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Evaluation of attitudes and approaches of mothers with 6-24 months old infants about infant nutrition and complementary foods

Avaliação das atitudes e abordagens de mães com bebês de 6-24 meses de idade sobre nutrição infantil e alimentos complementares

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ABSTRACT

Objective
This study was conducted to underline the importance of breastfeeding and complementary feeding period, to see the knowledge levels and attitudes of mothers in these processes and to address the problems experienced in this period for both mother and baby.

Methods
In this study, the data collection form prepared by the researcher and the Infant Feeding Attitude Scale were used. The study was conducted with 272 mothers aged 18 years and over with infants aged 6-24 months who started complementary feeding. The mothers who participated in the study resided in various parts of Turkey, agreed to participate in the study through various social media accounts and shared their phone numbers.

Results
In the study, the time of giving water to the babies for the first time was compared with the educational status of the mothers, it was observed that 7.2% of the mothers who gave water after the 6th month of life had a high school degree or less, 69% had a bachelor's degree and 23.8% had a master's degree. It was found that cow's milk was not consumed by 67.2% of the infants, while yoghurt was consumed by 65% of the infants between 4-6 months as a complementary food. Honey was consumed by 7% of the infants before 12 months and 46.7% after 12 months. Egg white and egg yolk were consumed as complementary foods by 70% and 89.8% of the infants, respectively, at 12 months and before. It was observed that 91.6% of the mothers who participated in the study stated that their babies did not consume coffee, 69.3% tea and 86.1% instant fruit juice. It was found that the mean scores of the infant feeding attitude scale were lower in mothers of infants who were not employed, high school graduates, perceived their income as higher than their expenses, used formula while breastfeeding, and received breast milk alone for the first 1 month.

Conclusion
The results of our study show that mother's positive attitudes about infant feeding are reflected in their lives and have a positive effect on their infant's feeding. In the light of the relevant results, the attitudes and approaches of mothers with infants aged 6-24 months were revealed.

Keywords: Attitude scale. Breast milk. Breastfeeding. Complementary feeding. Infant feeding.

RESUMO

Objetivo
Este estudo foi realizado para destacar a importância do aleitamento materno e do período de alimentação complementar, para verificar os níveis de conhecimento e as atitudes das mães nesses processos e para abordar os problemas enfrentados nesse período, tanto para a mãe quanto para o bebê.

Métodos
Neste estudo, foram utilizados o formulário de coleta de dados preparado pelo pesquisador e a Escala de Atitudes em Alimentação Infantil. O estudo foi realizado com 272 mães, de 18 anos ou mais, com bebês de 6 a 24 meses que iniciaram a alimentação complementar. As mães que participaram do estudo residiam em várias partes da Turquia, concordaram em participar do estudo por meio de várias contas de mídia social e compartilharam seus números de telefone.

Resultados
Quando o momento de dar água aos bebês pela primeira vez foi comparado com o nível de escolaridade das mães, observou-se que 7,2% das mães que deram água após o sexto mês de vida tinham ensino médio completo ou menos, 69% tinham bacharelado e 23,8% tinham mestrado. Verificou-se que o leite de vaca não era consumido por 67,2% dos bebês, enquanto o iogurte era consumido por 65% dos bebês entre 4 e 6 meses como alimento complementar. O mel foi consumido por 7% dos bebês antes dos 12 meses e por 46,7% após os 12 meses. A clara de ovo e a gema de ovo foram consumidas como alimentos complementares por 70% e 89,8% dos bebês, respectivamente, aos 12 meses e antes. Observou-se que 91,6% das mães que participaram do estudo afirmaram que seus bebês não consumiam café, 69,3% chá e 86,1% suco de fruta instantâneo. Verificou-se que as pontuações médias da escala de atitude em relação à alimentação do bebê foram menores nas mães de bebês que não estavam empregadas, que tinham ensino médio completo, que percebiam sua renda como maior do que suas despesas, que usavam fórmula durante a amamentação e que receberam apenas leite materno durante o primeiro mês.

Conclusão
Os resultados de nosso estudo mostram que as atitudes positivas das mães em relação à alimentação de bebês se refletem em suas vidas e têm um efeito positivo na alimentação de seus filhos. À luz dos resultados relevantes, foram reveladas as atitudes e abordagens das mães com bebês de 6 a 24 meses de idade.

