JERN Journal of Education and Research in Nursing

Original Article
DOI:10.14744/jern.2021.21115
J Educ Res Nurs. 2023;20(3):241-247

Attachment Status and Social Support Perceptions of Parents with an Infant in the Neonatal Intensive Care Unit

Canan Uçakcı Asalıoğlu, Şengül Yaman Sözbir

Department of Nursing, Gazi University Faculty of Health Science, Ankara, Türkiye

Abstract

Background: There has been a limited number of studies investigating the social support perceptions of parents of infants treated in neonatal intensive care units and parent–infant attachment in Türkiye.

Aim: This study aimed to investigate the relationship between social support perceptions and the attachment status of parents who have babies in neonatal intensive care unit.

Methods: This study was conducted descriptively with 154 mothers and 154 fathers of infants treated in the neonatal intensive care unit. To collect the data, the questionnaire form, Multidimensional Perceived Social Support Scale (MPSSS), and Maternal Attachment Inventory (MAI) were used. The means, standard deviation, Student's *t*-test, a Mann–Whitney U test, ANOVA, and LSD were used to analyze the data.

Results: The mean score of the mothers on the Maternal Attachment Scale was 98.8 ± 5.2. The mean score of mothers on the MPSSS was 64.1 ± 17.7, and the mean score of fathers was 63.6 ± 15.3. While the study found no correlation between the mothers' overall MPSSS scores and overall MAI scores, a weak significant positive correlation between their scores in the friends subscale and MAI scores was found. There was a significant difference between the MPSSS significant other subscale score and the feeling of fathers toward their infants; those having higher scores in the subscale of significant other had attachment feelings at a lower level.

Conclusion: It was determined that mothers and fathers have a high level of attachment and social support perception. Parents' social interactions should not be restricted and nurses should increase parents' communication with their babies so that their attachment is not adversely affected.

Keywords: Maternal–infant attachment, neonatal intensive care unit, nursing, paternal-infant attachment, social support perception

Introduction

The phenomenon of attachment covers all the emotional and behavioral patterns such as showing a positive reaction to a particular individual, one's desire to spend most of his time with that person, seeking the presence of that particular person when one faces a frightening situation or object, and experiencing a feeling of ease as soon as one senses the presence of that person.[1] Mother attachment, father attachment, and infant bonding are separate processes. Each one has a different start time and formation process.[2,3] The process in which a mother develops a bond of affection toward an infant is called a maternal attachment; it is a process where a satisfactory and joyful interaction begins between a mother and an infant.[4] Maternal attachment begins just before birth and continues in an upward direction in the early post-natal period.[5] The mother is not the only person with whom an infant establishes a close bond from the 1st day of its life; it would also establish a similar close bond with the father. It is expected that an attachment is established between an infant and its father within 6 months following the birth.[6] The prospective father, who experiences the pregnancy together with his spouse, cares for the infant after the birth, thereby developing a feeling of love and affection, thus beginning to live up to his role as a father.[7]

A premature delivery would pose a risk in respect of initiating a bond between parents and infants in the early period. The treatment of the infant in the intensive care unit, developmental problems of the premature infant, and the condition of parents being obliged to

Cite this article as: Uçakcı Asalıoğlu C, Yaman Sözbir Ş. Attachment status and social support perceptions of parents with an infant in the neonatal intensive care unit. *J Educ Res Nurs*. 2023;20(3):241-247.

Corresponding author: Canan Uçakcı Asalıoğlu
E-mail: cananucakci_2001@hotmail.com

Received: April 16, 2021
Accepted: August 03, 2022
Publication Date: September 01, 2023

visit their child only in pre-set times do negatively affect the parent–infant relationship.[7-9] Therefore, the parents of an infant treated in the Neonatal Intensive Care Unit (NICU) need to be supported.

Influencing one's coping ways and social support can change the connection between a straining incident and its outcomes. Many studies have reported that lack of social support and stressful living conditions are among the main causes of psychological reciprocal effects emerging in the post-natal period.[10,11] Alan and Ege provided evidence that the support provided to mothers having infants with health problems in the post-natal period and the developed social support perception with this respect affect the mother–infant bond.[12] It is assumed, based on this finding, that social support perception affects the father–infant bond, too.

