The Relationship Between Maternal Attachment, Perceived Social Support and Breast-Feeding Sufficiency

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ABSTRACT
Objective: To determine the relationship between maternal attachment, perceived social support and breast-feeding sufficiency.
Study Design: Descriptive correlational design.
Place and Duration of Study: A state hospital and two family health centers in Sakarya, Turkey, between June to December 2011.
Methodology: The sample was 122 voluntary mothers who had healthy babies of 1 - 2 months old. The data were collected by a Personal Information Form, Maternal Attachment Inventory (MAI), Multidimensional Scale of Perceived Social Support (MSPSS) and Breast-feeding Self-Efficacy Scale-Short Form (BSES-SF). The data collected were analysed by percentage distribution, mean square, independent sample t-test, Mann-Whitney U, Kruskall-Wallis and Pearson correlation.
Results: The mean age of the mothers was 25.01 ± 2.2 years, and 48.4% of them were primary school graduates. BSES-SF was 61.02 ± 8.44 (16 - 70), MAI was 99.07 ± 7.19 (56 - 100) and MSPSS was 66.40 ± 13.58 (37 - 84). There was a positive, medium level, significant relationship between the total scores of BSES-SF and MAI (r=0.370, p < 0.001). There was a positive, medium level, significant relationship between the total score of BSES-SF and the score from family subdimension of MSPSS (r=0.255, p < 0.01). There was a positive, medium level, significant relationship between the total score of MAI and the total score of family subdimension of MSPSS (r=0.339, p < 0.001).
Conclusion: Successful maternal attachment and familial support positively affected the breast-feeding sufficiency of the mother.

INTRODUCTION
Maternal attachment, which is one of the important factors in a child's healthy growth and development, is a unique relationship.1,2 Mother's loving attachment to her child, the sooner it begins, will contribute to the baby develop a basic sense of trust and have a healthy future.1-3 Nurses and midwives have an important role in mother and baby bonding. It is important to find out the positive and negative factors which affect the attachment process and to give support to the families on this matter.3 Environmental support, especially from the family, is the leading factor that positively affects the mother and baby attachment.4

Social support is highly important for the success of breast-feeding. It can be provided in many ways, both by lay people and health professionals. Support from the baby's father through active participation in the breast-feeding decision, together with a positive attitude and knowledge about breast-feeding benefits, have been shown to enhance breast-feeding.5
Breast-feeding is the normal way of providing young infants with the nutrients they need for healthy growth and development. Mother's milk is the most appropriate food for infants. There is no other food to replace it.6 Maternal breast-feeding self-efficacy is a mother's perceived ability to breast-feed her infant and has been shown to predict breast-feeding duration and exclusivity rates among women in the immediate postpartum period.7 Breast-feeding Self-Efficacy (BFSE) supports breast-feeding initiation and duration. Mother's intention and her breast-feeding are reported to affect sense of motherhood,4,8 and the attachment between mother and baby in positive way.9,10

This study aimed to determine the maternal attachment, perceived social support and breast-feeding self-sufficiency in the mothers who had 1 - 2 month-old babies and to put forward the relationship between these concepts.

METHODOLOGY
The descriptive correlational study was carried out at a State Hospital and two family health centers in Sakarya between June and December 2011. The study sample consisted of all the mothers aged 18 years or above who...
applied to pediatric outpatient clinic at a state hospital and two family health centers in Sakarya province, had term born and healthy babies 1 - 2 months, had communication problem and agreed to participate. The mothers who had premature babies or multiple babies were excluded from the study.

The data were collected through a Personal Information Form which included 10 questions that were prepared by the researchers themselves, Maternal Attachment Inventory (MAI) which measures maternal affectionate attachment, Multidimensional Scale of Perceived Social Support (MSPSS) which measures perceived social support and Breast-feeding Self-Efficacy Scale-Short Form (BSES-SF) which measures breast-feeding confidence.

Personal Information Form included items on age, educational status, economical status, mother’s working status and type of delivery etc.

Maternal Attachment Inventory (MAI) is originally developed by Muller (1994).11 It is used to evaluate maternal attachment to the infant. The scale was translated into Turkish by Kavlak and Sirin (2009) and its validity and reliability were confirmed.12 All items are presented positively. The scale is a 4-point Likert Type scale in which 1 stands for “never”, 2 stands for “sometimes”, 3 stands for “often” and 4 stands for “regularly”. An average score is obtained from the sum of all items. High score is a sign of high maternal attachment. The lowest score is 26, and the highest is 104. The responses for items of MAI scale of the sample group that consists of 122 mothers in the study transferred to the computer, Cronbach's alpha was calculated by SPSS. Cronbach's alpha coefficient in this study was 0.91.