***Palavras-chave**: Escala de atitude. Leite materno. Aleitamento materno. Alimentação complementar. Alimentação infantil.*

INTRODUCTION

The infancy period, which starts with pregnancy and continues after birth, is considered the first step of life. Recent studies emphasize that many social health problems, especially obesity, can be improved with the right practices in infancy and childhood. Accordingly, the concept of the first 1000 days, which covers the period from fertilization to 2 years of age, has been defined in the literature. At the same time, postnatal maternal nutrition maintains its importance for both mother and baby throughout the breastfeeding period. There are increasing studies showing that adequate and balanced nutrition of the baby after birth until the age of 2 positively affects physical and mental health in adulthood [1].

The World Health Organization (WHO) recommends exclusive breastfeeding for the first 6 months of life and then switching to complementary foods, in addition to breast milk after 6 months.

Breast milk is the most important food with gold standards for the baby. The content of breast milk may vary according to the needs of the baby. In addition to macronutrients such as carbohydrates, fats and proteins, breast milk also contains minerals, vitamins, growth factors and various nutrients that support immunity. A newborn baby's immunity is supported by breast milk and protected from various diseases. With this feature, breast milk is considered as the first vaccine [2].

From the beginning to the end of pregnancy, maternal nutrition affects the growth and development of the baby in the womb. In this respect, WHO is conducting breastfeeding promotion activities in various countries around the world. Breastfeeding practices such as encouraging and supporting breastfeeding, starting breastfeeding within the first 1 hour after birth, exclusive breastfeeding for 6 months, switching to complementary foods after 6 months and continuing breastfeeding until the end of 2 years are among the sustainable development goals that WHO recommends being achieved by 2030 [3].

It is recommended that complementary feeding should be started when babies reach their sixth month of life. However, early or late introduction of complementary foods is a very common problem. Early introduction of complementary foods may shorten the duration of exclusive breastfeeding and cause various digestive problems. In case of late initiation, growth retardation may be observed because the baby cannot get enough energy from breast milk alone [4].

This study was conducted to underline the importance of breastfeeding and complementary feeding period, to see the knowledge levels and attitudes of mothers in these processes and to address the problems experienced in this period for both mother and baby.

METHODS

In this study, the data collection form prepared by the researcher and the Infant Feeding Attitude Scale were used. The data collection form consists of 5 sections. The first section includes demographic characteristics, family type and number of children of the mothers participating in the study. In the second section, questions about the baby such as the baby's age, birth weight and birth length. In the third section, questions about the mother's pregnancy and breastfeeding periods were included. In the fourth section, transition periods to complementary foods were evaluated. In the fifth section, the 3-day food records of the infants submitted by the mothers in the data collection form were questioned and the infant feeding attitude scale was applied. In Infant Feeding Attitude Scale, the total attitude score ranges from 17 points (reflecting a positive attitude towards bottle feeding) to 85 points (reflecting a positive attitude towards breastfeeding). The scale has no cut-off value, with higher scores indicating positive breastfeeding attitudes. The infant feeding attitude scale was translated into Turkish by forward and backward translation and expert opinion was taken for semantic equivalence [5]. The mothers who participated in the study resided in various parts of Turkey, agreed to participate in the study through various social media accounts and shared their phone numbers. The data collection form and the Infant Feeding Attitude Scale were administered to the participants by the researcher over the phone.

Sample Selection

In order to make the necessary calculations, the studies in the literature were examined and based on the literature information, considering the mean and standard deviation values of the parameters as 7.6±4.08 respectively, a total of 272 individuals were calculated according to 80%

power in the R program. The mothers who participated in the study, residing in various parts of Turkey, agreed to participate in the study through various social media accounts and shared their phone numbers. The data collection form and the Infant Feeding Attitude Scale were administered to the participants by telephone by the researcher. This study was conducted with mothers who were 18 years of age or older, between the ages of 6-24 months and had infants who had started complementary feeding. The exclusion criteria for this study were mothers whose age was not between 6-24 months and who were in this age group but had not started complementary foods.

Data Evaluation

Evaluation of Energy and Nutrient Consumption of Infants

Food consumption records of infants were analyzed using the 'Computer Assisted Nutrition Program, Nutrition Information System (BEBIS) developed for Turkey. During the interview, infants were asked for their consumption records for 3 days before or 3 days after the interview. The food consumption records were analyzed in the BEBIS program to evaluate the energy and nutrient intakes of the infants according to their age (in months) and complementary food consumption.

