

## Factors Effecting the Duration of Breast Feeding and the Time of Weaning

Anne Sütü Alım Süresi ve Kesilme Zamanını Etkileyen Faktörler

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## ABSTRACT

**Aim:** Breast milk is the ideal type of nutrition for infants. Breastfeeding has many benefits for the mother, baby and society. In this study, we aimed to determine the sociodemographic factors that affect the duration of breastfeeding and the time of weaning in the children of mothers who have children aged 5 and under, to detect the problems that will occur during the breastfeeding process in advance and to contribute to the precautions that need to be taken.

**Materials and Methods:** This is a cross-sectional study in which a survey was conducted with mothers or caregivers of children aged 5 and under. Our study was conducted by the researcher using the face-to-face survey method. In the survey; the child's gender, age, type of birth, week of birth, birth weight, when he first breastfed, whether he used formula or not, if so, the reason, when he started the first complementary food, how much breast milk he received only and in total, the number of siblings, if any, for how long. Breastfeeding, household's total income, mother's prenatal breastfeeding education status, mother and father's sociodemographic characteristics, occupations, working and health status, and mother's emotional state were questioned.

**Results:** The cesarean delivery rate in the group with breastfeeding for less than 1 year was significantly (p<0.05) higher than the group with breastfeeding for more than 1 year. The rate of the mother receiving prenatal breastfeeding education in the group with breastfeeding for more than 1 year was significantly (p<0.05) higher than the group with breastfeeding for less than 1 year. The rate of breastfeeding within the first hour in the group with breast milk intake over 1 year was significantly higher than in the group with breast milk intake under 1 year (p<0.05). In the group whose breastfeeding is over 1 year, the proportion of those who think that their child should be breastfed until the age of 2 is; Breast milk intake was significantly higher than the group with breastfeeding for more than 1 year than in the group with breastfeeding for less than 1 year. The maternal employment rate in the group with breastfeeding for more than 1 year was significantly (p<0.05) higher than the group with breastfeeding for less than 1 year. The maternal employment rate in the group with breastfeeding for more than 1 year was significantly (p<0.05) higher than the group with breastfeeding for less than 1 year.

**Conclusion:** Breastfeeding is very important for a baby's healthy development and protection from diseases in the first two years of life. It is every baby's natural right to be fed with breast milk. Determining the timing of breastfeeding and the factors that lead to its cessation in our country and region will contribute to taking precautions in this regard and increasing the duration of breastfeeding. If possible, breastfeeding education starting before birth, supporting the mother after birth, and providing appropriate opportunities for breastfeeding for working mothers will increase the duration of breast milk intake.

Keywords: Human milk, breastfeeding, duration of time

ÖΖ

**Amaç:** Anne sütü, bebekler için en ideal besindir. Anne sütü ile beslenmenin; anneye, bebeğe ve topluma çok sayıda yararı bulunmaktadır. Biz de bu çalışmamızda, 5 yaş ve altı çocuk sahibi olan annelerin çocuklarındaki anne sütü alım süresi ve kesilme zamanında etkili olan sosyodemografik faktörlerin belirlenmesini, anne sütü ile beslenme sürecinde yaşanacak sorunların önceden tespit edilmesini ve alınması gereken önlemlere katkıda bulunmayı amaçladık.

Gereç ve Yöntem: Araştırmamız 5 yaş ve altı çocukların anneleri veya bakım verenleriyle anket uygulanan kesitsel tipte bir çalışmadır. Çalışmamız araştırıcı tarafından yüz yüze anket yöntemi ile yapıldı. Ankette; çocuğun cinsiyeti, yaşı, doğum şekli, doğum haftası, doğum kilosu, ilk ne zaman

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emdiği, formül mama kullanıp kullanmadığı, kullandıysa nedeni, ilk ek gıdaya başlama zamanı, sadece ve toplam ne kadar anne sütü aldığı, kardeş sayısı, varsa kardeşin ne kadar süre anne sütü aldığı, hane halkının toplam geliri, annenin doğum öncesi emzirme eğitimi alma durumu, anne ve babanın sosyodemografik özellikleri, meslekleri, çalışma ve sağlık durumları ile annenin duygudurumu sorgulanmıştır.