Nurses have a particular responsibility in specifying social support needs and in carrying the support provided into practice.[13] Nurses provide women significant support both during pregnancy and in the postnatal period. Supports provided to parents reduce problems and have positive effects on the attachment bond process. With a special focus on the mother and the infant, nurses, who are important actors in the development of the attachment between infants and parents, should support, consult, and train parents, particularly concerning the behaviors of the infant and the interpretation and reaction of parents to these behaviors.[14]

While there has been a limited number of studies investigating the social support perceptions of parents of infants treated in neonatal intensive care ünits (NICU) and parent-infant attachment in Türkiye.[12,15,16] However, no research has been found comparing this issue in terms of mother and father. With this respect, the present study aims to investigate whether a relationship exists between the social support perceptions of parents having an infant in the NICU and their level of attachment to their infants.

Methods

Type of Study

This study is a descriptive and relation-seeker study.

Participants and Setting

The sample consisted of 154 mothers and 154 fathers of infants treated in the NICU of women and child health hospitals equipped with a 3rd level NICU. The power analysis conducted (with power (1-β)=0.95 with α=0.05 error probability) to determine the sample size revealed a sample of size 138;[17] however, all the parents reached during the implementation of the study were included in the sample to increase the reliability-validity of the study. The study sample consisted of 154 mothers and 154 fathers. Parents (married couples) of at least 18 years of age without any psychiatric and chronic disease, who were at least elementary school graduates, who had 30 days old infants, and who agreed to participate in the study were included in the study sample.

Data Collection

To collect the data, a questionnaire form designed by the researcher, "Multidimensional Perceived Social Support Scale (MPSSS)," and "Maternal Attachment Inventory (MAI)" was used.

The Questionnaire Form

It included 34 questions in total. Thirty questions were designed to investigate the socio-demographic characteristics of parents and infants and the birth process. On the other hand, the remaining 4 questions were intended to investigate the attachment of fathers to infants. The form was designed based on the available models in previous research.[16-18]

Maternal Attachment Inventory (MAI)

It is a scale developed by Muller.[19] The validity and reliability tests of the Turkish version of MAI were performed by Kavlak and Şirin, who calculated Cronbach Alpha reliability coefficient values as 0.77 and 0.82 between 30 and 40 days in the post-partum period and four months after the delivery, respectively. The scale consisted of 26 items, whose the lowest score was 26 and the highest score was 104, respectively. Higher scores indicated a higher attachment level in an individual.[17] In this study, the Cronbach alpha value of MAI was found to be 0.76.

The Multidimensional Perceived Social Support Scale (MPSSS)

This scale was first developed by Zimet et al. in 1988.[20] The Turkish version of the scale was tested by Eker et al., who calculated a Cronbach Alpha value between 0.80 and 0.90. The MPSSS consists of 12 items and three sub-scales. The lowest and highest scores to be obtained on the scale were 12 and 84, respectively, whereby higher scores indicated a higher social support perception in an individual.[21] In this study, mothers' MPSS Cronbach alpha values were found to be 0.90, and fathers' MPSS Cronbach alpha values were 0.92.

The data were collected face-to-face in a quiet room, outside of the viewing and treatment hours, when there were no situations that would prevent communication with the parents. Parents were taken to the room in pairs for the interview, respectively. Data were collected between February 08, 2016, and June 17, 2016. It took on average 10–15 min to fill in the scales and the questionnaire by parents.

Data Analysis

The data of this study were evaluated through SPSS 23.0 package data program (Statistical Package for Social Sciences, IBM Corp. in Armonk, New York, USA). The statistical analysis of the article was conducted by an independent statistical expert. A Shapiro–Wilk test was used to investigate whether the study data had a normal distribution. While a Student's *t*-test was used to compare the variables with normal distribution in two groups, a Mann–Whitney U test was used to compare the ones with non-normal distribution. We used multiple comparison tests of ANOVA and LSD to compare the variables with normal distribution in more than two groups; on the other hand, we drew on a Kruskal–Wallis test to compare the variables with non-normal distribution.

Ethical Consideration

The ethical approval (Approval Number: 77082166-604, Date: 15.12.2015) was obtained from the Gazi University Ethical Committee, and written permission was also obtained from the hospital where the study was conducted. The study was carried out after written consent was obtained from the study subjects. This research was carried out in accordance with the Helsinki Declaration. After the study was completed, we met the head of the clinic and the responsible nurse to exchange views on the possibilities as to how the parents with a lower attachment level to their infants and a lower social support perception could be supported and consulted.

Results

Characteristics of the Study Population

Of the infants included in the study, 53.2% of whom were male, had a mean age of 40.5 days and were in 34.4 post-natal weeks mean. The average hospitalization time was 23.7 days. Of the infants, 54.5% were referred to the NICU due to respiratory tract disorders; 96.8% had no anomalies. In addition, 8.4% of the babies were connected to a ventilator, 42.9% of them had been connected to a ventilator before, and 48.7% of them were never connected to a ventilator. Considering the feeding methods, 42.2% of the babies were fed with breast milk, 31.8% with a bottle, and 26% with total parenteral nutrition, syringe, or catheter.