Statistical Analysis

The IBM®SPSS® Statistics 24 statistical package program was used in the evaluation of the research data. Percentages, arithmetic mean, standard deviation, median, minimum and maximum values were given as descriptive statistics of the data. Shapiro-Wilk normality test and Q-Q graphs were used to determine whether the data were normally distributed. Independent Samples t test was used for two independent group comparisons and ANOVA test was used for more than two independent group comparisons for the data that were suitable for normal distribution; Mann Whitney U test was used for two independent group comparisons, Kruskall Wallis test was used for more than two independent group comparisons for the data that were not suitable for normal distribution and chi-square test was used for the comparison of categorical data. Variables with more than one response and variables with inappropriate number of respondents were not analyzed. In all calculations and interpretations, the statistical significance level was considered as "$p \leq 0.05$".

RESULTS

Sociodemographic and personal characteristics of the mothers who participated in the study are given in Table 1.

Table 1 – Sociodemographic and personal characteristics of mothers (Zeytinburnu, Istanbul/Turkey, 2023).

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Distribution of mothers according to sociodemographic and personal characteristics	n	%
Year		
< 30 years	149	54.4
≥30 years	125	45.6
Working status		
Working	113	41.2
Not working	161	58.8

Table 1 – Sociodemographic and personal characteristics of mothers (Zeytinburnu, Istanbul/Turkey, 2023).

Distribution of mothers according to sociodemographic and personal characteristics	n	%
Eduction status		
High school and lower education	28	10.2
Licence education	189	69.0
Master's degree	57	20.8
Income		
Income less than expenditure	7	2.6
Income matches expenditure	234	85.4
Income more than expenditure	33	12.0
Family type		
Nuclear family	254	92.7
Extended family	18	6.6
Fragmented family	2	0.7
Number of children		
1	192	70.1
2	65	23.7
≥3	17	6.2

It was observed that 54% of the babies were male, 35% were aged (in months) between 19-24 months, 32.8% between 13-18 months, 18.2% between 9-12 months and 13.9% between 6-8 months.

It was observed that 95.6% of the infants did not have any chronic disease and 87.6% did not take any medication regularly. While 90.5% of the infants had no food allergy, 9.5% had allergic reactions to certain foods (milk and milk products, eggs, strawberries and tomatoes).

Table 2 shows the comparison of information on infants according to some characteristics of the mothers who participated in the study. When the time of giving water to the babies for the first time was compared with the educational status of the mothers, it was observed that 7.2% of the mothers who gave water after the 6th month of life had a high school degree or less, 69.0% had a bachelor's degree and 23.8% had a master's degree. This result was found to be statistically significant (p=0.004).

The comparison of the energy intake of infants as a result of food consumption records with the recommendations made by TUBER 2022 was examined. Accordingly, the energy meeting rate of 6-8 month old female infants was 127% and 145% for male infants, 147% and 129% for 9-12 month old female infants, 131% and 125% for 1 year old female infants, 103% and 96% for 2 year old female infants and male infants, respectively.

The comparison of the amounts of carbohydrate, fiber, and fat consumption of infants because of food consumption records with the TUBER 2022 recommendations was examined. Accordingly, the meeting ratios of carbohydrate, total fat, and fiber consumption of 1 year old infants are 88%, 142% and 27%, respectively. For infants aged 2 years, the meeting rates of carbohydrate, total fat and fiber consumption are 96%, 120% and 73%, respectively (TUBER 2022 does not make a recommendation on fiber and carbohydrates for children before 1 year of age).

The percentages of vitamin and mineral intakes of the infants meeting the recommendations are given in Figure 1.

Table 2 – Comparison of some characteristics of the mothers participating in the study and information on feeding history of infants (Zeytinburnu, Istanbul/Turkey, 2023).

