16±5.97	123.91±32.39	73.88±10.07
	F=4.711	F=3.634	F=4.253	F=3.531	F=3.567	F=4.424	F=1.238
	p=0.000	**p=0.002**	**p=0.000**	**p=0.002**	**p=0.002**	**p=0.000**	p=0.286
	b>e,f,g	**a**>g	**a,b**>g	**d**>e,f	**a**>g	**d**>f	*continue* →

**Other (Lawyer, Farmer, animal husbandry, banker, marketer, accountant, financier etc.)

TABLE 4: Distribution according to father's descriptive characteristics of PPAQ and PBIS total and sub-dimension scores *(continued)*.

Descriptive characteristics	PBIS Sub-Dimension Scores					PBIS total score	PPAQ total score
	Savvy	Helping	Appreciation	Presence	Responsiveness		
	Mean±SD	Mean±SD	Mean±SD	Mean±SD	Mean±SD	Mean±SD	Mean±SD
Family type							
Nuclear family	19.42±4.96	37.40±8.12	25.85±5.77	21.56±5.17	26.02±5.23	133.42±27.71	75.58±9.12
Extended family	16.18±4.76	31.18±8.56	21.09±6.55	17.65±5.76	21.32±6.19	109.82±30.52	70.01±9.12
	t=3.658	t=4.259	t=4.551	t=4.183	t=4.927	t=4.708	t=3.345
	p=0.000	**p=0.001**	**p=0.000**	**p=0.000**	**p=0.000**	**p=0.000**	**p=0.001**
Income level							
Income lower than expenses[a]	17.17±5.00	34.80±9.06	23.28±6.58	19.90±5.88	23.88±5.74	121.72±30.71	74.34±8.92
Income equal to expenses[b]	19.47±4.97	37.51±7.95	26.01±5.75	21.61±5.22	25.94±5.44	133.72±27.80	75.72±9.18
Income higher than expenses[c]	19.82±4.84	36.64±8.65	25.55±5.81	21.18±5.01	26.10±5.05	132.50±28.28	73.79±10.46
	F=6.752	F=2.951	F=5.808	F=2.818	F= 4.290	F=4.806	F=1.540
	p=0.001	p=0.053	**p=0.003**	p=0.061	**p=0.014**	**p=0.008**	p=0.216
	b,c>a		b,c>a		**b,c>a**	**b,c>a**	
Number of children							
1[a]	20.13±5.14	37.97±8.21	26.66±5.68	22.61±4.98	26.82±5.24	137.48±27.57	76.92±8.73
2[b]	18.25±4.44	36.30±7.87	24.58±5.68	20.16±5.09	24.67±4.97	126.93±26.64	73.59±9.21
3[c]	17.88±5.08	34.90±9.03	23.45±6.96	18.88±5.60	23.53±6.61	121.37±32.26	72.87±10.86
4 and more[d]	15.63±5.34	29.50±9.12	20.13±6.75	17.25±6.07	22.25±3.62	107.00±28.52	66.40±9.79
	F=6.746	F=4.557	F=8.171	F=12.146	F=8.626	F=8.620	F=7.310
	p=0.000	**p=0.004**	**p=0.000**	**p=0.000**	**p=0.000**	**p=0.000**	**p=0.000**
	a>d	**a,b>d**	a,b>d	**a>c,d**	**a>d**	**a>d**	**a,b>d**

t: Student t-test; F: One-way ANOVA test; Post hoc: Bonferroni; PPAQ: Postnatal Paternal-Infant Attachment Questionnaire; PBIS: Partner Breastfeeding Influence Scale; SD: Standard deviation.

In a study that stated the importance of increasing the knowledge on breastfeeding and of feeding mother's milk for up to 2 years of age, it was found that mothers had moderate knowledge on breastfeeding.[19] In support of this result, it was determined in our study that the majority of mothers and fathers correctly responded to the propositions on mother's milk and breastfeeding ($p<0.001$). In this study, mother and fathers with good knowledge about mother's milk and breastfeeding supports the facts that mother's milk is given in the first hour after birth (81.3%), the infant is exclusively breastfeeding (65.6%) for the first 6 months. and breastfeeding continues until the age of 2.

The American Academy of Pediatrics recommends breastfeeding with about eight feedings a day for the first 6 months and then with mother's milk with supplementary food for the next 6-18 months.[20] For initiating and maintaining successful breastfeeding, mothers and fathers must be supported by family, community, and health workers during the gestation period as well as after childbirth.[3,15,19] If the level of knowledge on breastfeeding is insufficient, fathers may not want to

TABLE 5: Correlation between mothers BSES, PPAQ and PBIS scale total and sub-dimension scores.