The average ages of the fathers and mothers participating in the study were 31.1 ± 6.7 and 27.4 ± 6.0, respectively. The majority of the parents were high school graduates with 37% of the mothers and 41.6% of the fathers. While 7.8% of the mothers had a job, the employment rate among the fathers was 96.8%. Of the parents, 49.4% lived in a nuclear family, and 41.6% said that the infant involved was their first child. Considering the income level perceptions of the parents, 59.7% of the mothers and 68.2% of the fathers stated that they have a medium income.

Mothers (85.7%) and fathers (90.9%) stated that they wanted this pregnancy. As for the mode of delivery, 39% of the mothers delivered their babies by vaginal birth, and 61% had a cesarean section. While 17.5% of the mothers reported having complications (including excessive pain, hypertension, excessive blooding, retention of the placenta, and rupture at the uterus) during the delivery, 18.2% expressed some problems (including pain, infection, hypertension, blooding, psychological problems, pulmonary embolism, and cerebral vein thrombosis) after the delivery. When the parents were asked about when they first touched their babies, 25.3% of the mothers and 4.5% of the fathers expressed having touched it just after the delivery while 10.4% of the mothers and 9.7% of the fathers said that they did it within two hours after the delivery. No kangaroo care was practiced in the hospital where the study was undertaken.

Mean Scores of MAI and MPSSS and Findings on the Feelings and Views of the Fathers on Infants

The mean score of the mothers in MAI was 98.8 ± 5.2. The mean score of the mothers in total in MPSSS was 64.1 ± 17.7; their mean scores in the Family, Friends, and Significant Other subscales were 24.5 ± 5.6, 19.8 ± 8.0, and 19.7 ± 7.6, respectively. The overall mean score of the fathers obtained in MPSSS was 63.61 ± 15.3; as for their mean scores in the subscales, the obtained scores were 24.5 ± 4.6, 19.1 ± 6.4, and 19.9 ± 6.4 in the family, friends, and significant other subscales, respectively (Table 1). 96.1% of the fathers expressed having positive feelings towards their infants, and 88.9% expressed feeling attachment toward their infants. On the other hand, 83.1% of the fathers said that they had a feeling of being bound towards their infants, and 88.3% expressed being happy to spend time with them (Table 2).

Scores of the Participating Mothers in MAI and MPSSS, the Relationship between the Fathers' Feelings Toward and Views on their Infants and their MPSSS Scores, and Comparison of MPSSS Scores of the Parents

While the study found no correlation between the mothers' overall MPSSS scores and overall MAI scores, a weak significant positive correlation between their scores in the Friends subscale and MAI scores ($r=0.159$, $P=0.048$) was found. No significant correlation was found between the scores obtained in the significant other subscale and MAI scores ($P \geq 0.05$) (Table 3).

A comparison between the feelings and views of the fathers for their infants and MPSSS revealed no significant difference ($P \geq 0.05$). The only significant difference ($P \leq 0.05$) found was between the MPSSS Significant Other subscale score and the feeling of fathers toward their infants; those having higher scores in the subscale of Significant Other had attachment feelings at a lower level (Table 4). The comparison between the parents' MPSSS total scores and those associated with the subscales revealed no significant relationship between their average scores ($P \geq 0.05$) (Table 5).

Table 1. MAI mean score of mothers and MPSS mean score of parents

Scales	Minimum	Maximum	X±SD
MAI	78	104	98.89±5.26
MPSS (Mother)	12	84	64.13±17.79
Family Subscale	4	28	24.55±5.65
Friend Subscale	4	28	19.81±8.07
Significant Other Subscale	4	28	19.76±7.60
MPSS (Father)	12	84	63.61±15.32
Family Subscale	4	28	24.55±4.67
Friend Subscale	4	28	19.15±6.45
Significant Other Subscale	4	28	19.90±6.40

Table 2. Fathers' feelings and thoughts about their babies (n=154)

Fathers' feelings and thoughts about their babies	Number	%
Feelings of Fathers		
Positive	148	96.1
Negative	6	3.9
Baby connecting feeling status		
Yes	137	88.9
No	16	10.3
Unanswered	1	0.6
Related sensing status against baby		
Yes	128	83.1
No	26	16.9
Satisfaction spend time with the baby status		
Yes	136	88.3
No	18	11.6

