

# Level of Exclusive Breastfeeding for the First 6 Months in 0-24 Month Infants and Children in a Family Health Center in Şanlıurfa and the Factors Affecting it

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## Abstract

**Purpose:** The research is conducted to determine the level of exclusive breastfeeding for the first 6 months in infants of mothers who have 0-24 month infants/children in Şanlıurfa and the factors affecting it. **Method:** The study is a cross-sectional type. It was conducted between February and March 2018. Mothers with 0-24 month infants/children registered in a family health center are the study population. 358 people participated in the study. **Results:** The median age of the women in the research is 27 years. Education level of 75.5% of women was primary school and below, 14.2% of them were agricultural worker, 62.3% of them had no health insurance. Level of exclusive breastfeeding for the first 6 months in 6-24 month infants and children is 15.0%. 63.7% of newborns received breast milk as the first food after birth. In the logistic regression model; while being agricultural worker negatively affects the condition of exclusive breastfeeding for the first 6 months by 5.2 times, using the pacifier-baby bottle by 2.7 times, not receiving breastfeeding counselling from primary health institutions by 4.1 times, 1 unit increase in the number of daily breastfeeding affects 1.6 times positively. **Conclusion:** Level of exclusive breastfeeding for the first 6 months is very low. In secondary and tertiary health care institutions, studies should be done to increase the quality and quantity of breastfeeding and breast milk counselling; the counselling services should be reached to women who are seasonal agricultural workers. The positive contribution of the primary healthcare institutions on breastfeeding should be improved and maintained.

**Keywords:** Breast Milk, Breastfeeding, Exclusively

## 1. Introduction

Nourishment is very important for healthy completion of growth-development, preventing infections and maintaining lifelong health<sup>1</sup>. Poor diet or malnutrition causes growth-developmental retardation and provides a basis for death in infants and children<sup>2</sup>. According to Convention on the Rights of the Child, each child should be fed with foods which are hygienic, can meet nutritional requirements and do not lead to metabolic loading and biochemical disturbance. It is

evident that breast milk that completely meets these conditions is the most healthy and ideal food for all newborns<sup>3</sup>.

Breast milk can meet all nutritional needs of an infant in the first 6 months of life, and at least one-third of his/her needs until 24 months after the 6<sup>th</sup> month<sup>1</sup>. Therefore, the World Health Organization (WHO) and the American Academy of Pediatrics (AAP) recommend that only breast milk be used for the first 6 months of life and continuing feeding with breast milk with complementary food for up to 2 years<sup>2,4</sup>.

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Breast milk reduces the risk of many acute and chronic diseases in addition to providing healthy growth-development. It has been reported that diarrhea, respiratory tract infections, otitis media, bacteremia, bacterial meningitis, botulism, urinary tract infections and necrotizing enterocolitis are less common in breastfed infants, and breast milk is reported to be protective against sudden infant death syndrome, insulin-dependent diabetes mellitus, Crohn's disease, ulcerative colitis, lymphoma, allergic diseases and chronic digestive system diseases<sup>4</sup>. In addition, the risk of uterine bleeding, depression, cardiovascular disease, breast cancer, ovarian cancer and osteoporosis decreases in nursing mothers<sup>5</sup>. Besides, breastfeeding decreases health expenditures both in terms of preventing formula cost and protecting against infectious diseases<sup>2,5</sup>.

Despite the many benefits, maintaining exclusive breastfeeding for the first 6 months is still not at the desired levels in the World and Turkey. Exclusive breastfeeding for 0-5 months is around 40.0%, continuing breastfeeding for 2 years is around 45.0% in the World<sup>6</sup>. According to 2013 data of Turkey Demographic and Health Survey (TDHS), level of exclusive breastfeeding for the first 6 months is 30.0% in our country. 12.0% of infants took complementary food before the 6<sup>th</sup> month. The median duration of exclusive breastfeeding is 1.2 months<sup>7</sup>.

WHO and UNICEF (United Nations International Children's Emergency Fund) offers a series of recommendations for successful breastfeeding because breastfeeding process is affected by many factors. These recommendations are as follows:

In the first half-hour after birth, the mother should start breastfeeding and the mother and her baby should share the same room.

Mothers should be informed not to use pacifier-baby bottle.

Mothers should be given qualified breastfeeding and breast milk counselling in order to solve the problems they face during breastfeeding.

In order to carry out all these practices, breastfeeding policy should be established in the institutions and health staff should be trained in this regard<sup>8</sup>.

It is necessary to know the usage levels for popularizing breastfeeding and to identify the factors causing the problem in the insufficient regions. The aim of this study is to determine the level of exclusive breastfeeding for the first 6 months in infants of mothers who have 0-24 month infants/children, and the factors affecting it in a family health center in Şanlıurfa.

