FACTORS AFFECTING MATERNAL ATTACHMENT OF THE MOTHERS IN ŞIRNAK PROVINCE, TÜRKİYE

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ABSTRACT

Objective: This study was carried out to determine the effect of breastfeeding and delivery method on maternal attachment of mothers with 1-8 months-old babies in Şırnak, province, Türkiye.

Material and Method: This descriptive study was conducted at Şırnak State Hospital between 01/08/2017 and 31/09/2017. The minimum sample size of the study was determined as 110 mothers determined by power analysis; however, the study was conducted by face-to-face interviews with 252 literate mothers who had a baby of 1-8 months and who volunteered to participate in the study who met the research criteria. Introductory Properties Form and Maternal Attachment Inventory have been used in data collection. The data were analyzed by using SPSS 23.0 program.

Results: When the maternal attachment level and introductory characteristics of the mothers were examined;

those who had good relations with their own mothers (97.3±6.0) and fathers (97.4±5.9), those who had previous knowledge of baby care (97.5±6.0), those who said that they did not get tired while caring for their baby (97.3±6.3), those who felt moderately restricted postpartum independence (97.5±6.1), those who thought their baby was a calm baby (97.9±5.3) had significantly higher maternal attachment levels (p<0.05). There was no significant difference between delivery type (normal/cesarean section) and infant feeding (breastmilk/food/breastmilk/food mix) and maternal attachment level (p>0.05).

Conclusion: It is recommended that families should be supported during and after pregnancy and that families should understand the importance of attachment in the mother-infant relationship in order to establish a maternal bond.

Keywords: Breast feeding, parturition, nursing, mother-child relations, cesarean section.

TÜRKİYE ŞIRNAK İLİ'NDEKİ ANNELERİN MATERNAL BAĞLANMALARINI ETKİLEYEN FAKTÖRLER

ÖZET

Amaç: Bu araştırma, Şırnak ilinde 1-8 aylık bebeği olan annelerin emzirme ve doğum şeklinin maternal bağlanmaya etkisini belirlemek amacıyla yapılmıştır.

Materyal ve Metot: Tanımlayıcı türde olan bu araştırma, 01/08/2017-31/09/2017 tarihleri arasında Şırnak Devlet Hastanesi'nde yapıldı. Çalışmanın minimum örneklem büyüklüğü power analizi ile belirlenen 110 anne olarak belirlenmiştir; ancak araştırma, 1-8 aylık bebeği olan ve araştırma kriterlerine uyan araştırmaya katılmaya gönüllü, okuma-yazma bilen 252 anne ile yüz yüze görüşülerek yapılmıştır. Verilerin toplanmasında Tanıtıcı Özellikler Formu ve "Maternal Bağlanma Ölçeği" kullanılmıştır.

Bulgular: Annelerin maternal bağlanma düzeyi ile tanıtıcı özellikleri incelendiğinde; kendi anneleri (97,3±6,0) ve babaları (97,4±5,9) ile ilişkileri iyi olanların, daha önce bebek bakımı konusunda bilgisi olanların (97,5±6,0) bebeğine bakım verirken yorulmadığını söyleyenlerin (97,3±6,3), doğum sonrası bağımsızlığının kısıtlandığını orta derecede hissedenlerin (97,5±6,1), bebeğinin sakin bir bebek olduğuna düşünenlerin (97,9±5,3) maternal bağlanma düzeyleri anlamlı şekilde yüksek bulunmuştur (*p*<0,05). Doğum şekli (normal/sezaryen) ve bebek beslenmesi (anne sütü/mama/anne sütü/mama karışımı) ile maternal bağlanma düzeyi arasında ise anlamlı bir farklılık saptanmamıştır (*p*>0,05).

Sonuç: Annelik bağının kurulabilmesi için gebelik sırasında ve sonrasında ailelerin desteklenmesi ve ailelerin anne-bebek ilişkisinde bağlanmanın önemini anlamaları önerilmektedir.