**Bulgular:** Anne sütü alımı 1 yıl altı olan grupta sezaryen doğum oranı, anne sütü alımı 1 yıl üstü olan gruptan anlamlı (p<0,05) olarak daha yüksekti. Anne sütü alımı 1 yıl üstü olan grupta annenin doğum öncesi emzirme eğitimi alma oranı, anne sütü alımı 1 yıl altı olan gruptan anlamlı (p<0,05) olarak daha yüksekti. Anne sütü alımı 1 yıl üstü olan grupta ilk 1 saat içinde emzirme oranı, anne sütü alımı 1 yıl altı olan gruptan anlamlı (p<0,05) olarak daha yüksekti (p<0,05). Anne sütü alımı 1 yıl üstü olan grupta ilk 1 saat içinde emzirme oranı, anne sütü alımı 1 yıl altı olan gruptan anlamlı olarak daha yüksekti (p<0,05). Anne sütü alımı 1 yıl üstü olan grupta, çocuğunun 2 yaşına kadar anne sütü alması gerektiğini düşünenlerin oranı; anne sütü alımı 1 yıl altı olan gruptan anlamlı olarak yüksekti. Anne sütü alımı 1 yıl üstü olan grupta anne eğitim durumu, anne sütü alımı 1 yıl altı olan gruptan anlamlı olarak gruptan anlamlı (p<0,05) olarak daha yüksekti. Anne sütü alımı 1 yıl üstü olan grupta anne eğitim durumu, anne sütü alımı 1 yıl altı olan gruptan anlamlı (p<0,05) olarak daha yüksekti. Anne sütü alımı 1 yıl üstü olan grupta anne çalışma oranı, anne sütü alımı 1 yıl altı olan gruptan anlamlı (p<0,05) olarak daha yüksekti.

Sonuç: Anne sütü ile beslenme hayatın ilk iki yılında bir bebeğin sağlıklı gelişimi ve hastalıklardan korunması için çok önemlidir. Her bebeğin anne sütü ile beslenmek en doğal hakkıdır. Ülkemizde ve bölgemizde anne sütü alım zamanı ve kesilmesine yol açan faktörlerin belirlenmesi, bu konuda önlemler alınmasına ve anne sütü alım süresinin arttırılmasına katkı sağlayacaktır. Mümkünse doğum öncesi başlanan emzirme eğitimi, annenin doğum sonrası desteklenmesi, çalışan anneler için emzirme için uygun olanakların sağlanması anne sütü alım süresini arttırız

Anahtar Kelimeler: Anne sütü, alım süresi, emzirme

## INTRODUCTION

Breast milk is the ideal food for babies. Breastfeeding has many benefits for the mother, the infant and society. Exclusive breastfeeding (EB), especially for the first six months, is very important for the functional, neuromotor and cognitive development of infants. The World Health Organization (WHO) and the European Committee for Pediatric Gastroenterology, Hepatology and Nutrition (ESPGHAN) recommend that all infants should be fed with EB for the first 6 months, and that supplementary foods with high nutritional value should be started in addition to breast milk from the 6<sup>th</sup> month onwards, and breastfeeding should be continued until at least 2 years of age<sup>1,2</sup>.

Breastfeeding reduces infant mortality and morbidity rates, provides optimal growth and development, and establishes a close bond between mother and child. In addition, breast milk protects infants against diseases through antibodies transmitted from the mother, prevents nutritional deficiencies and prevents foodborne infections<sup>3</sup>.

Breastfeeding has benefits for the mother as well as the baby. Breastfeeding prevents complications that may occur in the breast due to milk accumulation. Postpartum bleeding, breast, ovarian and uterine cancers, urinary tract infections and osteoporosis are less common in breastfeeding women compared to non-breastfeeding women<sup>4,5</sup>.

The WHO and the United Nations Children's Fund (UNICEF) have been working hard to promote breastfeeding. For this reason, in 1992, the WHO initiated the "Baby Friendly Hospital" practice on an international platform and established practical practices, especially in developing countries, to increase breastfeeding. This approach of WHO has led to visible changes in hospital practices in most countries to increase breastfeeding rates<sup>6,7</sup>.

In this study, we aimed to determine the sociodemographic factors affecting the duration of breast milk intake and discontinuation of breast milk in the children of mothers with children aged 5 years and residing in Tekirdağ province, to determine the problems that would be experienced during the breastfeeding process in advance and to contribute to the measures to be taken.