## 2. Materials and Methods

The study was carried out between February and March 2018 in Şanlıurfa Zeliha Öncel Family Health Center.

Family Health Center is located in a semi-urban region where the socio-economic level is low and seasonal agricultural workers live intensively.

The research is cross-sectional.

1686 women who have 0-24-month-old infants/children and registered to Family Health Center constituted the universe of the research.

The sample size was calculated as 385 people by taking the estimated level of exclusive breastfeeding for the first 6 months as 50.0% with 95% confidence, 5% error margin. Participants were selected from the lists obtained from family physicians by systematic sampling method. However, since some of the participants could not be reached, the study was conducted with 358 mothers. Participation level is 93.0%.

Ethics approval for the research was obtained from Harran University Faculty of Medicine Non-Interventional Research Ethics Committee' in the session no. 02, dated 01.02.2018; written permission was obtained from Şanlıurfa Provincial Health Directorate. Verbal consent was obtained from the participants by explaining the purpose of the study.

A 35-item structured questionnaire was used to collect data. The questionnaire was filled with face-to-face interviews with the participants. With the survey, mothers' socio-demographic characteristics (age, education level, occupation, income level, social security, family type), obstetric properties (number of children, gestational week of last child/infant, delivery method, place of birth, birth weight, gender, age, planned pregnancy status, the place where the pregnancy follow-ups are performed) and characteristics of breastfeeding (mother's level of knowledge, the experience of breastfeeding, prenatal and postnatal breastfeeding counselling status, counselling received at place/from person, sources of information except healthcare personnel about breastfeeding and benefiting status of mothers, first food given after birth, the first time to start to breastfeed, the first person who helped breastfeeding, breastfeeding at night status, the number of daily breastfeeding, exclusive breastfeeding duration, how long breastfed/to breastfeed, when and which complementary food given, status of using pacifier-baby bottle, spouse support, status of information on storing breast milk) were questioned.

The dependent variable of the study is the status of exclusive breastfeeding for the first 6 months.

Independent variables are maternal age, education level, employment status of mother and father, income level, social security status, family type, number of children, gestational week of last infant/child, method of delivery, birth weight, gender, place of birth, status of pregnancy follow-up/the place where follow-up is performed, planned pregnancy status, mother's level of knowledge, experience of breastfeeding, prenatal and postnatal breastfeeding counselling status, counselling received at place/from person, sources of information except healthcare personnel about breastfeeding and benefiting status of mothers, first food given after birth, the first time to start to breastfeed, the first person who helped breastfeeding, breastfeeding at night status, the number of daily breastfeeding, status of using pacifier-baby bottle, spouse support.

Exclusive breastfeeding for the first 6 months defines the situation of feeding with breast milk only without any complementary food including water in the first 6 months of life.

In data analysis, the Mann-Whitney U test and Chi-square test were used for descriptive statistics, univariate analyzes.

Regression model was established with the variables, which create differences in univariate analyzes, of

being agricultural worker (categorical), social security status (categorical), receiving breastfeeding counselling from primary health institutions in the prenatal period (categorical), receiving breastfeeding counselling in the postpartum period (categorical), benefiting from brochure-booklet for breastfeeding information (categorical), starting breastfeeding within the first half-hour (categorical), breastfeeding at night status (categorical), using pacifier-baby bottle status (categorical) and daily number of breastfeeding (continuous). Backward Stepwise (conditional) method was used in logistic regression analysis. The analyzes were performed using SPSS 20.0 statistical package program.

In calculating the level of exclusive breastfeeding for the first 6 months, infants younger than 6 months were not included in case the possibility of giving up feeding with breast milk only before 6 months period is not completed. This may have created a limitation in the study.

### 3. Results

The median age of the women in the research is 27 years. 75.4% of the participants have primary education level and below, 14.2% are agricultural workers, 62.3% have no social security; 13.4% of fathers are unemployed, the income of 60.6% of families is lower than the expenditure and 33.2% have extended family type (Table 1).

**Table 1.** Distribution of socio-demographic characteristics according to the exclusive breastfeeding status for the first 6 months

Characteristics	Exclusive breastfeeding status					X <sup>2</sup>	P
	Yes		No		%**		
	Number	%*	Number	%*	%**		
<b>Mother's educational status</b>							
Does not speak Turkish	1	9.1	10	90.9	3.1		
Not literate	17	15.0	96	85.0	31.6		
Literate	13	22.4	45	77.6	16.2	3.02	0.69
Primary school	19	21.6	69	78.4	24.6		
Secondary school	10	18.5	44	81.5	15.1		
High School and Above	5	14.7	29	85.3	9.4		
<b>Employment status of mother</b>							
Agricultural worker***	2	3.9	49	96.1	14.2		
Other workers	2	20.0	8	80.0	2.8	8.11	0.017
Housewife	61	20.5	236	79.5	83.0		
<b>Employment status of father</b>							
Employed	57	18.4	253	81.6	86.6	0.08	0.93