Anahtar kelimeler: Emzirme, doğum, hemşirelik, anne-bebek etkileşimi, sezaryen doğum.

INTRODUCTION

Mothers live tremendous happiness with the birth of their babies. However, in addition to happiness, this development brings some anxiety, fears, and worries as well. Because the responsibilities of mothers have increased, their lifestyles and roles have changed as well as their priorities in life. The most significant changes occur after the child is born. The connection of the mother with the baby after birth plays an essential role in shaping the relationship between the mother and the baby in the later years. The earlier this connection is established between the mother and the child; the more sensible the maternal bond will develop. Maternal attachment is an insatiable, ambitious, unique love relationship that continues between the mother and the baby. Maternal attachment is one of the loops that allow the formation of the maternal role.[1,2]

In the formation of attachment between the mother and baby, the following factors are influential; planned pregnancy, desired pregnancy, the economic status of the family, the relationship with the spouse, getting support from the spouse, the relationship with the mother's family and her environment, the birth process, birth time, the level of experienced stress, any health problem of mother and baby, an anomaly on the baby, age of the mother, education status of the mother, the attachment relations of the mother with her mother in the childhood, when the baby is born, the care provided in the newborn unit, etc. The first contact between the mother and the baby after birth and emotional conditions such as breastfeeding and delivery types are very important for the baby's development.[1,2]

The maternal connection has a very significant function in the first three days after birth. Compared with those who give birth with the cesarean section, the mothers having a natural childbirth experience more emotions and compassionate behavior when they first meet their baby. It is essential to have a sense of motherhood at first to have an attachment with the mother and the baby. This unique feeling between mother and baby contributes considerably to the emotional development of the baby. Starting with birth, these relationships constantly influence the development, interaction, and harmony of the baby with other people. In the first two years of infancy, if the baby cannot safely attach to someone, the baby experiences problems in mental, social, physical, emotional, and language development.[3]

When anomalies are detected in the mother and baby relationships, it is possible to prevent child abuse, mental illnesses, and many psychosomatic diseases thanks to early therapeutic interventions. Nurses should pay attention to prevent such situations. Nurses should be able to help to establish skin contact between mother and baby, encourage breastfeeding, decide on the way of delivery, and support the mother's adaptation process with the help of the necessary therapeutic interventions.[3]

The current study was carried out to determine the factors such as breastfeeding, cesarean birth, and vaginal birth affecting the maternal attachment of mothers from Sırnak, Turkey. In addition, it will present a detailed report on mother-infant attachment levels according to the socio-demographic status of the mothers.

MATERIALS AND METHOD

This study was conducted as descriptive research. The population of the study consisted of 1050 mothers who applied to Sırnak State Hospital between 01.08.-31.09.2017. The minimum sample size of the study was determined as 110 mothers according to the power analysis; however, the study was carried out with face-to-face interviews of 252 mothers, who have 1 to 8 months old babies and who fulfill the research criteria and volunteered to participate in the study. Since the formation phase of maternal attachment and the most intensive period consists of the period between 1 and 8 months, the study was performed with mothers who gave birth in these months.[4]

The Dependent Variable

Maternal attachment score averages of mothers with a 1 to the 8-months-old infant were dependent variables in the study.

Independent Variables

The birth type of mothers, feeding status of the babies and other identifying characteristics are independent variables of the study.

Data Collection

Maternal-Infant Introduction Form (43 questions) prepared by the researchers and the Maternal Attachment Inventory were used for collecting data. In the research, mothers who applied to child policlinics, child service, newborn unit mother hotel, delivery room, and maternity hospital were interviewed to reach mothers with 1 to 8-month-old babies. Mothers, who have a 1 to 8-month-old baby, fulfill the research criteria and who have literate are included in the research if they are willing to be included.

The Mother-Infant Introductory Form used in the study was given by the researcher to the mothers after providing necessary information by using the face-to-face interview technique with the mothers.

The data of the mother-Infant Introduction Form were collected after 15-20 minutes while it was given 15-20 minutes to the participants for filling the Maternal Attachment Inventory. Hence, the data was collected in 30-40 minutes.