The distributions related to the comparison of some characteristics of the mothers participating in the study and the information related to the feeding history of the infants	Working status of mother						Number of children in the family								Education status of mother							
	Working		Not working		χ^2	*p*	1		2		≥3		χ^2	*p*	High school and lower education		Undergraduate education		Master's degree		χ^2	*p*
	n	%	n	%			n	%	n	%	n	%			n	%	n	%	n	%		
Breastfeeding Status																						
Still breastfeeding	83	39.9	125	60.1	0.714	0.662	144	69.2	51	24.5	13	6.3	0.464	0.488	17	8.2	147	70.7	44	21.2	0.276	0.229
Didn't breastfeed	2	50	2	50			3	75	-	-	1	25			1	25	3	75	-	-		
Breastfed but stopped	28	45.2	34	54.8			45	72.6	14	14	3	4.8			10	16.1	39	62.9	13	21		
Using formula while breastfeeding																						
Yes	39	47	44	53	0.203	0.230	61	73.5	16	19.3	6	7.2	0.499	0.487	11	13.3	56	67.5	16	19.3	0.537	0.522
No	74	38.7	117	61.3			131	68.6	49	25.7	11	5.8			17	8.9	133	69.6	41	21.5		
Duration of Exclusive Breastfeeding																						
First month	15	50	15	50	0.653	0.664	22	73.3	6	20	2	6.7	0.242	0.401	5	16.7	19	63.3	6	20	0.505	0.478
1-6 monts	67	41.9	93	58.1			114	71.3	38	23.8	8	5			12	7.5	110	68.8	38	23.8		
1-9 months	8	44.4	10	55.6			9	50	5	27.8	4	22.2			0	5.6	15	83.3	2	11.1		
1-12 months	4	28.6	10	71.4			11	78.6	3	21.4	-	-			2	14.3	9	64.3	3	21.4		
1-18 months	19	36.5	33	63.5			36	69.2	13	25	3	5.8			8	15.4	36	69.2	8	15.4		
Duration of formula consumption only (n=70)																						
First month	7	38.9	11	61.1	0.411	0.442	15	83.3	3	16.7	-	-	0.450	0.570	4	22.2	11	61.1	3	16.7	0.750	0.711
1-6 monts	9	45	11	55			15	75	4	20	1	5			4	20	11	55	5	25		
1-9 months	1	16.7	5	83.3			3	50	3	50	-	-			1	16.7	4	66.7	1	16.7		
1-12 months	9	60	6	40			10	66.7	3	20	2	13.3			-	-	12	80	3	20		
1-18 months	6	54.5	5	45.5			9	81.8	2	18.2	-	-			1	9.1	7	63.6	3	27.3		
Time for Baby to Start Complementary Food																						
4-6 months	51	42.5	69	57.5	0.709	0.713	84	70	29	24.2	7	5.8	0.968		13	10.8	80	66.7	27	22.5	0.763	0.749
After 6th months	62	40.3	92	59.7			108	70.1	36	23.4	10	6.5		1	15	9.7	109	70.8	30	19.5		
Giving Baby First Water Time																						
Under 4 months	15	41.7	21	58.3	0.591	0.59	22	61.1	10	27.8	4	11.1	0.292	0.257	11	30.6	20	55.6	5	13.9	0.001	0.004
4-6 months	50	44.6	62	55.4			76	67.9	31	27.7	5	4.5			8	7.1	82	73.2	22	19.6		
After 6th month	48	48	78	61.9			94	74.6	24	19	8	6.3			9	7.2	87	69	30	23.8		

Table 2 – Comparison of some characteristics of the mothers participating in the study and information on feeding history of infants (Zeytinburnu, Istanbul/Turkey, 2023).