## **MATERIALS AND METHODS**

## Type, Sample, Place and Time of the Study

Our study is a cross-sectional study in which mothers or caregivers of children aged 5 years and under were surveyed. This study was conducted on 400 children aged 5 years and younger between October 2021 and December 2021 at Tekirdağ Namık Kemal University Hospital, Department of Pediatrics, Pediatrics Outpatient Clinics.

### **Data Collection Method**

Our study was conducted by the researcher with faceto-face questionnaire method. The questionnaire takes approximately 10 minutes to complete. In the questionnaire, the child's gender, age, mode of delivery, birth week, birth weight, when he/she first breastfed, whether he/she used formula milk or not, if so, why, the time of starting the first supplementary food, how much breast milk he/she received exclusively and in total, the number of siblings, how long the sibling received breast milk, if any, the total income of the household, the mother's prenatal breastfeeding education, the sociodemographic characteristics, occupations, employment and health status of the mother and father, and the mother's emotional status were questioned.

While categorizing the answers to the question on the total income of the household in the survey, based on the May 2021 data of the TÜRK-İŞ Confederation, the hunger limit of 2850 TL

and below was determined as the lowest limit and the poverty limit of 9300 TL and above was determined as the upper limit.

## **Statistical Analysis**

Mean, standard deviation, median minimum, maximum, frequency and ratio values were used in descriptive statistics of the data. The distribution of variables was measured with the Kolmogorov-Smirnov test. The Mann-Whitney U test was used to analyze quantitative independent data. The chi-square test was employed in the analysis of qualitative independent data, and the Fisher's test was used when chi-square test conditions were not met. Statistical Package for the Social Sciences 28.0 program was used in the analysis.

## **Research Ethics**

The families and other caregivers of the children admitted to the Tekirdağ Namık Kemal University, Pediatrics Outpatient Clinics of the Department of Pediatrics were informed and the children who agreed to participate in the study and signed the Informed Consent Form by their families or caregivers were included in the study.

Approval decision with protocol number 2021.213.07.21 was obtained from the Tekirdağ Namık Kemal University Medical Faculty Non-Interventional Clinical Research Ethics Committee (date: 27.07.2021).

## RESULTS

Children aged 5 years and younger who were admitted to the Tekirdağ Namık Kemal University Hospital, Pediatrics Outpatient Clinics of the Department of Pediatrics between October 2021 and December 2021 were included in the study (Table 1, 2, 3).

The mean age was significantly (p < 0.05) higher in the group with breast milk intake of more than 1 year than in the group with breast milk intake of less than 1 year. Gender distribution did not differ significantly (p>0.05) between the groups with breast milk intake less than 1 year and above 1 year. The rate of cesarean delivery was significantly (p<0.05) higher in the group with breast milk intake less than 1 year than in the group with breast milk intake more than 1 year. The preterm birth rate was significantly (p<0.05) lower in the group with breast milk intake above 1 year than in the group with breast milk intake below 1 year. Low birth weight was significantly (p<0.05) lower in the group with breast milk intake above 1 year than in the group with breast milk intake below 1 year.

The number of siblings and duration of breastfeeding did not differ significantly (p>0.05) between the groups with breastfeeding intake of less than and above 1 year.

The rate of prenatal breastfeeding education was significantly higher in the group with breastmilk intake of more than 1 year than in the group with breastmilk intake of less than 1 year (p<0.05). The rate of breastfeeding within the first 1 hour

		Minimum-maximum	Median	Mean±SD	n	0⁄0
Did the mother receive prenatal breastfeeding education?	Yes				183	45.8%
	No				217	54.3%
When did she first breastfeed?	None				14	3.5%
	First 1 hour				256	64%
when did she first ofeastieed?	1-4 hours				85	21.3%
	After 4 hours				55	13.8%
Duration of breast milk use	None				14	3.5%
	0-6 months				80	20%
	6-12 months				62	14.5%
	12-18 months	0.0-36	17.0	15.0 <u>+</u> 9.3	74	18.5%
	18-24 months				117	29.3%
	24-30 months				45	11.3%
	30-36 months				8	2.0%
When is the first supplementary food?		0.0-16.0	6.0	5.8 <u>+</u> 1.7		
Has she/he started supplementary food?	Not started				19	4.8%
	Started				381	95.3%
	First 6 months				27	6.8%
How long should a child be breastfed?	Until one year of age				50	12.5%
	Until two years of age				323	80.8%