Table 3. The relationship between mothers' MAI scores and MPSS scores

	MAI	
	R	*P*-value
MPSS	0.152	0.06
Family Subscale	0.048	0.55
Friend Subscale	0.159	**0.04***
Significant Other Subscale	0.150	0.06

Pearson correlation test *$P \leq 0.05$

Discussion

Attachment is a mutual process; research has shown that the parent–infant relationship plays a role of importance in how the future life of an infant will unfold.[22] It is reported that several factors, including social support perception, affect the development of the attachment between parents and infants in the postnatal period.[10]

The MAI score of the mothers in our study was found to be very high (98.8 ± 5.2). Similarly, in studies conducted in Türkiye with the same scale, maternal attachment scores of mothers were found to be 100.11 ± 4.4, 96.53 ± 9.2, and 101.82, respectively.[12,23,24] A study conducted by Shin and Kim. with 196 Korean women with healthy infants using the maternal attachment scale yielded a maternal attachment mean score of 94.2 ± 9.7.[25] In another study conducted in Türkiye, it was found that those who have a high level of education, have social security, live in a nuclear family, and have a good income level have high levels of attachment.[26] In a study conducted with mothers whose babies were hospitalized in the NICU, the mean scores of mothers in MAI were found to be 99.0 ± 7.3. In the same study, it was found that the mean maternal attachment score of the mothers who did not participate in the care of their baby visited the baby less, and held it less often was found to be significantly lower.[27] In this study, mothers having infants with health problems had similar attachment scores to the scores of mothers with healthy babies found in previous studies. These results lead to the assumption that NICU-related factors do not affect the maternal attachment of mothers with infants treated in the NICU. This can be attributed to the fact that mothers actively participate in the care of infants, have opportunities to breastfeed their infants, and focus on their state of health.

Existing evidence has shown that the father-infant relationship affects the cognitive development of an infant in its future life.[28,29] A better attachment between fathers and infants can develop in a case when, in the 1st year, fathers care for the infant alongside the mother and thereby receive support from their spouse,[30] spend quality time with the infants at home, and assume responsibility in this respect.[31] In a study performed to analyze infant-father attachment during pregnancy, and 6 and 12 months after the delivery, Condon et al. found scores of 63.1 (during the 23rd week of pregnancy), 79.4 (6 months after delivery), and 80.7 (12 months after delivery).[32] We believe that they have a high level of attachment towards their infants based on the statements of the fathers involved in our study. In studies conducted in Türkiye, the mean scores of fathers' attachment to their babies were determined as 74.6 ± 9.0, 71.3 ± 10.5, 73 ± 9.1, and 76.6, respectively. In Türkçüer's study, a positive and significant relationship was found between father–baby attachment and

Table 4. Their relationship between the feelings and thoughts of the fathers about their babies and the scores they got from the MPSS

	Feelings of fathers feel against baby*				Feelings of fathers feelings against their baby*				Fathers feeling connected against baby*				Satisfaction status of spending time with babies of babies*			
	Positive (n=148)	Negative (n=6)			Related (n=128)	Unrelated (n=26)			Bonded (n=137)	Not Bonded (n=16)			Satisfied (n=136)	Dissatisfied (n=18)		
MPSS	X± SD	X± SD	Z	*P*-value	X± SD	X± SD	Z	*P*-value	X±SD	X±SD	Z	*P*-value	X± SD	X± SD	Z	*P*-value
Family Subscale	24.60±4.70	23.33±4.17	−1.13	0.25	24.95±4.12	22.61±6.54	−1.40	0.16	24.50±4.69	24.81±4.75	−.63	0.52	24.52±4.73	24.83±4.35	−.30	0.75
Friend Subscale	19.07±6.48	21.16±5.77	−.86	0.38	19.38±6.10	18.03±7.97	−.85	0.39	18.94±6.42	20.93±6.79	−1.19	0.23	18.91±6.37	20.94±6.93	−1.24	0.21
Significant Other Subscale	19.79±6.44	22.66±4.88	−.98	0.32	20.20±6.02	18.42±8.01	−.86	0.38	19.54±6.42	22.81±5.86	−1.98	**0.04**	19.63±6.45	21.88±5.84	−1.32	0.18
Total	63.47±15.54	67.16±8.18	−.48	0.63	64.53±14.32	59.07±19.22	−1.27	0.20	62.99±15.28	68.56±15.70	−1.47	0.14	63.08±15.37	67.66±14.70	−1.17	0.23