Unemployed	8	16.7	40	83.3	13.4		
Income level							
Income is less than expenditure	37	17.1	180	82.9	60.6		
Income is equivalent to expenditure	23	18.1	104	81.9	35.5	3.08	0.21
Income is more than expenditure	5	35.7	9	64.3	3.9		
Social security status							
Yes	48	21.5	175	78.5	62.3	3.93	0.047
No	17	12.6	118	87.4	37.7		
Family type							
Extended	23	19.3	96	80.7	33.2	0.06	0.79
Nuclear	42	17.6	197	82.4	66.8		

\*Row percentage, \*\*Column percentage, \*\*\*Differential group,

**Table 2.** Distribution of obstetric features by exclusive breastfeeding status for the first 6 months

Characteristics	Exclusive breastfeeding status				%**	X <sup>2</sup>	P
	Yes		No				
	Number	%*	Number	%*			
Type of delivery							
Normal	42	21.2	156	78.8	55.3	2.34	0.12
caesarean	23	14.4	137	85.6	44.7		
Sex of the infant							
Female	29	16.1	151	83.9	50.3	0.76	0.38
Male	36	20.2	142	79.8	49.7		
Place of birth							
Other	65	18.3	291	81.7	99.4	****	1.00
Home birth	0	0.0	2	100.0	0.6		
Follow-up at FHC							
Yes	61	18.8	264	81.2	90.8	0.50	0.48
No	4	12.1	29	87.9	9.2		
Follow-up at public hospital							
Yes	34	17.2	164	82.8	55.3	0.16	0.68
No	31	19.4	129	80.6	44.7		
Follow-up at university hospital							
Yes	3	15.8	16	84.2	5.3	****	1.00
No	62	18.3	277	81.7	94.7		
Follow-up at private hospital							
Yes	42	17.1	203	82.9	68.4	0.34	0.55
No	23	20.4	90	79.6	31.6		
Planned pregnancy status							
Yes	51	16.9	251	83.1	84.4	1.58	0.20
No	14	25.0	42	75.0	15.6		

\*Row percentage, \*\*Column percentage, \*\*\*\*Fisher's Final Chi-Square Test

97.7% of the mothers have breastfed their infants for a while. The median number of breastfeeding per day in the first 6 months is 8. In the study, exclusive breastfeeding level was found to be 31.0% in 0-5 month's infants, 14.3% in 6-11 months infants, 16.2% in 12-17 months children, 14.8% in 18-24 months children. Exclusive breastfeeding level in 6-24 month infants and children is 15.0%.

When the effects of socio-demographic characteristics on exclusive breastfeeding status were examined, it was found that the level of exclusive breastfeeding was lower in agricultural workers than that of the housewives and other workers, and that the level of exclusive breastfeeding was lower in those without social security than those with social security ( $P < 0.05$ ). The effect of the mother's educational status, employment status of the father, the level of income and the type of family on the exclusive breastfeeding status was not shown (Table 1).

The median birth weight of infants is 3100 grams. The median number of children of women is 3. 44.7% of deliveries were caesarean delivery and 99.4% of them were performed in a health institution. 50.3% of infants are female. Pregnancy follow-up was performed to all mothers in at least one or more institutions. Pregnancy follow-up was performed 90.8% in family health center, 68.4%

in private hospital, 55.3% in public hospital and 5.3% in university hospital. 84.4% of pregnancies were performed as planned. The effect of obstetric features used in the research was not only shown on exclusive breastfeeding status (Table 2).

77.1% of women did not receive professional counseling/support about breast milk and breastfeeding in the prenatal period, and 74.3% of them did not receive it in the postnatal period. 14.8% of women received prenatal breastfeeding counselling from primary health institutions, 8.1% of them received it from secondary and tertiary health institutions. The infants of mothers receiving breastfeeding counselling from primary care institutions have higher exclusive breastfeeding level ( $P < 0.05$ ). Information sources of women other than health care personnel are 81.8% family elders, 16.2% neighbour-friends, 15.4% Internet, 9.2% television, 5.6% social media, 2.5% newspaper-journal, 3.1% brochure-booklet and 21.2% their own experiences. Exclusive breastfeeding level is higher in infants of women who said that they benefited from brochure-booklet ( $P < 0.05$ ). 74.0% of women has experience in breastfeeding, 67.9% of them sees much/too much information about breast milk and breastfeeding (Table 3).