Table 1. Distribution of information on mothers' breastfeeding education, time of first breastfeeding, duration of breast milk use,

was significantly higher in the group with breastmilk intake of more than 1 year than in the group with breastmilk intake of less than 1 year (p<0.05). The proportion of those who thought that their child should receive breast milk until the age of 2 years was significantly higher in the group with breast milk intake of more than 1 year than in the group with breast milk intake of less than 1 year (p<0.05) (Table 4). Maternal age did not differ significantly between the groups with breast milk intake of less than 1 year and more than 1 year (p>0.05). Maternal education level was significantly higher in the group with breast milk intake over 1 year than in the group with breast milk intake less than 1 year (p<0.05). Maternal employment rate was significantly higher in the group with breastmilk intake above 1 year than in the group with breastmilk intake below 1 year (p<0.05). In the group

		Minimum- Maximum	Median	Mean <u>+</u> SD	n	0/0
Age of mother		3.0-46.0	31.0	31.7±5.3		
Mother's education level	Primary school				38	9.5%
	Middle school				46	11.5%
	High school				79	19.8%
	University				215	53.8%
	Master's degree				22	5.5%
Does the mother work?	Yes				206	51.5%
bots the mother work:	No				194	48.5%
	Teacher				57	27.7%
	Private sector employee				31	15%
	Civil servant				30	14.6%
	Nurse				16	7.8%
	Doctor				13	6.3%
	Engineer				12	5.8%
	Worker				8	3.9%
	Health officer				7	3.4%
If the mother works, what is her	Security				6	2.9%
occupation?	Self-employment				5	2.4%
•	Emergency medical				5	2.4%
	technician				4	1.9%
	Tradesmen				3	1.5%
	Academician				2	1%
	Lawyer				2	1%
	Dentist				2	1%
	Bank employee				2	1%
	Physiotherapist				1	0.5%
	Police officer					
Did the mother start working after the	Not working				194	48.5%
birth?	Not started				19	4.8%
	Started				187	46.8%
When did the mother start working after the birth?		1.0-120.0	7.0	11.6±14.4		
How long did she breastfeed the siblings?		0.0-40.0	1.0	8.3±10.5		
	1				189	47.3%
	2				176	44%
Number of siblings	3				26	6.3%
	4				7	1.8%
	5				2	0.5%

Table 3. Distribution of the child's formula i			0/0
		n	
Did she/he take formula?	Yes	199	49.8%
	No	201	50.2%
	First 1 week	83	41.7%
	1. month	11	5.5%
	2. month	37	18.6%
	3. month	18	9%
	4. month	15	7.5%
If so, when did she/he first start formula?	5. month	8	4%
	6. month	14	7%
	7. month	5	2.5%
	8. month	4	2%
	9. month	2	1%
	12. month	2	1%
	Because breast milk was insufficient	147	73.9%
Why did she/he start formula?	Because the doctor recommended it	30	15.1%
	Because the mother thought the baby was not full	22	11.1%
Who recommended formula?	Doctor	152	76.4%
	Nurse	7	3.5%
	Relative	2	1%
	Herself	38	19.1%
	Less than 1 year	156	39%
Breast milk intake	More than 1 year	244	61%

# Table 4. Distribution of information about the mother's breastfeeding education, time of first breastfeeding and duration of breastfeeding in the groups with breast milk intake of less than or more than 1 year