*Mann–Whitney U

Table 5. The comparison of the MPSS scores of mothers and fathers

MPSS	X±SD	t	*P*-value
Family subscale			
Mother	24.55±5.65	0	1
Father	24.55±4.67		
Friend subscale			
Mother	19.81±8.07	0.98	0.32
Father	19.15±6.45		
Significant other subscale			
Mother	19.76±7.60	−0.22	0.82
Father	19.90±6.40		
Total			
Mother	64.13±17.79	0.38	0.7
Father	63.61±15.32		

Paired-samples "t" test

the year of marriage and the age of the baby.[33-36] In the same study, it was determined that attachment was significantly higher in fathers who had a nuclear family, had a baby by planning, had a babysitter and housekeeping assistant, received birth preparation training, and had pregnancy-birth knowledge.[36] Past research reports that father–infant attachment rather develops in later months.[22] The findings in our study, however, indicated a higher father-infant attachment compared with the existing literature. In cases where the infant is healthy, it is usually the mother who assumes responsibility for the infant; fathers, on the other hand, spend less time with their infants in such cases. The higher attachment level of the fathers in our study can be attributed to their attitudes, namely, they felt concerned about the health of their infants. Besides, this higher attachment can be associated with the fathers' staying longer in the hospital to meet the probable urgent needs of their infants.

Social support is described as financial, cognitive, and emotional support that one receives from others.[37] In this study, parents' perceptions of social support were found to be high and there was no significant difference between parents' perceptions of social support. In a study performed by Hergüner et al. using MPSSS, mothers who delivered by cesarean section and those who bore their infants by vaginal delivery had social support average scores of 72.4 and 77.0, respectively.[24] On the other hand, in a study performed to investigate the social support perceptions of women in the pre- and post-natal period, Mermer et al. found an MPSSS post-natal score average of 65.7 ± 14.0.[13] Although previous research conducted in Türkiye with mothers having healthy infants has reported high social support scores for mothers in the post-natal period, no research has so far investigated the social support perceptions of fathers and the social support needs of parents with health problems.[11,12,16,17] In a study conducted by Yun-Yu et al. with parents having infants with health problems, the average social support perceptions of fathers were found as 33.7 (15–50).[38] The majority of the previous research has investigated the social support perceptions of parents having a healthy infant; however, the values of social support perception our study has yielded are close and similar to the values regarding the social support perceptions of parents with healthy infants. In Türkiye, relatives usually devote close attention to the family in the post-natal period, standing by the family to care for the mother and the infant and also caring for the rest of the family remaining at home when the parents are at the hospital.[11,16,17] The high social support perception found in our study can be attributed to this culture of support which is specific to Türkiye.

Some prior research has shown that attachment begins in the early life of a child, and that parent-infant attachment plays an essential role in the social, physical, cognitive, and emotional development of an infant.[1,17] It is reported that social support perceived by parents in the process of attachment between parents and infants is of great importance.[12,16,39] Our study found no correlation between the overall MPSSS and MAI scores of the mothers involved in the study ($P \geq 0.05$). A similar study conducted in Türkiye also found a weak positive correlation between the average scores of maternal attachment and MPSSS average scores.[12] Another study that investigated mother–infant attachment demonstrated that the mothers who received support from their spouses had higher maternal attachment scores.[16] Kinsey et al. found a positive correlation between MAI scores and social support.[15] The findings of our study are not consistent with those of previous research. This can be assigned to the fact that the mothers whose infants were treated in the NICU focused on the conditions of their infants rather than on their health and that the parents had higher levels of social support perceptions and maternal attachment.

A weak, but statistically significant positive correlation ($r=0.159$, $P=0.048$) was found between MPSSS Friends Subscale score and the MAI score. In the study of Engin and Ayyıldız, there was a positive and moderate relationship between the level of mother-infant attachment and perceived social support, while in the study of Özdemir et al., a weak positive relationship was found between maternal attachment levels of mothers and perceived social support.[26,40] In the study of Yeşilçınar et al., it was found that the perceived social support scores of pregnant women increased, and their prenatal attachment scores increased.[41] In the study of Bilgin and Alpar, no significant difference was found between the view that the perception of the inadequacy of social support affected the role of motherhood and the mean score of the Maternal Attachment Scale.[42] In the study of Ertekin and Polat, a weak positive correlation was found between the mean scores of MAI and MPSS.[43] Cebeci et al. found that mothers received more social support from their families and spouses than from their friends in the post-natal period.[44] Another study that investigated mother–infant attachment found that mothers who received support from their spouses had higher maternal attachment scores.[16] Metin showed that there was a statistically significant positive relationship between the average scores of the Prenatal Attachment Scale and average scores of Family, Friends, Significant Other subscales of MPSSS, and overall average scores.[45] The findings of our study are not consistent with those of previous studies. Most of the mothers included in our study came from remote towns and could see their families only when they visited them. We observed that the mothers spent most of their time at the hospital together with the mothers of other infants treated. The joint problem experienced had an enhancing effect on the mutual social relationship because mothers supported each other, which led us to think that this support had a positive effect on maternal attachment.