**Table 3.** Distribution of some characteristics of breast milk and breastfeeding according to exclusive breastfeeding status for the first 6 months

Characteristics	Exclusive breastfeeding status				%**	X <sup>2</sup>	P
	Yes		No				
	Number	%*	Number	%*			
Mother's knowledge level							
Very low	2	18.2	9	81.8	3.1		
Low	17	16.3	87	83.7	29.1		
High	35	18.8	151	81.2	52.0	0.33	0.95
Very high	11	19.3	46	80.7	15.9		
Breastfeeding experience							
Yes	50	18.9	215	81.1	74.0	0.18	0.66
No	15	16.1	78	83.9	26.0		
Prenatal breastfeeding counselling receiving status							
Primary***	19	35.8	34	64.2	14.8		
Secondary-Tertiary	8	27.6	21	72.4	8.1	16.47	<0.001
Not receiving	38	13.8	238	86.2	77.1		
Learning from a family elder							
Yes	54	18.4	239	81.6	81.8	0.01	0.91

No	11	16.9	54	83.1	18.2		
Getting information from a neighbor-friend							
Got	8	13.8	50	86.2	16.2	0.57	0.45
Did not get	57	19.0	243	81.0	83.8		
Getting information from a newspaper-journal							
Got	1	11.1	8	88.9	2.5	****	1.00
Did not get	64	18.3	285	81.7	97.5		
Getting information from social media							
Got	3	15.0	17	85.0	5.6	****	1.00
Did not get	62	18.3	276	81.7	94.4		
Getting information from the Internet							
Got	11	20.0	44	80.0	15.4	0.03	0.84
Did not get	54	17.8	249	82.2	84.6		
Getting information from TV							
Got	9	27.3	24	72.7	9.2	1.41	0.23
Did not get	56	17.2	269	82.8	90.8		
Learning from a brochure-booklet							
Learned	5	45.5	6	54.5	3.1	****	0.032
Did not learn	60	17.3	287	82.7	96.9		
Benefiting from her own experience							
Benefited	11	14.5	65	85.5	21.2	0.594	0.441
Did not benefit	54	19.1	228	80.9	78.8		

As the first food, 63.7% of newborns are given breast milk, 32.4% formula, 2.8% sugared water, 1.1% water. Level of starting breastfeeding within the first half hour is 33.5%. 61.5% of mothers did not start breastfeeding in the first half hour because of the health problems in mother or infant, 23.5% of them did not start it because milk did not come. Healthcare personnel helped 9.4% of the first breastfeeding. 90.8% of women stated they breastfed at night, 22.9% stated they did not use pacifier-baby bottle, 96.1% stated their spouses supported their breastfeeding.

Receiving postnatal breastfeeding counselling, starting breastfeeding within the first half-hour, breastfeeding at night and not using pacifier-baby bottle affect exclusive breastfeeding status positively ( $P < 0.05$ ) (Table 4).

41.0% of mothers who did not continue to breast-feed exclusively with breast milk for the first 6 months stated the milk is not enough, 35.8% stated they thought their infants were thirsty, 7.2% stated the infant left sucking, 4.1% stated they had health problems, 3.8% stated healthcare professional recommended it, 2.7% stated they have never breastfed, 2.0% stated they became pregnant

again, 1.4% stated it is time to start complementary food, 0.7% stated their spouses did not want, 0.7% stated their infants had health problems, 0.3% stated they started to work, 0.3% stated the milk damages the infant.

The first nutrient mothers started as complementary food is 68.7% formula, 11.3% yogurt, 10.4% other milks (cow and goat milk), 3.5% soup, 3.0% vegetable/fruit puree, 1.7% custard, 0.4% cheese, 0.4% egg, 0.4% tea.

The level of the mothers who know how long the milked breast milk can be stored at room temperature, in the refrigerator and in the freezer is 2.8%, 6.4%, 5.0%, respectively.

The number of daily breastfeeding was found to be higher in the ones who breastfed exclusively with breast milk ( $P < 0.05$ ). The effects of variables such as maternal age, number of children, gestational week, birth weight, etc. on the exclusive breastfeeding were not shown (Table 5).

In the logistic regression model where independent variables affecting exclusive breastfeeding status are evaluated together, while being agricultural worker negatively

**Table 4.** Distribution of some variables related to the post-partum period according to exclusive breastfeeding status for the first 6 months