	Breast milk intake				
	Less than 1 yearMore than 1 yearMean±SDMean±SD		1 year		
			Mean±SD		р
	n	%	n	%	
Yes	58	37.2%	125	51.2%	<b>0.006</b> x <sup>2</sup>
No	98	62.8%	119	48.8%	0.006 X-
First 1 hour	76	48.7%	170	69.7%	
1-4 hours	34	21.8%	51	20.9%	<b>0.000</b> x <sup>2</sup>
After 4 hours	32	20.5%	23	9.4%	0.000 X
First 6 months	24	15.4%	3	1.2%	
Up to 1 year old	38	24.4%	13	5.3%	<b>0.000</b> x <sup>2</sup>
Up to 2 years old	94	60.3%	228	93.4%	0.000 X <sup>2</sup>
	<ul> <li>No</li> <li>First 1 hour</li> <li>1-4 hours</li> <li>After 4 hours</li> <li>First 6 months</li> <li>Up to 1 year old</li> </ul>	Mean±SD           Mean±SD           n           ?         Yes         58           No         98           First 1 hour         76           1-4 hours         34           After 4 hours         32           First 6 months         24           Up to 1 year old         38	Mean±SD           n         %           ?         Yes         58         37.2%           No         98         62.8%           First 1 hour         76         48.7%           1-4 hours         34         21.8%           After 4 hours         32         20.5%           First 6 months         24         15.4%           Up to 1 year old         38         24.4%	Mean±SD         Mean±SD           n         %         n           ?         Yes         58         37.2%         125           No         98         62.8%         119           First 1 hour         76         48.7%         170           1-4 hours         34         21.8%         51           After 4 hours         32         20.5%         23           First 6 months         24         15.4%         3           Up to 1 year old         38         24.4%         13	Mean±SD         Mean±SD           n         %         n         %           ?         Yes         58         37.2%         125         51.2%           No         98         62.8%         119         48.8%           First 1 hour         76         48.7%         170         69.7%           1-4 hours         34         21.8%         51         20.9%           After 4 hours         32         20.5%         23         9.4%           First 6 months         24         15.4%         3         1.2%           Up to 1 year old         38         24.4%         13         5.3%

x<sup>2</sup>: Chi-square test, SD: Standard deviation

with breast milk intake of more than 1 year, the rate of maternal employment after birth was significantly higher than the group with breast milk intake of less than 1 year (p<0.05). There was no significant difference between the groups with breast milk intake of less than 1 year and more than 1 year in the mother's time of starting work after delivery (p>0.05). The rate of maternal smoking did not differ significantly between the groups with breast milk intake below and above 1 year (p>0.05). The rate of maternal alcohol use was significantly

higher in the group with breast milk intake over 1 year than in the group with breast milk intake less than 1 year (p<0.05). The rate of known maternal illness was significantly lower in the group with breast milk intake over 1 year than in the group with breast milk intake less than 1 year (p<0.05). The rate of maternal postpartum mood disorder did not differ significantly between the groups with breast milk intake of less than or more than 1 year (p>0.05) (Table 5).

		Breast milk intake				
		Less than 1 year		More than 1 year		
		n	0⁄0	n	0/0	р
	Primary school	22	14.1%	16	6.6%	
	Middle school	28	17.9%	18	7.4%	
Mother's education level	High school	34	21.8%	45	18.4%	0.000 x <sup>2</sup>
	University	64	41%	151	61.9%	
	Master's degree	8	5.1%	14	5.7%	
	Yes	62	39.7%	144	59%	0.000 x <sup>2</sup>
ls the mother working?	No	94	60.3%	100	41%	0.000 X
	Not working	94	60.3%	100	41%	
Did the mother start working after the birth?	Not started	13	8.3%	6	2.5%	0.000 x
	Started	49	31.4%	138	56.6%	
	Yes	34	21.8%	42	17.2%	0.0552
Does the mother smoke?	No	122	78.2%	202	82.8%	0.255 x <sup>2</sup>
Does the mother drink alcohol?	Yes	0	0%	12	4.9%	0.005
	No	156	100%	232	95.1%	0.005 x <sup>2</sup>
Does the mother have a known disease?	Yes	27	17.3%	25	10.2%	
	No	129	82.7%	219	89.8%	0.041 x <sup>2</sup>
Postpartum mood disorder in the mother	Yes	32	20.5%	54	22.1%	0.701 2
	No	124	79.5%	190	77.9%	0.701 x <sup>2</sup>

Table 5. Distribution of mothers' age, education level, employment and health status, and postnatal mood in the groups with

Paternal age did not differ significantly between the groups with breast milk intake less than 1 year and above 1 year (p>0.05). Paternal education level was significantly higher in the group with breast milk intake over 1 year than in the group with breast milk intake less than 1 year (p<0.05). Paternal employment rate did not differ significantly between the groups with breast milk intake of less than and above 1 year (p>0.05). The rate of paternal smoking was significantly lower in the group with breast milk intake over 1 year than in the group with breast milk intake less than 1 year (p<0.05). There was no significant difference between the groups with breast milk intake of less than or more than 1 year (p>0.05). There was no significant difference in the rate of known disease in the father between the groups with breast milk intake of less than 1 year and more than 1 year (p>0.05). Total household income was significantly higher in the group with breastfeeding intake above 1 year than in the group with breastfeeding intake below 1 year (p<0.05).