Mother-Infant Introduction Form

To collect data in the study, Mother-Infant Introduction which was developed by the researchers by the related literature was used.[1,5]

Maternal Attachment Inventory

The Maternal Attachment Inventory (MAI) was developed in 1994 by Mary E. Muller to measure maternal attachment. This index includes 26 articles with a 4-point Likert scale varying between "always" and "never". Each article has direct statements and is calculated as "Always=4 points, Often=3 points, Sometimes=2 points, and Never=1 point." The lowest score to be obtained from the index is 26 and the highest score is 104. The increase in the overall score obtained from the scale shows that the mother's maternal attachment increases.[4]

Muller (1994) tested maternal attachment in two phases. Muller used Mercer's theory of maternal role adaptation to create these phases. The formation of the first phase occurs about a month after birth, this phase is defined as physical recovery. Again, in this phase, the mother takes care of herself and her baby. During this phase, the mother adapts herself to motherhood. The mother socially and psychologically prepares herself during this phase. The second phase consists of the 4th-5th month after the birth and this phase is defined as the success phase. Muller (1994) applied this inventory to 196 mothers having a baby 30-40 days old. The safety coefficient of the MAI was found to be Cronbach alpha 0.85. In the second phase, Muller (1994) applied MAI again to this group (n=62) in the fourth month after birth while Muller applied MAI to another group eight months after the birth (n=86) to determine whether the MAI can be used in the postpartum period. In the fourth month after birth, Cronbach's Alpha value was found to be 0.76 and in the 8th month after birth, Cronbach's Alpha value was 0.85.[4]

Studies on validity and reliability tests for the Turkish version of the MAI were completed by Kavlak in 2004 with the participation of 165 mothers who have healthy babies. Kavlak applied this scale to 165 mothers who had a baby between 30-40 days old. The reliability coefficient of the Maternal Attachment Inventory was determined to be Cronbach Alpha 0.77. In the second phase, Kavlak interviewed a group of 165 mothers

(n=78) when their babies were approximately 4 months old, to determine whether the Maternal Attachment Inventory could be used after the postpartum period. The Cronbach alpha coefficient reliability was found 0.82 for mothers who have a four-month-old baby. Hence, the Cronbach alpha reliability coefficient was determined to be high in both applications.[2] In this study, the Cronbach alpha of the Maternal Attachment Inventory was found to be 0.80.

Written approval was obtained from the Gaziantep University's Ethics Committee (19/06/2017.213) and the patients for the study to be conducted.

Data were evaluated in the SPSS package program. The normal distribution of the research data was analyzed with the Kolmogrov-Smirnov test. In the study, descriptive statistics (n, %, X±SD), t-test for independent groups to compare continuous variables in two groups, and One-Way Analysis of Variance were used to compare continuous variables in three or more groups. Obtained results were evaluated according to $p<0.05$ significance level.

RESULTS

The characteristics of the mothers included in the study are as follows; the mean age was 27.7±5.8 years, 66.7% in the 17-29 age group, 34.9% did not attend school, 42.5% of the husbands were in the 30-39 age group and 28.6% were high school graduates, 46.4% were living in the city center. 94.4% did not work, 53.2% had fewer revenues than expenses, 53.2% had elementary family structure, 27.4% had been married for 5-9 years, 77.4% had children between 0 and 3 years old, 38.9% of them had a previous child that is 1 to 3 years old, 79% had spent their childhood with their families, 91.3% had good relations with their mothers and 85.3% had good relations with their fathers (Table 1).

The socio-demographic characteristics of mothers and maternal attachment average scores are presented in Table 1. According to this, maternal attachment levels were found to be significantly higher than those who have a poor relationship with their mothers (97.3±6.0) and fathers (97.4±5.9) (Table 1, $p=0.01$).

There is no significant difference between the age, level of education, the age of the husband and level of education, working status, place of residence, income, family type, duration of the marriage, number of children, the age of previous children, the place where the childhood was passed (Table 1, $p>0.05$).