Characteristics	Exclusive breastfeeding status					X <sup>2</sup>	P
	Yes		No		%**		
	Number	%*	Number	%*	%**		
Postnatal breastfeeding counselling receiving status							
Yes	24	26.1	68	73.9	25.7	4.54	0.033
No	41	15.4	225	84.6	74.3		
The first food given postnatal							
Breast milk	46	20.2	182	79.8	63.7	1.36	0.24
Other foods	19	14.6	111	85.4	36.3		
First time to start breastfeeding							
Within the first half hour***	32	27.1	86	72.9	33.5		
Within ½ hour-1- hour	12	22.2	42	77.8	15.3	13.67	0.003
2 hours and later	20	11.6	152	88.4	48.9		
The infant has never sucked	0	0.0	8	100.0	2.3		
First person who helped breastfeeding							
Healthcare personnel	11	33.3	22	66.7	9.4		
Other	44	17.5	207	82.5	71.7	5.446	0.06
Alone	10	15.2	56	84.8	18.9		
Breastfeeding at night status							
Yes	65	20.0	260	80.0	90.8	6.77	0.009
No	0	0.0	33	100.0	9.2		
Pacifier-baby bottle using status							
Yes	39	14.1	237	85.9	77.1	11.98	0.001
No	26	31.7	56	68.3	22.9		
Spouse support							
Yes	64	18.6	280	81.4	96.1	****	0.48
No	1	7.1	13	92.9	3.9		

**Table 5.** The level of some characteristics according to exclusive breastfeeding status for the first 6 months

Characteristics	Median (lowest-highest)	MWU	P
Maternal age			
The ones who receive	28 (18-46)	9091.0	0.567
The ones who do not receive	27 (17-51)		
Number of children			
The ones who receive	3 (1-9)	9035.0	0.510
The ones who do not receive	3 (1-13)		
Gestational week			
The ones who receive	39 (36-40)	8391.0	0.113
The ones who do not receive	39 (34-41)		



Birth weight					
The ones who receive	3200 (1500-4300)		8822.0		0.352
The ones who do not receive	3100 (1350-4800)				
Number of daily breastfeeding					
The ones who receive	10 (7-15)		4118.5		<0.001
The ones who do not receive	8 (3-15)				

**Table 6.** Logistic regression model of factors affecting exclusive breastfeeding status for the first 6 months

Variables	B	Standard deviation	P	O.R	95% Confidence Interval
Mother's Work (Agricultural Worker)	1.6	0.7	0.031	5.2	1.1-23.4
Prenatal breastfeeding counselling (not receiving from primary healthcare institutions)	1.4	0.3	0.000	4.1	1.9-8.8
Breastfeeding frequency (continuous)	0.3	0.07	0.000	0.6	0.5-0.7
Pacifier-baby bottle use (Yes)	1.0	0.3	0.002	2.7	1.4-5.2

affects the exclusive breastfeeding status for the first 6 months by 5.2 times, using the pacifier-baby bottle by 2.7 times, not receiving prenatal breastfeeding counselling from primary healthcare institutions by 4.1 times; 1 unit increase in the number of daily breastfeeding affects 1.6 times positively (Table 6).

## 4. Conclusion

The research region is a place where agricultural workers and poor families live intensively. A significant portion of the participants does not have social security and regular work.

Breastfeeding level of mothers for a period is 95.0% in the world, 78.8% in high-income countries, 95.6% in middle-income countries and 97.6% in low-income countries<sup>8</sup>. In all across Turkey, it is 96.0% according to the TDHS-2013 data<sup>7</sup>. The results of this research were found to be high as indicated in the literature.

Breastfeeding is the first and most important step in healthy nutrition. According to TDHS 2013, 74.0% of the infants in Turkey first breastfed with breast milk<sup>7</sup>. Level of postnatal breastfeeding with breast milk firstly is found in the range of 76.3% and 87.9% in other studies conducted in Turkey<sup>9-11</sup>. From different countries; it is reported as 77.5% in TRNC, and 75.0% in the USA<sup>12,13</sup>. In this research, although almost all mothers gave birth in a health institution, only 63.7% of them started feeding their infants with breast milk first. That's probably because of the delay in first breastfeeding. As a matter of

fact, 48.9% of the mothers performed their first breastfeeding after the first 1- hour post-partum in this study.

Mother's giving breast milk to her infant within the first hour after delivery is called early initiation of breastfeeding<sup>6</sup>. Starting breastfeeding early protects the infant against infections, reduces neonatal deaths and increases the chance of successful breastfeeding<sup>14</sup>. 45.0% of newborns across the world are given breast milk within 1- hour<sup>15</sup>. This level was indicated as 50.0% in all across Turkey according to TDHS 2013; it was found by Gümüştakım et al., as 83.0%, by Yetim et al., as 70.4%, by Ünsal et al., as 71.8%<sup>7,16-18</sup>. Late initiation of breastfeeding is quite high in this research region. However, the fact that the majority of mothers try to breastfeed their infants may create important opportunities for the actions to be taken to improve this negativity.