The distributions related to the comparison of some characteristics of the mothers participating in the study and the information related to the feeding history of the infants	Working status of mother						Number of children in the family								Education status of mother							
	Working		Not working		χ^2	*p*	1		2		≥3		χ^2	*p*	High school and lower education		Undergraduate education		Master's degree		χ^2	*p*
	n	%	n	%			n	%	n	%	n	%			n	%	n	%	n	%		
Starting Complementary Food Reason																						
Because the environment	4	40	6	60	0.922	0.946	6	60	4	40	-	-	0.392	0.338	3	30	5	50	2	20	0.275	0.250
Because the doctor request	89	41.4	126	58.6			156	72.6	47	21.9	12	5.6			18	8.4	149	69.3	48	22.3		
Because the time has come	7	35	13	65			11	55	6	30	3	15			3	15	15	75	2	10		
Because the baby is ready	13	44.8	16	55.2			19	65.5	8	27.6	2	6.9			4	13.8	20	69	5	17.2		
Form of the First Food Given to a Baby																						
Liquid	22	41.5	31	58.5	0.956	0.945	38	71.7	11	20.8	4	7.5	0.925	0.940	6	11.3	37	69.8	10	18.9	0.777	0.768
Blenderized	33	43.4	43	56.6			52	68.4	18	23.7	6	7.9			10	13.2	53	69.7	13	17.1		
Rough	54	39.7	82	60.3			96	70.6	33	24.3	7	5.1			11	8.1	92	67.6	33	24.3		
Granular	4	44.4	5	55.6			6	66.7	3		-				1	11.1	7	77.8	1	11.1		
Time for Baby to Eat Chunky Food																						
4-6 months	33	44.6	41	55.4	0.645	0.766	50	67.6	19	25.7	5	6.8	0.438	0.523	7	9.5	53	71.6	14	18.9	0.301	0.331
6-8 months	68		102	60			121	71.2	41	24.1	8	4.7			15	8.8	118	69.4	37	21.8		
8-12 months	11	40	13	54.2			15	62.5	5	20.8	4	16.7			5	20.8	15	62.5	4	16.7		
12-18 months	-	45.8	2	100			2	100	-	-	-	-			1	50	1	50	-	-		
Does not consume	1	25	3	75			4	100	-	-	-	-			-	-	2	50	2	50		
Night Feeding Status of baby																						
Yes	83	40.9	120	59.1	0.840	0.889	144	70.9	45	22.2	14	6.9	0.475	0.522	19	9.4	138	68	46	22.7	0.372	0.390
No	30	42.3	42	57.7			48	67.6	20	28.2	3	4.2			9	12.7	51	71.8	11	15.5		
Night Feeding Frequency of baby (n=203)																						
Hourly	4	40	6	60	0.680	0.702	6	60	2	20	2	20	0.62	0.47	1	10	6	60	3	30	0.870	0.860
Every 2 hours	10	31.3	22	68.8			17	53.1	10	31.3	5	15.6			2	6.3	24	75	6	18.8		
Every 3 hours	36	43.4	47	56.6			64	77.1	17	20.5	2	2.4			10	12	56	67.5	17	20.5		
4 hours and more	33	42.3	45	57.7			57	73.1	16	20.5	5	6.4			6	7.7	52	66.7	20	25.6		

Note: χ^2: Chi-square test.

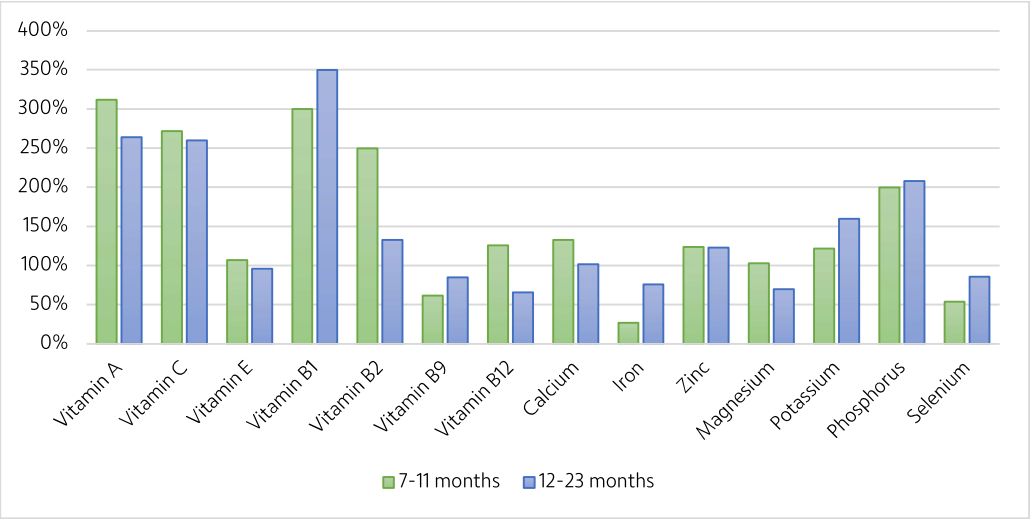

Figure 1 – Vitamin and mineral meeting percentages of infants according to TUBER 2022 recommendations.

The time of starting complementary foods for the infants of the mothers participating in the study was also examined. It was found that cow's milk was not consumed by 67.2% of the infants, while yoghurt was consumed by 65% of the infants between 4-6 months as a complementary food. Honey was consumed by 7% of the infants before 12 months and 46.7% after 12 months. Egg white and egg yolk were consumed as complementary foods by 70% and 89.8% of the infants, respectively, at 12 months and before. It was observed that 91.6% of the mothers who participated in the study stated that their babies did not consume coffee, 69.3% tea and 86.1% instant fruit juice.

Table 3 shows the comparison table of the scale scores according to some characteristics of the mothers who participated in the study. The relationship between mothers who were not employed and the infant feeding attitude scale score was statistically significant (p=0.002).

Table 3 – Comparison of scale scores according to some characteristics of the mothers participating in the study. (Zeytinburnu, Istanbul/Turkey, 2023).