Table 1. Comparison of descriptive characteristics of mothers and mean scores of maternal attachment

Descript ve Characteristics		n (%)	MAI X±SD	t, F, p
Mother's age	17-29 years	168 (66.7)	96.8±6.3	t=0.767, p=0.444
	30-47 years	84 (33.3)	97.5±6.3	
The age of husband	20-29 years	111 (14.0)	96.2±6.6	F=1.866, p=0.157
	30-39 years	107 (42.5)	97.8±6.1	
	40-50 years	34 (13.5)	97.5±5.7	
Level of education	The uneducated	88 (34.9)	97.8±5.9	F=1.373, p=0.251
	Primary school	63 (25.0)	96.9±6.3	
	Middle School	66 (26.2)	95.8±6.7	
	High School and above	35 (13.9)	97.5±6.1	
Husband's education level	The uneducated	35 (13.9)	96.4±6.0	F=0.310, p=0.851
	Primary school	66 (26.2)	97.6±5.6	
	Middle School	48 (19.0)	96.8±6.5	
	High school	72 (28.6)	96.7±7.2	
	University	31 (12.3)	97.5±5.5	
Place of residence	Village	114 (45.2)	96.7±6.8	F=0.670, p=0.513
	District	21 (8.3)	98.4±5.4	
	Province	117 (46.4)	97.1±5.9	
Working status	Yes	14 (5.6)	95.7±6.3	t=0.779, p=0.437
	No	238 (94.4)	97.1±6.3	
Income to expense ratio	Little	134 (53.2)	96.6±6.4	t=1.199, p=0.232
	Equal	118 (46.8)	97.5±6.1	
Family type	Core	134 (53.2)	97.2±6.3	t=0.378, p=0.706
	Wide	118 (46.8)	96.9±6.3	
Duration of the marriage	1 year	11 (4.4)	98.0±4.0	F=1.351, p=0.235
	2 years	38 (15.1)	96.2±6.9	
	3 years	16 (6.3)	93.3±7.2	
	4 years	31 (12.3)	96.8±5.3	
	5-9 years	69 (27.4)	98.0±6.1	
	10-19 years	66 (26.2)	97.2±6.7	
	20-30 years	21 (8.3)	97.5±5.7	
Number of children	0-3	195 (77.4)	97.0±6.3	t=0.241, p=0.810
	4-8	57 (37.0)	97.2±6.3	
The period of previous children	Milk Period	98 (38.9)	96.6±6.6	F=1.384, p=0.249
	Game period	59 (23.4)	98.4±5.6	
	School term	19 (7.5)	95.8±8.6	
	Adolescence	6 (2.4)	95.5±7.4	
The person who the childhood was passed	Mother	37 (14.7)	98.2±6.5	F=0.946, p=0.419
	Father	6 (2.4)	99.3±4.3	
	Family	199 (79.0)	96.8±6.4	
	Relative	10 (4.0)	95.8±4.2	
Those have a poor relationship with their others	Good	230 (91.3)	97.3±6.0	t=2.366, p=0.01
	Bad	22 (8.7)	94.0±8.0	
Those have a poor relationship with their fathers	Good	215 (85.3)	97.4±5.9	t=2.574, p=0.01
	Bad	37 (14.7)	94.6±7.8	

MAI: Maternal attachment, **F:** One Way Anova (Post Hoc Tukey), **t:** independent sample test, *p*=0.05