The original version of MSPSS which is developed by Zimet, Dahlem, Zimet ve Farley, (1988) measures the perceived support from family, friends and significant others.12 Its validity and reliability is carried out by Eker and Arkar (1995).13 In order to bring out the concepts of family and significant others, there have been some revisions in the factor structure and validity and reliability studies of Multidimensional Scale of Perceived Social Support by Eker, Arkar and Yaldiz (2001).14 In the scale items, family stands for parents, spouse, children, siblings, and significant others stand for someone except family members or friends such as a date, a fiancée, a relative, a neighbour or a doctor.

MSPSS consists of 12 items and three sub-scales. Each item is scored as 1 (definitely no) - 7 (definitely yes). Each subscale has four items: Family (3,4,8,11), Friends (6,7,9,12) and Significant others (1,2,5,10). The scores of four items in each subscale are summed and thus subscale scores are obtained. All the subscales are summed and by this way total score of the scale is obtained. The high scores represent a high level of perceived social support. The lowest score to get from the scale is 12 and the highest is 84. Alpha reliability coefficient of the scale in the study by Eker, Arkar and Yaldiz (2001). Eker et al. was 0.89.14 Responses between 1(definitely no) and 7 (definitely yes) for each of the 12 items of the MPSS scale of the sample group that consists of 122 mothers in the study were transferred to the computer. Three sub-scale and the total scale Cronbach's alpha was calculated in SPSS program. Cronbach's alpha of family sub-scale of the scale was 0.72, Friends sub-scale 0.88 and Significant others sub-scale were found as 0.95. Cronbach's alpha coefficient in this study was 0.83.

Breast-feeding Self-Efficacy Scale- Short Form (BSES-SF) is a 14-item instrument developed to measure breast-feeding confidence. All items are preceded by the statement "I can always" and are anchored by a 5-point Likert-type scale, with 1=not at all confident and 5=always confident. All items are presented positively and scores are summed to produce a final score ranging from 14 to 70, with higher scores indicating better breast-feeding self-efficacy. Turkish validity and reliability of the scale were made by Tokat, Okumus and Dennis (2010).15 In the same study Cronbach's alpha coefficient for internal consistency was 0.87 antenatally and 0.86 postnatally. Antenatal and postnatal BSES-SF scores were significant predictors of breast-feeding duration and exclusivity at 12 weeks after the birth. The responses for 14 items of BSES-SF scale of the sample group that consists of 122 mothers in the study transferred to the computer, Cronbach's alpha was calculated by SPSS. Cronbach's alpha coefficient in our study was 0.89 as well.

This study was approved by the Ethical Board in Sakarya University and study started after receiving approval from related local authorities. The participating mothers were informed of the purpose of the study and the methods to be used and signed an informed consent statement. The data were collected by face-to-face interviews with the mothers.

Total and subscales of the MAI, MSPSS and BSES-SF were shown as mean ± Standard Deviation (SD) and range (minimum and maximum values) or median and Interquartile Range [IQR=quartile 1 to 3]. The Kolmogorov Smirnov normality test were used for the evaluation, the distribution of the data were normal, before the analysis. Therefore, the independent sample t-test, Mann-Whitney U test and Kruskall-Wallis H test were used to compare the total scores between/ among subgroups of the mothers' sociodemographic characteristics. Pearson's correlation coefficients were calculated to determine the correlations between the scores of MAI, MSPSS, BSES-SF. A p-value < 0.05 was considered statistically significant. Analyses were performed using commercial software (IBM, SPSS statistics 20, SPSS Inc. An IBM Corp., Armonk, NY).
RESULTS

A total of 53.3% (n=65) of the mothers were determined as older than 27 years, 71.4% (n = 84) were primary school graduates and 86.9% (n=106) were unemployed. A total of 66.4% (n=81) of the families have described their economic situation as moderate. A total of 69.7% (n=85) of the mothers were found out to have spontaneous delivery.