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Distributions related to the comparison of scale scores according to some characteristics of other participants in the study	$\overline{X}$±SD	(Min-Max)	χ^2	p
Years				
< 30	65.37±6.32	42-78	-0.647*	0.518
≥30	65.73±6.46	42-79		
Working status				
Working	66.87±6.27	42-77	-3.048*	**0.002**
Not working	64.60±6.30	42-79		
Education status				
High school[1]	61.64±7.72	42-73	8.235**	**0.016** 1<2=3
Undergraduate education[2]	65.74±6.39	42-79		
Master's degree[3]	66.77±4.81	58-77		
Income				
Income less than expenditure[1]	67.43±3.99	62-75	5.930**	**0.048** 1>3
Income matches expenditure[2]	65.90±6.14	42-79		
Income more than expenditure[3]	62.52±7.61	42-74		
Family type*				

Table 3 – Comparison of scale scores according to some characteristics of the mothers participating in the study. (Zeytinburnu, Istanbul/Turkey, 2023).

Distributions related to the comparison of scale scores according to some characteristics of other participants in the study	$\overline{X}$±SD	(Min-Max)	χ^2	*p*
Nuclear family	65.51±6.26	42-79	-0.584*	0.559
Extended family	65.67±8.31	45-77		
Number of children				
1[1]	65.85±6.15	42-79	6.216**	**0.045** 1=2>3
2[2]	65.65±6.55	45-77		
≥3[3]	61.53±7.19	42-72		
A person other than the parents who takes care of the baby				
Yes	64.84±6.44	42-77	-1.196*	0.232
No	65.82±6.34	42-79		
Normal delivery	65.71±6.16	42-79	3.295**	0.193
The way of giving birth				
Cesarean delivery	65.71±6.34	45-78		
Epidural delivery	61.27±8.26	42-70		

Note: *Mann-Whitney U test; **Kruskal-Wallis H test. Different numbers in the same column indicate statistical differences between the groups. *p*-values in bold emphasize statistical significance ($p<0.05$).

When the mean scores of the mothers according to their educational level were examined, the mean scale scores of mothers with high school education (61.64±7.72) were significantly lower than those of mothers with undergraduate education (65.74±6.39) and master's degrees (66.77±4.81) ($p=0.016$).

It was seen that the mean infant feeding scale score of the mothers who expressed their income status as low was 67.43±3.99, and the mean scale score of the mothers who expressed their income as more than their expenses was 62.52±7.61, and this difference was statistically significant ($p=0.048$).

When the mean scores of the mothers were compared according to the number of children, it was observed that the mean scores of mothers with 1 (65.85±6.15) or 2 children (65.65±6.55) were lower than the mean scores of mothers with 3 or more children (61.53±7.19), and these differences were found to be statistically significant ($p=0.045$).

The comparison of scale scores according to some characteristics of the infants is given in Table 4. Accordingly, the mean score of mothers of infants who were given formula while breastfeeding was significantly lower (63.66±7.20) than the mean score of mothers of infants who were not given formula (66.35±5.82) while breastfeeding ($p=0.004$).

The mean scores of infants who received exclusive breastfeeding for the first month (61.30±7.68) and 1-12 months (62.86±5.53) were significantly lower than the mean scores of infants who received exclusive breastfeeding for 1-9 months (62.86±5.53), and the mean scores of infants of these 3 groups were significantly lower than the mean scores of infants who received exclusive breastfeeding for 1-6 months (64.17±8.29) and 1-18 months (66.23±6.30) ($p=0.002$).

Table 4 – Distribution of infant feeding scale scores of mothers according to some characteristics of infants. (Zeytinburnu, Istanbul/Turkey, 2023).

Distribution rates of mothers' infant feeding scale scores according to some characteristics of infants	$\overline{X}$±SD	Min-Max	χ^2	*p*
Gender				
Girl	65.98±5.75	42-79	-0.637*	0.524
Boy	65.16±6.86	42-78		
Year				
6-8 months	65.50±5.26	51-77	0.430**	0.934
9-12 months	66.01±5.79	52-77		
13-18 months	64.88±7.35	42-77		
19-24 months	65.92±6.13	42-79		
Presence of allergy				
No	65.42±6.48	42-79	-0.816*	0.415
Yes	66.65±5.23	57-75		
Giving formula while breastfeeding				
Yes	63.66±7.20	42-78	-2.905*	**0.004**
No	66.35±5.82	42-79		
Duration of exclusive breastfeeding				
First month[1]	61.30±7.68	42-74	16.775**	**0.002** 1=4<3<2=5
1-6 months[2]	66.49±5.58	48-79		
1-9 months[3]	64.17±8.29	42-75		
1-12 months[4]	62.86±5.53	53-73		
1-18 months[5]	66.23±6.30	45-78		
Time of first watering				
Under 4 months	64.11±7.68	42-77	2.641**	0.267
4-6 months	65.20±6.29	45-77		
After 6th months	66.24±6.00	42-79		
Nutritional status at night				
Yes	65.67±5.95	42-79	-0.159*	0.874
No	65.13±7.49	42-78		