Table 2. Comparison of maternal attachment mean scores with infant characteristics				
Characteristics of the Baby		**n (%)**	**MAI X±SD**	**t, F, p**
Month of birth of the baby	0-2 months	137(54.4)	97.2±6.7	t=0.494, p=0.622
	3-8 months	115(45.6)	96.3±5.7	
Gender of the Baby	Girl	126(50.)	96.5±6.6	t=1.246, p=0.214
	Male	126(50.0)	97.5±5.9	
Whether it was the desired gender	Yes	219(86.9)	97.0±6.3	t=0.036, p=0.971
	No	33(13.1)	97.0±6.1	
Birth weight	1000-3160 grams	162(64.3)	97.2±5.9	F=0.266, p=0.766
	3200-4000 grams	85(33.7)	96.6±7.1	
	4600-7000 grams	5(2.0)	97.2±3.2	
Birth time	32-37 premature birth	38(15.1)	97.7±5.2	F=0.235, p=0.760
	38-41 timely birth	177(70.2)	96.9±6.6	
	42-48 late birth	37(14.7)	97.0±5.6	
Bedtime in the newborn unit	1-24 hours	32(40.0)	99.9±4.1	F=938, p=0.151
	25-48 hours	11(13.8)	98.3±7.6	
	49 and above	37(46.3)	97.4±5.3	
Health status	Good	63(25.0)	98.1±6.2	t=938, p=0.151
	Bad	189(75.0)	96.7±6.3	
Nutrition status	Only breastmilk	150(59.5)	97.2±6.3	F=0.368, p=0.776
	Only mama	16(6.3)	96.8±4.8	
	Breastfeeding weighted and mama	60(23.8)	96.4±6.9	
	Mama weighted and breast milk	26(10.3)	97.8±5.6	
Breastfeeding until the baby is 6 months old	Yes	181(71.8)	97.3±6.5	t=0.969, p=0.333
	No	71(28.2)	96.4±5.6	
Breastfeeding time after birth	An hour later	93(36.9)	96.9±6.6	F=1.988, p=0.116
	Two hours later	77(30.6)	97.1±6.3	
	In an hour	51(20.2)	98.5±5.4	
	When he cries	31(12.3)	95.0±6.0	
Breastfeed termination time	Until the baby leaves	224(88.9)	97.0±6.2	F=2.476, p=0.08
	Until the mother leaves	17(6.7)	99.4±5.5	
	Until the end baby's crying	11(4.4)	94.0±7.2	
The baby's peace	Peaceful baby	174(69.0)	97.9±5.3	F=6.742, p=0.01
	Restless baby	54(21.4)	95.7±6.9	
	Other	24(9.5)	93.5±9.4	
Birth type	Normal birth	162(35.7)	97.1±6.4	t=0.209, p=0.851
	Cesarean birth	90(64.3)	96.9±6.2	
Total number of normal births	0-5Birth	226()89.3	97.0±6.3	t=0.498, p=0.619
	6-10Birth	26(10.7)	97.6±6.2	
Total number of Cesarean Births	0-2Birth	225(89.7)	97.0±6.2	t=0.102, p=0.919
	3-5Birth	27(10.3)	97.1±7.0	
The person who decides on the type of birth	Mother's want	113(44.8)	96.4±6.5	F=1.291, p=0.277
	Doctor's suggestion	129(51.2)	97.4±6.2	
	Husband's want	10(4.0)	98.9±4.8	

MAI: Maternal attachment, **F:** One Way Anova (Post Hoc Tukey), **t:** independent sample test, p=0.05

When we compare the Maternal Attachment Inventory Averages with the Characteristics of the Baby, it is revealed that there is no statistically significant difference between all variables except the temperament of the baby (month of birth of the baby, gender, whether it was the desired gender, birth weight and time, bedtime in the newborn unit, health and nutrition status, breastfeeding until the baby is 8 months old, breastfeeding time after birth, breastfeed termination time, birth type, the number of normal/cesarean deliveries, the person who decides on the birth type (Table 2, p>0.05).

Sixty-nine percent of mothers described their babies as calm babies in terms of temperament. The maternal attachment scores of the mothers who said, "My baby is a calm baby" were found to be higher (97.9±5.3) than the maternal attachment scores of mothers who defined their babies as bad-tempered (F=6.742, p<0.05, Table 2).