Our study found no significant difference between the fathers' emotions towards and views about their infants, and their MPSSS scores ($P \geq 0.05$). However, a significant difference was found between their scores of the MPSSS Significant Other subscale and their attitudes in respect of feeling attachment toward their infants ($P \leq 0.05$). The fathers who had higher scores in the subscale of Significant Other (friends, relatives, and neighbors) expressed lower attachment. Yun-Yu et al. showed the existence of a weak positive correlation between the social support score and father-infant attachment.[38] It is known that men spend less time with their infants since they rather socialize and spend more time outside the home.[46] We observed in our study that fathers spent a short time (10–15 min) with their infants only during visiting hours. In light of this observation, we believe that fathers receiving support from Significant Other persons spend much time with their circle of friends, thus spending less time with their infants, as a consequence of which a feeling of attachment towards their infants develops only at a slower pace.

The comparison of parents' MPSSS subscale and overall scores revealed no significant difference between the average scores of mothers and fathers ($P \geq 0.05$). No research has been found that compared the social support perceptions of parents. This can be assigned to the fact that parents generally spend time together at the hospital to care for their infants and that they benefit from similar social support mechanisms.

Limitations of the Study

Although there are many factors that affect parents' perceptions of social support and their attachment to their infants, only the relationship between attachment and social support was examined in this study. The study was conducted in a single institution, at a certain time interval, and with a certain number of parents. Therefore, the results cannot be generalized to the population.

Conclusion

The study found that the mothers had a high level of maternal attachment and social support perception; the fathers, on the other hand, had positive feelings toward their infants and also had a high level of social support perception. We found no difference between the social support perceptions of the mothers and the fathers. No relationship was found between the social support perceptions of the mothers and their maternal attachment, and also between the fathers' views about and emotions towards their infants and their social support perceptions. Furthermore, the study found that mothers with higher perceived social support received from friends had a higher maternal attachment, and fathers with higher perceived social support received from Significant Other persons felt lower attachment towards their infants. In line with these findings, the study suggests that conditions specific to mothers with an infant treated in the NICU should be provided, which will enable them to spend time with their friends in the hospital environment. Such specific conditions can increase the social support they receive from their friends, and can, in turn, enhance parents' attachment toward their infants. The study further suggests that further research on this topic should be conducted with different and larger samples to test the findings of the present study.

There are a limited number of studies in Türkiye that demonstrate the attachment bond and perceived social support in the parents with an infant in the NICU, while no studies are comparing both mother and father. To increase the attachment bond in NICU, social support provided by friends should be increased. Appropriate conditions in which the parents can spend time with their friends in the hospital should be provided.

Ethics Committee Approval: The ethical approval (Approval Number: 77082166-604, Date: 15.12.2015) was obtained from the Gazi University Ethical Committee, and written permission was also obtained from the hospital where the study was conducted.

Informed Consent: The study was carried out after written consent was obtained from the study subjects.

Peer-review: Externally peer-reviewed.

Author Contributions: Concept – C.U.A., Ş.Y.S.; Design – C.U.A., ŞY.S.; Supervision – Ş.Y.S.; Resources – C.U.A., Ş.Y.S.; Materials – C.U.A., Ş.Y.S.; Data Collection and/or Processing – C.U.A.; Analysis and/or Interpretation – C.U.A., Ş.Y.S.; Literature Review – C.U.A., Ş.Y.S.; Writing – C.U.A., Ş.Y.S.; Critical Review – Ş.Y.S.

Declaration of Interests: The authors have no conflict of interest to declare.

Funding: The authors declared that this study has received no financial support.