	BSES	Savvy	Helping	Appreciation	Presence	Responsiveness	PBIS total score	PPAQ total score
	r	r	r	r	r	r	r	r
BSES	1.000							
Savy	**0.273****	1.000						
Helping	**0.305****	**0.713****	1000					
Appreciation	**0.328****	**0.781****	**0.747****	1000				
Presence	**0.308****	**0.781****	**0.850****	**0.834****	1000			
Responsiveness	**0.364****	**0.783****	**0.779****	**0.867****	**0.849****	1000		
PBIS total score	**0.346****	**0.880****	**0.905****	**0.913****	**0.941****	**0.923****	1000	
PPAQ total score	**0.257****	**0.543****	**0.598****	**0.558****	**0.568****	**0.554****	**0.613****	1000

R: Pearson correlation coefficient;**p<0.001; BSES: Breastfeeding Self-Efficacy Scale; PPAQ: Postnatal Paternal-Infant Attachment Questionnaire; PBIS: Partner Breastfeeding Influence Scale.

Pearson r

0<r<0.20: Very weak correlation

0.20≤r<0.40: Weak correlation

0.40≤r<0.60: Moderate correlation

0.60≤r<0.80: Good correlation

support their spouses' breastfeeding.[15] The study revealed that mothers (21.7%) mostly wanted to receive information about breastfeeding from nurses and midwifes and that fathers (35.7%) approved this. Similarly, in a study conducted in Vietnam, it was found that obtaining counseling from healthcare professionals has a significant impact on breastfeeding.[21]

One of the most important factors affecting the initiation and maintenance of breastfeeding is the perception of breastfeeding self-efficacy.[22] In this study, it was possible to say that the mothers' BSES score (55.30±9.28) was above average. In a similar study, the total mean BSES score was 54.14±8.63.[23] Breastfeeding self-efficacy reflects the mother's self-confidence in breastfeeding. The mother's perception of breastfeeding self-efficacy can show whether she will breastfeed her baby, how much effort she will make to breastfeed, her thoughts on breastfeeding and how well she can cope with the problems she will encounter during the breastfeeding process.

According to the introductory characteristics of parents, when the mothers' mean BSES scores were examined, it was found that the mean scale scores of the mother who graduated from university and who expressed that their income status was equal to their expenses were higher than those observed in others. As the education levels of mothers increases, the level of knowledge about mother's milk and breastfeeding, and therefore, the breastfeeding self-efficacy also increases. In the study by Wu et al., there was a positive relationship between the level of education of mothers and their breastfeeding self-efficacy.[24] The level of education of the mother affects the practice of breastfeeding in particular and plays an important role in maintaining the health of the mother and the baby in general.[25] Initiating and maintaining breastfeeding, the level of education of the mother, working, willingness to breastfeed, mode of birth, previous experiences of the mother, parents' being informed insufficiently about breastfeeding, and lack of family support affect BSE.[22,26] Mothers who are consciously supported by their spouses during breastfeeding are reported to experience fewer breastfeeding problems, have increased self-efficacy, prefer more breastfeeding, and maintain breastfeeding for longer durations.[1,2,8] The main determinants of breastfeeding for longer durations were identified as strong support of the close circle of the mother of the first degree (spouse, mother, etc.).[27] The study shows that younger fathers appreciate breastfeeding more and that their readiness to support breastfeeding is higher. Some studies have revealed that the age of the father, his profession, level of education, number of children, and his financial situation affect his participation in the care and attachment to his baby.[28,29] The study shows that younger fathers appreciate breastfeeding more and that their readiness to support