In this study, mothers who started breastfeeding late stated the reasons for it as having health problems in the infant, having health problems in herself, not coming of breast milk. This research is similar to the research of Ünsal et al., in regard to reasons of late breastfeeding<sup>18</sup>. Çalık et al. showed the reasons for late breastfeeding as the infant did not want to suck the mother with a maximum of 54.6% and the milk did not come with 21.6%<sup>9</sup>. Different reasons for breastfeeding delay can be determined in different researches. However, healthcare personnel's not leaving the mother alone in the first moments of post-partum despite all kinds of problems becomes determinative for both the newborn and the mother to take appropriate care and initiating the first breastfeed-



ing properly. Therefore, the support of healthcare personnel in the first breastfeeding is considered to be one of the important steps of successful breastfeeding<sup>8,19</sup>. On the other hand, Ünsal et al., reported that caesarean delivery delayed the first breastfeeding period in their study<sup>18</sup>. A similar situation can be said to be valid for the study of Yetim et al.,<sup>17</sup>. Pain in the surgery site after caesarean is reported as a condition that delays mother-infant contact, decreases breastfeeding success in mothers due to the difficulty of holding the infant in the lap<sup>20,21</sup>.

In the study, exclusive breastfeeding level for the first 6 months was found to be considerably below the results of TDHS 2013 data (30.1%) and the studies conducted in Manisa (56.4%) and Van (47.9%)<sup>7,11,22</sup>. It is observed that breastfeeding level is high in the research region for a while, but exclusive breastfeeding for the first 6 months cannot be maintained. The low education level of women participating in the study may have an impact on this situation<sup>11</sup>.

One of the main reasons for the mothers' early start of complementary food rather than using exclusively breast milk for the first 6 months is the idea that milk is insufficient for infants<sup>16,17,23</sup>. In the research, it was determined that the biggest reason for the breakdown of exclusive breastfeeding status for the first 6 months was the idea that the milk of mothers is not enough. Though about 50% of women think that their milk is not enough for their infants, only milk of 5% of them is not enough<sup>24</sup>. The second major reason for the breakdown of exclusive breastfeeding status for the first 6 months is that mothers begin to give water to their infants. The warm climate of Şanlıurfa leads mothers to the idea of giving water to their infants. However, even in the hottest countries, there is no need for water in exclusively breastfed infants<sup>25</sup>.

On the other hand, an infant's stomach capacity is 5-7 ml when he was born, 45-60 ml in the first week and 80-150 ml in the first month<sup>26</sup>. Giving water to the infant before the 6th month causes the water to replace breast milk, which is the most favorable nutrient, and infants to suck their mothers less<sup>25</sup>.

The most important way to deal with these problems is to increase the frequency of breastfeeding. Increased breastfeeding will ensure adequate milk production and ensure that the baby receives sufficient breast milk and sufficient water<sup>27</sup>. Therefore, it will be easier to continue breast feeding. As a matter of fact, it is made clear in this research that the increase in the number of daily breast-

feeding is a factor that increases the level of exclusive breastfeeding for the first 6 months.

In the research, women who are agricultural workers constituted 83.6% of all working women. The research region is striking that the women working in the agricultural sector are far above the TDHS 2013 results, which is reported as 24.0%<sup>7</sup>. In the research, it was determined that the mother's being agricultural worker had a negative impact on exclusive breastfeeding for the first 6 months by 5.2 times. In the study of Demirli Yıldız, it was indicated that families who are agricultural workers had problems on the breastfeeding process<sup>28</sup>. Women in the agricultural sector often suffer from financial impossibility because they are unpaid family workers or work in return for low income<sup>29</sup>. In addition, they are not able to access health services due to insufficient transportation facilities, geographic and social isolation, frequent displacement and lack of knowledge of Turkish<sup>30</sup>.

The use of pacifiers and baby bottles in the community has almost become a cultural habit<sup>31</sup>. However, it has been found that the use of pacifier and baby bottle adversely affects the breastfeeding process and decreases the level of exclusive breastfeeding for the first six months<sup>18,32,33</sup>. Use of pacifiers and baby bottles causes oral motor dysfunction, difficulty in grasping the breast and rejecting the mother's breast in the infant<sup>9</sup>. In this research, the use of pacifier and baby bottle was found to be higher than the level (30.3%) indicated in the study of Turan et al., and this was determined to have an adverse effect on the level of exclusive breastfeeding for the first 6 months<sup>22</sup>. The results make it important to fight against the use of pacifiers and baby bottles.

At least 4 times qualified follow-up within the scope of Prenatal Care Management Guide should be done to all pregnant women in Turkey. Counselling for breastfeeding and feeding with breast milk should be given particularly during the last trimester<sup>34,35</sup>. In this study, all of the mothers were followed-up in at least one institution; however, only one out of five have been given breast milk and breastfeeding counselling. It has been determined that receiving counselling from primary healthcare institutions, despite the insufficient level, has positively affected exclusive breastfeeding for the first 6 months<sup>36,37</sup>. Counselling support prevents early supplementation of food by preventing insufficient milk perception in mothers<sup>38</sup>. Breastfeeding counselling is a very important primary healthcare service in order for the mother to be

prepared for the situations she will face in the breastfeeding process and to get support for the problems she cannot overcome. Considering the educational status of the women participating in the study, it is understood that counselling service is important and indispensable.