When maternal attachment points are compared with the characteristics of mothers; only those who think they were knowledgeable about infant care (97.5±6.0), those who state they don't feel tired when taking care of the baby (97.3±6.3) and those who do not feel that their independence was restricted because of the presence of the baby, have a significantly higher score than others. There is no significant difference between the maternal attachment levels and the following factors; having problems during pregnancy, delivery, and postpartum, length of stay in the hospital, desired pregnancy, feeling ready for motherhood, duration of seeing the first baby after the birth, baby looking like whom (father or mother), changes in the relationship with the spouse after the birth, the attitude of father to breastfeeding, getting support when taking care of the baby, knowledge about the infant care, fatigue when taking care of the baby, feeling dependent after the birth (p>0.05, Table 3).

DISCUSSION

When the maternal attachment average scores of the mothers were compared with the distinctive characteristics of the mothers, it has been revealed that the mothers having a good relationship with their mothers (97.3±6.0) and fathers (97.4±5.9) have significantly higher maternal attachment scores. In parallel with our findings of the study, Kavlak and Sen discovered that maternal attachment levels of mothers, who had a good relationship with their mothers in childhood, were higher.[2,5] This result suggests that the attachment relations of the mothers with their mothers in childhood affect the attachment

relationships that the new mothers will have with the new baby. In the study by Sen, maternal attachment levels of mothers who had good relations with their fathers were found to be higher.[5] Hence, the father has a very significant role in the growth and development of the child. The role of an active father has certainly a positive impact on the development of the child. The attitudes of the fathers directly or indirectly affect the safe attachment of children. The father has a positive effect on the healthy growth and emotional development of the child, by supporting the child to explore the environment.[6] Therefore, it was expected that mothers with good relations with their fathers had higher maternal attachment levels.

However, there is no significant difference between the following characteristics of the mothers and the maternal attachment level; age, level of education, the age of the spouse and level of education, residence, working status, income, family type, duration of the marriage, number of children, age of the previous child, the relationship with the mother and father in the childhood. Similar to our study, Alan discovered that there is no significant difference between the age of the spouse, education level and family type, and maternal attachment levels while Kavlak discovered that the maternal attachment levels do not change based on the following factors; the education level of the mothers, working status, economic status, duration of the marriage, the presence of other children, the age of the previous child, the person with whom the child stayed during the childhood. In addition, Sen found no significant difference between the maternal attachment level and the education level of the mothers and their working status. Finally, Ozkan *et al.* revealed that maternal attachment levels did not change based on the residence and working status of the mothers.[2,5,7,8] On contrary, the studies of Kavlak and Sen discovered that there is a significant difference between family types and maternal attachment levels.[2,5] It is thought that this result is due to the socio-cultural differences of the mothers in the study groups of Sırnak province.

When we compare the maternal attachment score averages with the characteristics of the baby, it is revealed that there is no statistically significant difference between all variables except the temperament of the baby (month of birth of the baby, gender, whether it was the desired gender, birth weight and time, bedtime in the newborn unit, health and nutrition status, breastfeeding until the baby is 8 months old, breastfeeding time after birth, breastfeed termination time, birth type, the number of normal/cesarean deliveries, the person who decides on the