breastfeeding is higher. In McVeigh's study, it was reported that participation in the care of the baby and the age of the father were significant, and these fathers took more duties in childcare and at home.[30] Kartal and Erişen found that there was a significant relationship between father's age with attachment and baby care.[29] As the level of education increases, the rate of consciously and effectively supporting breastfeeding increases. It has been shown that the education level of the fathers shapes their knowledge about breastfeeding and their support for the breastfeeding process. Nkwake has reported that fathers with a high level of education have an equalistic view of caring for children, whereas those with a low level of education have a traditional view and believe that the physical care of the child is the work of the mother.[31] Fathers working in professions based on shifts, such as soldiers, police, or security guards, were found to provide more support to their wives in breastfeeding and childcare.[29] Furthermore, fathers' support levels increased as their income level increased. It is known that fathers who have reached a satisfaction level in business life participate more in the care of the child and have better relationship with them.[30] In addition, it has been reported that fathers with definite working hours also increases the time and quality provided to the child.[32] In a traditional family structure, the following three gender attitudes are prevalent: "employment and work are primarily the responsibility of a man," "women are better than men in caring for a child" and "child care is a mother's work".[12] All mean scale scores of the families with a core family structure and one child were determined to be higher than those observed in others. This suggests that mothers who have more than one baby and who live in a large family can be negatively affected in breastfeeding behavior by the elders in their family.

In this study, when the relationship between the BSE and PBIS subscale scores of the mothers were examined, there was a highly positive, weak linear relationship between the mothers' breastfeeding self-efficacy scores and fathers' savvy about breastfeeding, helping, presence, and responsiveness mean subscale scores and total PBIS and attachment scale mean scores. The BSE scores of mothers who were supported by their spouses during breastfeeding were found to be high. In a study conducted in Türkiye, the activity of breastfeeding in mothers was positively related to the emotional, social, and physical support levels of their spouses.[23] Studies show that fathers who support breastfeeding increase the rates of starting breastfeeding, reduce the rate of complications of lactation leading to premature cessation of breastfeeding, and increase the duration of the mother's breastfeeding efforts.[2,8,9] Our study findings support the literature.

The transition to postpartum parenting can be difficult for mothers and can cause distrust and stress. This situation negatively affects mother-infant attachment and interaction as well as affecting the process of father-baby attachment.[33] It can be said that the mean PPAQ scale scores (75.11±9.41) of the fathers participating in the study was slightly higher than the intermediate level. Fathers develop the feeling of caring for their baby and loving them after birth in general. The role and responsibility of fatherhood and spending more time with their children are also considered useful for fathers. In this case, fathers' having sufficient knowledge about breastfeeding and their support for breastfeeding is also very important. In this study, it was determined that there was a highly positive, moderate linear relationship between the fathers' PBIS total and subscale mean scores and PPAQ scale mean scores. Accordingly, as the fathers' breastfeeding support scores increase, their attachment scores also increase. This result supports the finding in the literature.[12] It can be said that partner support has a positive effect on parenting behaviors and father-infant relationship. Studies show that fathers' participation in baby care after birth has a positive effect on parenting behavior, mother-infant and family health.[34,35]

LIMITATIONS

In the research execution phase, the fact that the data were collected via online forms instead of the face-to-face interview method due to the social distancing rule and curfew restrictions in wake of the coronavirus disease-2019 pandemic process is one of the limitations of the research. The heterogeneity of the demographic variables, such as the region where the sample group lives, education level, and income

level, is another limitation in terms of the generalization of the study results.

CONCLUSION

Initiating and maintaining breastfeeding is an important public health problem. In this study, it was found that the fathers' support for breastfeeding positively affects the mothers' self-efficacy and father-infant attachment. Not exclusively breastfeeding, considering its influence on the relationship between the father and baby, but also the influence of fathers on breastfeeding is considered among the priority issues of breastfeeding by health professionals. In accordance with these results, the following points have been suggested:

- Fathers' perception of inefficacy about breastfeeding should be determined and mothers and fathers should be included together in society-based studies on breastfeeding.
- Particularly considering the effect of social media today; trainings in which spouses will participate together on internet sharing platforms should be organized.
- Fathers supporting programs about father-infant attachment should be organized.
- To ensure that fathers encourage mothers to breastfeed, intervention programs that are community-based and include a holistic approach appropriate for fathers should be planned by health professionals in future researches.

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Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: *Kamuran Özdil, Derya Evgin;* ***Design:*** *Derya Evgin;* ***Control/Supervision:*** *Derya Evgin, Kamuran Özdil;* ***Data Collection and/or Processing:*** *Derya Evgin, Kamuran Özdil;* ***Analysis and/or Interpretation:*** *Derya Evgin;* ***Literature Review:*** *Derya Evgin, Kamuran Özdil;* ***Writing the Article:*** *Derya Evgin, Kamuran Özdil;* ***Critical Review:*** *Kamuran Özdil;* ***References and Fundings:*** *Derya Evgin, Kamuran Özdil;* ***Materials:*** *Derya Evgin, Kamuran Özdil.*

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