#### Conclusion and Recommendations

The research region is a region where agricultural workers live intensively and most of the women have not completed their primary education. The majority of the participants used breast milk for a while in their infants' nourishment, but could not maintain feeding with breast milk only for the first 6 months. There is no adequate counselling on breastfeeding and breast milk in health institutions. On the other hand, primary healthcare institutions are found to be more successful in breast milk and breastfeeding counselling.

For enhancing the levels of exclusive breastfeeding for the first 6 months, it would be beneficial to develop and popularize counselling services integrated to prenatal care according to problems and to make these services more accessible by taking into consideration the problems of women who are seasonal agricultural workers.

## 5. References

- Bağcı TB. Beslenmesi BİGÇ, Akın L, editor. Halk Sağlığı Temel Bilgiler. Ankara: Hacettepe Üniversitesi Yayınları; 2015. p. 1273–81.
- United Nations Children's Fund. Global strategy for infant and young child feeding; 2003; Available from: <http://apps.who.int/iris/bitstream/10665/42590/1/9241562218.pdf>
- Braimoh, Davies JL. When 'breast' is no longer 'best': Postpartum constructions of infant-feeding in the hospital. *Social Science and Medicine*. 2014; 123:82–9. <https://doi.org/10.1016/j.socscimed.2014.10.052> PMID:25462608
- American Academy of Pediatrics (AAP), Breastfeeding and the use of human milk. *Pediatrics*. 2012; 129(3):827–41. Available from: <http://dx.doi.org/10.1542/peds.2011-3552> <https://doi.org/10.1542/peds.2011-3552>
- Topal S, Çınar N, Altınkaynak S. Emzirmenin Anne Sağlığına Yararları; 2017.
- WHO. Infant and young child feeding. 2018. Available from: <http://www.who.int/news-room/fact-sheets/detail/infant-and-young-child-feeding>
- Hacettepe Üniversitesi Nüfus Etütleri Enstitüsü. 2013 Türkiye Nüfus ve Sağlık Araştırması Ankara: Hacettepe Üniversitesi Nüfus Etütleri Enstitüsü, T.C.K.B.v.T.
- Breastfeeding A Mothers Gift For Every Child. United Nations Children's Fund (UNICEF); 2018. Available from: [https://www.unicef.org/publications/index\\_102824.html](https://www.unicef.org/publications/index_102824.html)
- Çalık KY, Çetin FC, Erkaya R. Annelerin emzirme konusunda uygulamaları ve etkileyen faktörler. *Gümüşhane Üniversitesi Sağlık Bilimleri Dergisi*. 2017; 6(3):80–91.
- Şatır G, Çelik M, Kemhacıoğlu M. Emzirme Döneminde Olan Annelerin Bebek Besleme Alışkanlıkları ve Etkileyen Faktörler. *SDÜ Tıp Fakültesi Dergisi*. 2017; 24(3):60–6. <https://doi.org/10.17343/sdu.tfd.277492>
- Şahin BB, Özyurt BC. Manisâda yarı-kentsel bir bölgede 0-24 ay çocuklarda anne sütü alma durumu ve beslenme alışkanlıkları. *Türkiye Halk Sağlığı Dergisi*, 2017; 15(3):164–75.
- Şafak Ç, Ata TN. Anne sütü ile beslenme sürelerinin yaşam çözümlenmesi ile incelenmesi: Kuzey Kıbrıs Türk Cumhuriyeti örneği.
- UNICEF. Breastfeeding; 2014. Available from: [http://www.unicef.org/nutrition/index\\_24824.html](http://www.unicef.org/nutrition/index_24824.html)
- WHO and UNICEF issue new guidance to promote breastfeeding in health facilities globally. Available from: <http://www.who.int/news-room/detail/11-04-2018-who-and-unicef-issue-new-guidance-to-promote-breastfeeding-in-health-facilities-globally>
- 2017 Global Nutrition Global Profile. Available from: [www.globalnutritionreport.org](http://www.globalnutritionreport.org)
- Gümüştakım RŞ, et al. 0-2 yaş çocuklarda beslenme alışkanlıklarının değerlendirilmesi: Çok merkezli çalışma. *Family Practice and Palliative Care*, 2017; 2(1):1-8. <https://doi.org/10.22391/920.308548>
- Yetim A, Yetim Ç, Devcioğlu E. Iğdır'da annelerin süt çocuğu beslenmesi konusundaki bilgi ve davranışları; 2015.
- Ünsal H, et al. Toplumda anne sütü verme eğilimi ve buna etki eden faktörler. *Çocuk Sağlığı ve Hastalıkları Dergisi*. 2005; 48(3):226–33.
- Ulutasdemir N, et al. Effects of occupational health and safety on healthy lifestyle behaviors of workers employed in a private company in Turkey. *Ann Glob Health*. 2015; 81(4):503–11. PMID: 26709282 <https://doi.org/10.1016/j.aogh.2015.08.018> PMID:26709282
- Arora A, et al. Determinants of breastfeeding initiation among mothers in Sydney, Australia: findings from a birth cohort study. *International Breastfeeding Journal*. 2017; 12(1):39. PMID: 28932255, PMID: PMC5602913 <https://doi.org/10.1186/s13006-017-0130-0> PMID:28932255 PMID:PMC5602913
- Cangöl E, Şahin N. Emzirmeyi etkileyen faktörler ve emzirme danışmanlığı (Factors affecting breastfeeding and breastfeeding counselling). *Zeynep Kamil Tıp Bülteni*. 2014; 45(3):100–5. <https://doi.org/10.16948/zktb.80388>