Table 3. Comparison of maternal attachment mean scores with mother's characteristics			
Characteristics of Mothers		**n (%)**	**MAI X±SD**	**t, F, p**
Having problems during pregnancy	Yes	54(21.4)	97.0±6.3	t=0.033, p=0.974
	No	198(78.6)	97.0±6.3	
Having problems during birth	Yes	36(14.3)	95.3±6.4	t=0.766, p=0.444
	No	216(85.7)	97.3±6.2	
Having problems during postpartum	Yes	35(13.9)	97.8±5.6	t=0.766, p=0.444
	No	217(86.1)	96.9±6.5	
Length of stay in the hospital	0-4 days	242(96.0)	97.0±6.2	t=0.340, p=0.734
	5-15 days	10(4.0)	96.4±8.1	
Desired pregnancy	Yes	215(85.3)	97.0±6.2	t=0.323, p=0.747
	No	37(14.7)	97.3±6.6	
Feeling ready for motherhood	Very	185(73.4)	97.6±6.1	F=5.045, p=0.07
	Middle	38(15.1)	96.7±5.0	
	No feeling ready	29(11.5)	93.7±7.6	
Duration of seeing the first baby after the birth	Less than 10 minutes	54(21.4)	98.8±4.7	F=1.741, p=0.126
	10 minutes	23(9.1)	98.5±4.7	
	11-29 minutes	23(9.1)	96.0±8.1	
	30 minutes	46(18.3)	96.6±6.5	
	31-60 minutes	66(26.2)	96.4±6.2	
	One hour and above	40(15.9)	95.8±7.2	
According to the mother baby looking like whom	Mother	81(32.1)	96.9±5.6	F=0.474, p=0.701
	Father	133(52.8)	97.2±6.6	
	Mother's relatives	22(8.7)	95.7±7.6	
	father's relatives	16(6.3)	98.0±5.2	
Changes in relationship with the spouse after the birth	Positive changes	101(40.1)	97.5±5.6	F=0.630, p=0.533
	Negative changes	13(5.2)	95.7±6.6	
	No changes	138(54.8)	96.8±6.7	
Attitude of father to breastfeeding	Supported breastfeeding	146(57.9)	97.1±6.1	F=0.718, p=0.489
	No support for breast feeding	11(4.4)	99.0±6.0	
	Not interested in breastfeeding	95(37.7)	96.7±6.5	
Getting support for baby care	Yes	58(23.0)	97.1±5.9	F=1.680, p=0.428
	No	143(56.7)	97.5±5.8	
	Partially	51(20.2)	95.6±7.8	
Knowledge about the infant care	Yes	122(48.4)	97.5±6.0	F=3.038, p=0.05
	No	97(38.5)	97.2±5.9	
	Partially	33(13.1)	94.5±8.0	
Fatigue when taking care of the baby	Yes	45(17.9)	97.1±5.6	F=3.218, p=0.02
	No	153(60.7)	97.3±6.3	
	Partially	54(21.4)	96.0±6.7	
Feeling dependent after the birth	Very	28(11.1)	96.3±6.0	F=3.218, p =0.02
	Middle	76(30.2)	97.5±6.1	
	Little	69(27.4)	95.3±7.3	
	Never	79(31.3)	98.3±5.3	
MAI: Maternal attachment, **F:** One Way Anova (Post Hoc Tukey), **t:** independent sample test, *p*=0.05				

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birth type. 69% of mothers described their babies as calm babies in terms of temperament. The maternal attachment scores of the mothers who said, "My baby is a calm baby" were found to be higher than the maternal attachment scores of mothers who defined their babies as bad-tempered.

Similar to our study, the following studies didn't find a significant difference between the following factors and the maternal attachment levels of the mothers; Sen, birth date, the gender of the babies, whether the gender was the desired gender or not and the birth type; Kavlak, birth date, the gender of the babies, whether the gender was the desired gender or not, type of delivery and birth weight; Ozkars, length of stay in the newborn unit; Mutlu *et al.* the health status of babies, delivery style; Alan baby's nutritional status, birth type; Kırca and Savaser, breastfeeding status of the mothers; Shafiq first breastfeeding time of babies; Ozturk and Erci style of delivery; Yakut the person, who decides on the style of birth.[2,5-7,9-13]

Contrary to our study and literature, three studies examining the relationship between the type of birth and the interaction between the mother and infant were also reported to have negative effects on the attachment pattern of cesarean delivery.[14-16] The results of our study that are different from the literature can be explained by the cultural structure of our society. Maternity is highly valuable in Turkish culture. The girls play with the baby when growing up, they learn how to take care of a baby and they share their love with the baby. We advise newly married couples to have babies immediately. We consider pregnant women as sick and having two lives at the same time and pay attention to fulfilling the needs of the mothers. Thus, motherhood is very important for girls/women. Although the cultural structure of the province of Sırnak gives great importance to the male gender, recently this approach has been replaced by a healthy baby. This situation did not change the maternal commitment. Hence, in our culture, no matter how a woman gives birth and in what way she feeds her child, the level of maternal attachment does not change.