The rate of formula feeding was significantly lower in the group with breast milk intake over 1 year than in the group with breast milk intake less than 1 year (p<0.05). In the group with a breast milk intake of more than 1 year, the rate of starting formula at 3 months and later was significantly lower than the group with a breast milk intake of less than 1 year

(p<0.05). The reason for the initiation of formula feeding did not differ significantly between the groups with breast milk intake of less than 1 year and more than 1 year (p>0.05). The person who recommended formula did not differ significantly between the groups with breast milk intake of less than or more than 1 year (p>0.05).

The rate of prenatal breastfeeding education did not differ significantly between the groups who received formula for the first 4 months and those who did not (p>0.05). The duration of EB was significantly lower in the group receiving formula for the first 4 months than in the group not receiving formula for the first 4 months (p<0.05). The rate of breastfeeding within the first hour was significantly lower in the group receiving formula for the first 4 months than in the group not receiving formula for the first 4 months (p < 0.05). The proportion of those getting breast milk for 1 year or less in the group who received formula for the first 4 months (57.9%) was significantly higher than the proportion of those who used breast milk for 1 year or less in the group who did not receive formula for the first 4 months (25.8%) (p<0.05). The rate of those who thought that their child should receive breast milk until the age of 2 years was significantly lower in the group who received formula for the first 4 months than in the group who did not receive formula for the first 4 months (p<0.05).

## DISCUSSION

In this cross-sectional study conducted among parents with children aged 5 years and younger, who applied to the Pediatrics Outpatient Clinic of Tekirdağ Namık Kemal University Hospital, sociodemographic data affecting the duration of breast milk intake and weaning time, problems experienced in this process and solutions were investigated.

Total fertility rate refers to the average number of children a woman can give birth to in the age group of 15-49 years during her fertile period. According to Turkish Statistical Institute 2020 data, the total fertility rate is 1.76<sup>8</sup>. In our study, 47.3% of the families had one child, 44% had two children, 6.5% had three children, and 2.2% had more than three children.

In our study, the mode of delivery was questioned and 63.8% were delivered by cesarean section and the rate of cesarean section was 57% according to 2019 data in Turkey<sup>8</sup>. The rate of cesarean delivery is increasing in our country and the data of our study were found to be close to the average of Turkey. Considering that cesarean delivery affects breastfeeding, the high rates are striking. In a study conducted by Hobbs et al.9 in 2016, when planned cesarean delivery and normal spontaneous vaginal delivery were compared, it was reported that women who gave birth by cesarean delivery had a higher rate of discontinuation of breastfeeding before 12 weeks postpartum and that cesarean delivery negatively affected breastfeeding initiation time and total breastfeeding duration. In our study, we found that cesarean delivery had a negative effect on EB and total breastfeeding duration. However, Pérez-Escamilla et al.<sup>10</sup> reported that cesarean delivery had no effect on total breastfeeding duration if mothers started breastfeeding from birth and continued breastfeeding for at least 4 weeks after birth. Similarly, in the study conducted by Watt et al.<sup>11</sup> no difference was found between the total breastfeeding duration of mothers who continued breastfeeding up to 6 weeks postpartum and mothers who delivered by cesarean section or normal spontaneous vaginal delivery.

Delays in the initiation of breastfeeding may lead to a decrease in the baby's sucking ability and sensitivity, as well as a decrease in the amount of milk<sup>12-20</sup>. In a study by Raghavan et al.<sup>21</sup>, it was reported that cesarean delivery and male gender were the greatest risk factors for early initiation of breastfeeding. In our study, we found that babies who were breastfed within the first 1 hour after birth had a higher duration of EB intake and total breast milk intake for the first 6 months compared to babies who were not breastfed within the first 1 hour. These results are consistent with the WHO's 10 steps for successful breastfeeding, which encourage initiation of breastfeeding within the first 1 hour after birth and recommend that babies stay with their mothers for 24 hours<sup>22-24</sup>. Difficulties experienced in initiating and maintaining breastfeeding in the first child lead to the same problems in subsequent births<sup>25,26</sup>. In our study, we found that mothers who breastfed their first child had higher rates of feeding their children with EB for the first 6 months in other births, but this did not affect the total duration of breastfeeding.