22. Turan A, et al. How mothers feed their 0-12-month-old children in Turkey's Eastern province of Van? *Turkish Journal of Public Health*. 2015; 13(3).
23. Sivri BB, et al. 0-6 aylık bebeği olan annelerin katı gıdaya geçiş süreci ve emzirmeye ilişkin bilgi ve uygulamaları. *Acıbadem Üniversitesi Sağlık Bilimleri Dergisi*. 2014; 5(1):59-65.
24. Özkara H, et al. Emzirme danışmanlığı. *TAF Preventive Medicine Bulletin*. 2016; 15(6).
25. Sağlık Bakanlığı Türkiye Halk Sağlığı Kurumu, Emzirme ve Anne Sütü ile İlgili Sık Sorulan Sorular; 2015. Available from: <https://dosyaism.saglik.gov.tr/Eklenti/9282>
26. Türk Neonatoloji Derneği, Sağlıklı Term Bebeğin Beslenmesi Rehberi; 2014. Available from: [http://www.neonatology.org.tr/wp-content/uploads/2016/12/term\\_beslenme.pdf](http://www.neonatology.org.tr/wp-content/uploads/2016/12/term_beslenme.pdf)
27. Kucuk E. Health perception and healthy lifestyle behaviors of female factory workers. *Arch Environ Occup Health*. 2016; 71(4):216-21. PMID: 26067209 <https://doi.org/10.1080/19338244.2015.1058237> PMID:26067209
28. Yıldız AD. Evaluation of the development characteristics of the 0 to 6 year old children of families engaged in seasonal agricultural.
29. T.C. Aile ve Sosyal Politikalar Bakanlığı Kadının Statüsü Genel Müdürlüğü, Türkiye'de Kadın. ANKARA; 2018. Available from: <https://kadinstatusu.aile.gov.tr/uploads/pages/turkiye-de-kadin>
30. Koruk İ. İhmal Edilen Bir Grup: Göçebe Mevsimlik Tarım İşçileri. *Mesleki Sağlık ve Güvenlik Dergisi (MSG)*. 2015; 10(38).
31. Sülü UE, Çakal MM, Aşar A. Annelerin 0-1 Yaş Arası Bebeklerinde Emzik Kullanma Durumları; 2017.
32. Tunçel EK, Dündar C, Pekşen Y. Ebelerin anne sütü ile ilgili bilgi ve uygulamalarının değerlendirilmesi. *Kocatepe Tıp Dergisi*. 2005; 6(1).
33. Howard CR, et al. Randomized clinical trial of pacifier use and bottle-feeding or cupfeeding and their effect on breast-feeding. *Pediatrics*. 2003; 111(3):511-8. PMID: 12612229 <https://doi.org/10.1542/peds.111.3.511> PMID:12612229
34. Başar F, Arıöz DT, The evaluation of the education for the pregnant on puerperium care and baby care; 2017.
35. Doğum Öncesi Bakım Yönetim Rehberi T.C. Sağlık Bakanlığı Türkiye Halk Sağlığı Kurumu, Sağlık Bakanlığı Yayın No: 924. Ankara; 2014
36. Bolat F, et al. İlk altı ayda anne sütü ile beslenmeye etki eden faktörler. *Çocuk Dergisi*. 2011; 11(1):5-13. <https://doi.org/10.5222/j.child.2011.005>
37. Mekuria G, Edris M. Exclusive breastfeeding and associated factors among mothers in Debre Markos, Northwest Ethiopia: A cross-sectional study. *International breast-feeding journal*. 2015; 10(1):1. PMID: 25635183, PMID:25635183 <https://doi.org/10.1186/s13006-014-0027-0> PMID:25635183 PMID:25635183
38. Gökçeoğlu E. Annelerin emzirme öz yeterlilikleri ile sütün yeterlilik algısı arasındaki ilişkinin incelenmesi; 2014.