Kavlak and Sen in their studies revealed that the gender of the baby doesn't affect maternal attachment since the study was conducted in the Western regions of Turkey.[2,5] Although our study was conducted in the eastern region, it was ascertained that the gender of the babies did not affect maternal attachment. The results obtained from both studies are parallel. Our society tends to favour boys. It is considered a positive result to reveal that the gender of the baby doesn't affect the maternal attachment scores.

On the contrary, Ozturk and Saruhan affirmed that the maternal attachment score of mothers, who had been treated in the hospital for 1-4 months, was significantly higher than the babies that have been born on their due time.[17] According to the results of the study, it is considered that maternal attachment is not significant according to the birth week. This is contemplated as related to socio-demographic reasons.

When we compare maternal attachment sores with distinctive characteristics of mothers; only those who think they were knowledgeable about infant care, those who state they don't feel tired when taking care of the baby, and those who do not feel that their independence was restricted because of the presence of the baby, have a significantly higher score than others. There is no significant difference between the maternal attachment levels and the following factors; having problems during pregnancy, delivery, and postpartum, length of stay in the hospital, desired pregnancy, feeling ready for motherhood, duration of seeing the first baby after the birth, baby looking like whom (father or mother), changes in the relationship with the spouse after the birth, the attitude of father to breastfeeding, getting support when taking care of the baby.

In parallel with the findings of our study, the following studies didn't find a significant difference between the maternal attachment scores and the following factors; Alan having problems in pregnancy, getting support from the spouse in the care of the baby, experiencing changes in the relationship with the spouse after birth, getting support from spouses or family while looking at their babies; Mutlu *et al.* complications during pregnancy; Cankaya *et al.* postpartum health problems; Ozturk and Erci, hospitalization times of mothers; Shafiq, the deliberate conception of the last baby; Sen; when the mother sees the baby first and the change in the relationship with the spouse; Kavlak, being ready for motherhood, length of stay in the hospital, change in the relationship with the spouse. However, like our study, Kavlak observed a significant difference between maternal attachment levels and being aware of infant care, and feeling dependent after birth. However, contrary to our study, Kavlak also revealed that the appearance of the baby affected the maternal attachment levels and the maternal attachment levels of the mothers resembling the baby to themselves and their spouse have been significantly higher.[2,5,7,10,12,14,18] Although the literature suggests that attachment can be an example of instinctive behavior when the nature and functioning of maternal-infant attachment are understood, we realize that healthy attachment is based on learning and knowledge about raising children; this is something special in humans. Studies confirm that

when parents have more information and skills about raising a child, they can establish healthy relationships with their children and raise healthy children.[19] It is assumed that it will have a positive effect on mother-infant attachment if the mother stays physically and psychologically healthy after birth and gets support from their relatives in that special period. It is thought that families in the province of Sırnak are sensitive and helpful towards pregnant and giving birth mothers, which positively affects mother-infant attachment.

At the end of the study, it was determined that maternal attachment scores decrease as the duration of hospitalization of mother's increases. It has been considered that the mothers can contact their babies more in the home environment, thus, the attachment decreases when the duration of hospitalization increases.

CONCLUSION

At the end of the study conducted to determine the effect of breastfeeding and delivery on the maternal attachment of mothers with a 1 to 8-month-old baby from Sırnak province:

a. It is concluded that the maternal attachment level of mothers, who have good relations with their parents, who do not feel that their independence after birth is restricted, those who define their babies as calm babies, and those who know infant care are found to be higher than others.

b. It is a recommendation to health staff; to apply the Maternal Attachment Inventory to mothers and to determine the problems experienced in the early period, to intervene with therapeutic approaches, to comprehend the importance of attachment in the mother-infant relationship, to realize that attachment is a multi-factorial process, to support the family to improve the interaction and quality between the family and the baby, to inform the mothers and the family elders on this subject before the birth.

c. We believe that more inclusive studies should be carried out to reveal regional/cultural differences.

Acknowledgments

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