References

1. Bowlby J. Attachment and loss, vol. *1*. 2nd ed. New York: Basic Books. 2012:135-236.
2. Bağrıyanık BÇ, Yıldız D, Fidancı BE, Pekyiğit A. Healthy parent-infant bonding. *Eurasian J Health Sci*. 2020;*3*(2):40-47.
3. Yıldız D. Counselling needs and interventions of mothers about infant care during postpartum period. *Gülhane Med J*. 2008;*50*(4):294-298.
4. İşler A. The role of neonatal nurses in initiating the mother-infant relationship in premature infants. *Perinat J*. 2007;*15*(1):1-6.
5. Çalışır HZ, Karaçam F, Akgül Kurnaz D. Validity and reliability of the Turkish version of the postpartum parenting behavior scale. *J Anatolia Nursiing Health Sci*. 2009;*12*(1):2-4.
6. Kesebir S, Özdoğan KS, Üstündağ MF. Attachment and psychopathology. *Curr Approaches Psychiatry*. 2011;*3*(2):321-342.
7. Kavlak O, Şirin A. Anne ve babaya ait bağlanma ve hemşirenin rolü. *J Ege Univ Nurs Fac*. 2007;*23*(2):183-194.
8. Korja R, Latva R, Lehtonen L. The effects of pre-term birth on mother-infant interaction and attachment during the infant's first two years. *Acta Obstet Gynecol Scand*. 2012;*91*(2):164-173. [CrossRef]
9. Manav G, Yıldırım F. Perception of term and preterm babies by their mothers. *Cumhuriyet Med J*. 2010;*32*(2):149-157.
10. Okanlı A, Tortumluoğlu G, Kırpınar Ş. The relationship between pregnant women perceived social support from family and problem-solving skills. *Anatol J Psychiatry*. 2003;*4*:98-105.
11. Timur EE, Zincir S, Reeder H, BS. Social support and symtoms of postpartum depression among new mothers in Eastern Türkiye. *J Obstet Gynaecol Resience*. 2008;*34*(4):585-593. [CrossRef]
12. Alan H, Ege E. Influence of social support on maternal-infant attachment in Turkish society. *J Anatolia Nurs Health Sci*. 2013;*16*(4):34-239.
13. Mermer G, Bilge A, Yücel Ü, Çeber E. Evaluation of perceived social support levels in pregnancy and postpartum periods. *J Psychiatr Nurs*. 2010;*1*(2):71-76.
14. Mercer RT, Ferketich SL. Predictors of parental attachment during early parenthood. *J Adv Nurs*. 1990;*15*(3):268-280. [CrossRef]
15. Kinsey CB, Baptiste-Roberts K, Zhu J, Kjerulff KH. Birthrelated, psychosocial, and emotional corre-lates of positive maternal-infant bonding in a cohort of first-time mothers. *Midwifery*. 2014;*30*(5):e188-e194. [CrossRef]
16. Şen S, Kavlak O. Investigation of attachment of grandmother–mother-baby (MSc. thesis). İzmir: Ege Üniversity, Institute of Health Sciences; 2009.
17. Kavlak O, Şirin A. The Turkish version of maternal attachment inventory. *J Human Sci*. 2009;*6*(1):188-202.
18. Güleç D, Kavlak O. The study of reliability and validity of paternal-infant attachment scale in Turkish society. *Int J Hum Sci*. 2013;*10*(2):170-181.
19. Müller ME. A Questionnaire to measure mother-to-infant attachment. *J Nurs Meas*. 1994;*2*(2):129-141. [CrossRef]