Note: *Mann-Whitney U test; **Kruskal-Wallis H test. Different numbers in the same column indicate statistical differences between the groups. *p* values in bold emphasize statistical significance ($p<0.05$)

DISCUSSION

In a study conducted by Gümüştakım et al. to evaluate feeding habits in children aged 0-2 years, it was observed that 25.6% of the infants participating in the study started supplementary food before the 6th month [6]. In a study investigating how and when complementary foods were introduced to Australian infants, it was found that the majority of the mothers who participated in the study gave their babies food other than breast milk before the 6th month, and the most preferred food was a cereal specific for infants [7]. A study investigating complementary food preferences in France shows that some foods are started to be given to babies between 4-6 months [8]. In our study, the rate of mothers who started supplementary food in the 4-6 month period was found to be 43.8%. In general, the rate of early introduction of supplementary food is high. Correct guidance of mothers in this regard should become an important issue.

In a study investigating the first food preferences of infants during the transition to supplementary food in Europe, it was found that the most preferred supplementary food product in the UK was baby rice with a rate of 76%, the first foods given in the supplementary food period

in Sweden were potatoes, sweet potatoes, corn and carrots, and in Italy, 65.5% preferred fruits, 50.8% cereals and 49.9% meat [9]. In our study, it was observed that the first supplementary food given to infants was yogurt with a rate of 34.4%, vegetable group with a rate of 44.9% and fruit group with a rate of 16.4%. Yogurt is a food recommended in the supplementary food period due to its protein-casein content and its positive effect on intestinal microbiota. Similarly, vegetable purees should be preferred during the supplementary food period as they support vitamin, mineral and fiber intake [10]. It is seen that mothers prefer foods in line with the recommendations when starting supplementary foods.

In a study conducted in Taiwan comparing the infant feeding attitudes of mothers and fathers, the Chinese version of the infant feeding attitude scale was used and the mean infant feeding attitude score of mothers was 59.78±6.68 [11]. It was found that the mean infant feeding attitude scale score of the mothers participating in our study was 65.53±6.37. Since the increase in the infant feeding attitude scale score indicates a positive attitude, it can be said that the mothers participating in our study have a more positive attitude than the mothers in China.

In a study conducted by Özen et al. to evaluate breastfeeding self-efficacy and infant feeding attitudes of breastfeeding mothers, it was found that infant feeding attitude scale scores increased as the educational level of mothers increased. It was found that the mean infant feeding attitude scale score of mothers who graduated from primary school was 57.8±6.8, and this average increased to 65.8±5.9 in mothers with university and higher education, and these results were found to be statistically significant [12]. In our study, when we compared the characteristics of the mothers who participated in the study and some of the characteristics of their babies with the educational status, the relationship between the educational status of the mothers and the time of giving the first water to the babies was found to be statistically significant. The mean infant feeding attitude scale score of mothers with high school education or less was 61.64±7.72, while the mean score of mothers with undergraduate education was 65.74±6.39. These results were found to be statistically significant. These results coincide with the conclusion that the increase in maternal education level positively affects the infant feeding attitudes of mothers.

In the study conducted by Aksoy et al. it was found that the relationship between the number of children in the family and infant feeding attitude scale scores was statistically significant, the mean infant feeding scale score of mothers with the first child was 68.4+4.95, and the mean infant feeding scale score of mothers with the second or more children was 69.89+5.47. In this study, it is seen that the increase in the number of children has a positive effect on infant feeding attitudes [13]. In a study conducted in China to compare the infant feeding attitudes of mothers and fathers, it was concluded that the difference between the number of children and infant feeding attitude scale scores was not significant [11]. In our study, it was concluded that there was no significant relationship between the mean infant feeding scale score of mothers with the first child (65.85+6.15) and the scale score of mothers with the second child (65.65+6.55), but the scale score of mothers with three or more children (61.53+7.19) was lower and the relationship between them was significant. In addition, no significant relationship was found between the educational status of the mothers and some information about breastfeeding and supplementary food periods of infants. According to this result, it can be interpreted that the increase in the number of children negatively affects the infant feeding attitudes of mothers. The fact that the number of children in the family alone is not a factor affecting infant feeding attitudes and cultural differences in child rearing may have caused different results to be obtained from the two studies.