Preterm babies have many problems, including irregular sucking ability, low birth weight and low alertness levels. These adversely affect initiation and maintenance of breastfeeding<sup>27,28</sup>. In our study, preterm birth and low birth weight negatively affected the duration of EB and total breast milk intake in the first 6 months.

Scime et al.<sup>29</sup> reported that there was no significant difference between the rates of EB in the first 6 months between mothers with and without a chronic disease, but the presence of a chronic disease in the mother may negatively affect the total breastfeeding time. In our study, the presence of a known chronic disease in the mother did not affect the duration of EB in the first 6 months but shortened the total duration of EB.

In their meta-analysis, Cohen et al.<sup>30</sup> found that higher educational level had a positive effect on both initiation and continuation of breastfeeding. It is thought that mothers with higher levels of education and working mothers may have more control over their home or working environment, which has a positive effect on the duration of breastfeeding<sup>31</sup>. In a study conducted by Laksono et al.<sup>32</sup> in 2021 using data from 53,528 children aged 5 years and younger, it was reported that as the mother's education level increased, the duration of EB intake increased, but the duration of EB intake was inversely associated with the mother's employment status. In our study, we concluded that a high level of maternal education and employment status of the mother had a positive effect on the duration of EB and total breast milk intake in the first 6 months.

In a study by Mathew et al.<sup>33</sup> including children aged 4 years and younger published in 2021, it was found that breastfeeding rates were higher in families with higher household income, and that this was inversely related to maternal age. In another study, sociodemographic characteristics such as low household income and low maternal age were associated with a decreased likelihood of initiation and continuation of breastfeeding<sup>34</sup>. In our study, high total household income had a positive effect on the duration of SAS and total breastfeeding in the first 6 months, whereas maternal age and infant gender were not found to be associated with these durations. In a study by Hacıan-Tilaki<sup>35</sup>, it was reported that mothers with higher educational level breastfed their children for a longer period of time, whereas maternal age and infant gender had no effect on the duration of breastfeeding. Mothers who received prenatal breastfeeding education are more likely to initiate and continue breastfeeding than mothers who did not receive prenatal breastfeeding education<sup>36-40</sup>. In our study, no significant difference was found between mothers who received prenatal breastfeeding education and mothers who did not receive prenatal breastfeeding education in the rates of feeding their babies with EB, and we concluded that mothers who received prenatal breastfeeding education fed their children with breast milk for longer periods.

In many studies, it has been found that smoking by breastfeeding mothers shortens the duration of breastfeeding<sup>41-45</sup>. In our study, no significant difference was found between the duration of feeding their babies with EB and total breastfeeding in smoking and nonsmoking mothers. This result made us think that mothers may have hesitated to answer the more personal questions in the questionnaire.

## Study Limitations

Our study is limited to individual statements as it was conducted with the survey method. The fact that the survey was conducted face-to-face by a single interviewer helped to ensure that the questions were asked in the same way to each participant and the answers were clearer, but it was not always possible for the participants to perceive all the questions in the survey in the same way. In particular, the question "Have you received prenatal breastfeeding education?" was misunderstood and a high percentage (45.8%) answered AS yes. At the same time, the presence of the mother's relatives or other people in around during the survey may have prevented the mothers from always giving the clearest and most accurate answer.

### **Ethics**

**Ethics Committee Approval:** Approval decision with protocol number 2021.213.07.21 was obtained from the Tekirdağ Namık Kemal University Medical Faculty Non-Interventional Clinical Research Ethics Committee (date: 27.07.2021).

Informed Consent: Cross-sectional study.

### **Authorship Contributions**

Concept: B.N., Design: B.N., G.Y.Ç., Data Collection or Processing: B.N., G.Y.Ç., A.N., Analysis or Interpretation: B.N., A.N., Literature Search: B.N., G.Y.Ç., Writing: B.N., G.Y.Ç.

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