20. Zimet GD, Dahlem NW, Zimet SG, Farley GK. The multidimensional scale of perceived social support. *J Pers Assess*. 1988;*52*(1):30-41. [CrossRef]
21. Eker D, Arkar H, Yaldız H. The study of reliability and validity of paternal-infant attachment scale in Turkish society. *Turk J Psychiatry*. 2001;*12*(1): 17-25.
22. Soysal AŞ, Bodur Ş, İşeri E, Şenol S. Attachment process in infancy: a review. *Klin Psikiyatr*. 2005;*8*(2):88-99.
23. Mutlu C, Yorbık O, Tanju I, Çelikel F, Sezer R. Association of prenatal, natal, and postnatal factors with maternal attachment. *Anatol J Psychiatry*. 2015;*16*(6):442-450. [CrossRef]
24. Hergüner S, Çiçek E, Annagür A, Hergüner A, Örs R. Association of delivery type with postpartum depression, perceived social support and maternal attachment. *J Psychiatry Neurol Sci*. 2014;*27*(1):15-20. [CrossRef]
25. Shin H, Kim YH. Maternal attachment Inventory: psychometric evaluation of the Korean version. *J Adv Nurs*. 2007;*59*(3):299-307. [CrossRef]
26. Engin N, Ayyıldız T. The investigation of mother-baby attachment based on maternal perception and some variables. *J Adnan Menderes Univ Health Sci Fac*. 2021;*5*(3):583-596. [CrossRef]
27. Eren Balcı M, Geçgil E. *Maternal Infant Attachment and Related Factors in Mothers Stay in NICU of Premature Infant* (Master's thesis). Konya: Necmettin Erbakan University, Institute of Health Sciences; 2018.
28. Brown G, Mcbride B, Shin N, Bost K. Parenting predictors of father- child attachment security: interactive effects of father involvement and fathering quality. *Fathering*. 2007;*5*(3):197-219. [CrossRef]
29. Flouri E, Buchanan A. The role of father involvement in children's later mental health. *J Adolesc*. 2003;*26*(1):63-78. [CrossRef]
30. Sevil U, Özkan S. Fathers functional status during pregnancy and the early postnatal period. *Midwifery*. 2009;*25*(6):665-672. [CrossRef]
31. Woodworth S, Belsky J, Keith C. The determinants of fathering during the child second year and third years of life: a developmental analysis. *J Marriage Fam*. 1996;*58*(3):679-692. [CrossRef]
32. Condon J, Corkindale C, Boyce P, Gamble E. A longitudinal study of father-to-infant attachment: antecedents and correlates. *J Reprod Infant Psychol*. 2013;*31*(1):15-30. [CrossRef]
33. Düdükcü TF, Taş AF. Paternal-infant attachment and determination of factors affecting attachment. *Arch Health Sci Res*. 2020;*7*(1):43-49. [CrossRef]
34. Kartal AY, Erişen B. Fathers' attachment to their infants between 6-12 months of age and related factors. *Mehmet Akif Ersoy University Journal Health Science Institute*. 2020;*8*(2):44-49. [CrossRef]
35. Kılan S, Özpınar S. Father-baby attachment and influencing factors; Manisa case International Refereed Academic Journal of Sports. *Health Med Sci*. 2020;*35*:1-15. [CrossRef]
36. Türkçüer N, Özkan S. *The Effect of Father-Baby Attachment on the Functional Status in the Postpartum Period* (Master's thesis). Denizli: Pamukkale University, Health Sciences Faculty; 2020.
37. Öztürk H, Şirin A. Doğum yapan annelerde algılanan sosyal destek faktörlerinin ve bunlara etki eden faktörlerin incelenmesi. *Ege Univ Hemşirelik Yüksek Okulu Derg*. 2000;*16*:31-40.
38. Yun-Yu C, Hsiu-Hung C, Chan TF, Yeh CH, Yu-Lai C. Prenatal predictors for father–infant attachment after childbirth. *J Clin Nurs*. 2011;*21*(11-12):1577-1583. [CrossRef]
39. Veríssimo M, Santos AJ, Vaughn BE, Torres N, Monteiro L, Santos O. Quality of attachment to father and mother and number of reciprocal friends. *Early Child Dev Care*. 2011;*181*(1):27-38. [CrossRef]
40. Özdemir K, Başkaya Y, İdare A. Annelerin maternal bağlanma düzeyleri ile algıladıkları sosyal destek arasındaki ilişkinin değerlendirilmesi. *Jinekol-Obstet Neonatoloji Tıp Derg*. 2021;*18*(1):638-642. [CrossRef]
41. Yeşilçinar İ, Şahin E, Nergis Özçam N. Assessment of prenatal attachment and perceived social support among pregnant women living in south-east of Türkiye: cross-sectional study. *Turk Klin J Nurs Sci*. 2021;*13*(3):516-525. [CrossRef]
42. Bilgin Z, Alpar ŞE. The relationship between maternal attachment perception of women's maternal role. *J Health Sci Prof*. 2018;*5*(1):6-15.
43. Ertekin Pınar Ş, Polat Ş. The relationship between perceived social support in postpartum period and post-traumatic stress and maternal-infant attachment. *Mersin Univ J Health Sci*. 2019;*12*(3):448-456. [CrossRef]
44. Cebeci SA, Aydemir Ç, Göka E. The prevalance of depressive symptom levels in puerperal period: relationship with obstetric risk factors, anxiety levels and social support. *Kriz Derg*. 2002;*10*(1):11-18.
45. Metin A, Pasinlioğlu T. *Examination of the Relationship between Perceived Social Support and Prenatal Self Assessment in Pregnant* (PhD thesis). Erzurum: Atatürk Üniversity, Institute of Health Sciences; 2014.
46. Buist A, Morse CA, Durkin S. Men's adjustment to fatherhood: implications for obstetric health care. *J Obstet Gynecol Neonatal Nurs*. 2003;*32*(2):172-180. [CrossRef]