In a study by Özen et al. investigating the factors affecting mother's infant feeding attitudes, it was found that the mother's employment status did not affect infant feeding attitudes [12]. Aksoy et al. also found that the relationship between the mother's employment status and the scale score was not statistically significant [13]. In a study examining the infant feeding attitudes of Muslim women in Qatar, it was observed that women who worked full-time or part-time had higher scale scores than those who did not work [14]. In a study conducted by Uyar et al. the mean scale score of working mothers was 67.622±6.900, while that of non-working mothers was 65.511±5.220. This difference was found to be statistically significant [15]. Our study shows a linear result with the studies on the effect of mother's employment status on infant feeding attitudes. The mean score was 66.87±6.27 in working mothers and 64.60±6.30 in non-working mothers. It was concluded that the scale score of working mothers was higher than that of non-working mothers and this difference was statistically significant. The fact that the education level and income status of working mothers are better than non-working mothers may explain the higher mean scores of the infant feeding attitude scale.

In a study conducted by Uyar et al. in Turkey, it was observed that the mean infant feeding attitude scale score of mothers who evaluated their economic status as low was 63.182±4.557, while the mean infant feeding attitude scale score of mothers who evaluated their economic status as medium and above was 66.216±5.764. However, this difference was not found to be statistically significant [15]. The mean scale score of the mothers who participated in our study and stated that their income was less than their expenses was 67.43±3.99, while the mean scale score of the mothers who stated that their income was higher than their expenses was 62.52±7.61 and this difference was found to be statistically significant. The results of studies measuring the effectiveness of income level on infant feeding attitude are variable. The fact that breast milk is not costly may have increased the mothers with low-income level to give breast milk to their babies and to prefer the responses related to breast milk in the scale. This may be one of the reasons for the higher infant feeding attitude scale scores of low-income mothers.

In a study evaluating the infant feeding attitudes of Syrian mothers living in Turkey, it was observed that the mean infant feeding attitude scale score of mothers who used only formula was 68.51+3.50, while the mean scale score of mothers who fed breast milk and supplementary foods was 68.70+3.52. There was no significant difference between the results [16]. In our study, it was observed that the mean scale score of mothers who used formula while breastfeeding was 63.66±7.20, while the mean scale score of mothers who did not use formula was 66.35±5.82. Accordingly, as expected, the difference between the use of formula while breastfeeding and the infant feeding attitude score was found to be statistically significant. Similarly, while the mean attitude score of the mothers of the infants who received breast milk alone for the first month was 61.30±7.68, the mean attitude score of the mothers of the infants who received breast milk for 6 months was 66.49±5.58 and this difference was found to be statistically significant.

These results in our study show that mother's positive attitudes about infant nutrition are reflected in their lives and have a positive effect on their infant's nutrition.

CONCLUSION

The results of our study show that mother's positive attitudes about infant feeding are reflected in their lives and have a positive effect on their infant's feeding. Although there are many studies on the importance of breast milk and breastfeeding, breastfeeding rates have not reached the desired level. For this reason, it is very important to support mothers financially and morally as

well as raising their awareness. It should be ensured that health personnel, especially dieticians, play a greater role in this issue. In order to prevent infants from experiencing health problems related to nutrition in the future it should be insured exclusive breastfeeding for the first 6 months, continued breastfeeding until the age of 2, and transition to complementary foods in the right consistency and amounts for babies who have completed the sixth month. Early solution of the underlying problem of feeding problems is very important. In this regard, the level of knowledge of mothers should be improved. In addition to breastfeeding promotion activities, mothers should be provided with the necessary information and support during the transition to complementary foods. Moreover, awareness-raising activities should be carried out for mothers regarding the attitudes and approaches of mothers towards the infant feeding. The importance of communication between mother and baby during feeding should be emphasized.

It should be kept in mind that the targeted results regarding infant nutrition, breastfeeding, transition time to supplementary foods, consumption patterns and amounts of supplementary foods can be achieved by raising public awareness and making improvements in health policies.

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