When sociodemographic features and the scores from MAI and MSPSS and BSES-SF were compared, there was a significant relationship between economic status ($\chi^2_{KW}=6.263$, p=0.044) and educational status ($\chi^2_{KW}=6.377$, p=0.04) and BSES- SF.

In Table II, total score averages which mothers got from MAI and MSPSS and BSES- SF scales are given. When the correlation between the total scores from these scales was studied, there was a significant medium-level positive correlation between MAI total score and BSES- SF total score while there was no significant correlation between MSPSS total score. However, there was a significant medium-level positive correlation between the score from family subscale of MSPSS.

When the correlation between total scores that mothers got from BSES-SF and MSPSS scales were studied, there was a significant medium-level positive correlation between family sub-scale scores of MSPSS and BSES-SF.

Table I: The comparison between the scale scores and sociodemographic features.

<table>
<thead>
<tr>
<th>Features</th>
<th>MAI</th>
<th>MSPSS</th>
<th>BSES-SF</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Descriptives</td>
<td>Test statistics</td>
<td>Descriptives</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below 27</td>
<td>57 (46.7)</td>
<td>103 [6.5]</td>
<td>z= -0.657</td>
</tr>
<tr>
<td>Above 27</td>
<td>65 (53.3)</td>
<td>102 [8]</td>
<td>z= -0.04</td>
</tr>
<tr>
<td>Educational status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary school graduate</td>
<td>87 (71.4)</td>
<td>103 [8]</td>
<td>$\chi^2_{KW}=2.712$</td>
</tr>
<tr>
<td>High school graduate</td>
<td>25 (20.5)</td>
<td>101 [9]</td>
<td>p=0.258</td>
</tr>
<tr>
<td>Bachelor degree</td>
<td>10 (8.2)</td>
<td>97.5 [16]</td>
<td>66.40±11.72</td>
</tr>
<tr>
<td>Economical status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>4 (3.3)</td>
<td>92.5 [19]</td>
<td>$\chi^2_{KW}=2.759$</td>
</tr>
<tr>
<td>Medium</td>
<td>81 (66.4)</td>
<td>103 [8]</td>
<td>p=0.252</td>
</tr>
<tr>
<td>High</td>
<td>37 (30.3)</td>
<td>101 [7]</td>
<td>67.57±12.14</td>
</tr>
<tr>
<td>Mother's working status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>16 (13.1)</td>
<td>99.5 [12.5]</td>
<td>U=684</td>
</tr>
<tr>
<td>No</td>
<td>106 (86.9)</td>
<td>103[8]</td>
<td>p=0.199</td>
</tr>
<tr>
<td>Type of delivery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spontaneous delivery</td>
<td>85 (69.7)</td>
<td>103 [8]</td>
<td>z= -0.006</td>
</tr>
<tr>
<td>Cesarean</td>
<td>37 (30.3)</td>
<td>102 [8]</td>
<td>p=0.995</td>
</tr>
</tbody>
</table>

Table II: The descriptive statistics of MAI, MSPSS and BSES-SF scores and correlations between same scores.

<table>
<thead>
<tr>
<th>Descriptives</th>
<th>Postpartum breast-feeding self-sufficiency</th>
<th>Maternal attachment scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAI</td>
<td>r= 0.370</td>
<td>p&lt; 0.001</td>
</tr>
<tr>
<td>MSPSS</td>
<td>r= 0.370</td>
<td>p&lt; 0.001</td>
</tr>
<tr>
<td>Family</td>
<td>r= 0.255</td>
<td>p&lt; 0.01</td>
</tr>
<tr>
<td>Friends</td>
<td>r= 0.035</td>
<td>p= 0.866</td>
</tr>
<tr>
<td>Significant other</td>
<td>r= -0.17</td>
<td>p= 0.156</td>
</tr>
<tr>
<td>BSES-SF</td>
<td>r= 0.370</td>
<td>p&lt; 0.001</td>
</tr>
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</table>

DISCUSSION

Breast-feeding self-efficacy has been shown to be a robust predictor of breast-feeding duration and pattern, and developing interventions based on this theory will help us meet the nation’s breast-feeding goals. It is seen that there is a significant medium-level positive correlation between the mothers’ BSES- SF total scores and MAI total scores. In the studies, it is expressed that breast-feeding and intention of breast-feeding are among the most essential factors that affect the attachment period positively.

The better support the mother receives from members of her own network, the better is her ability to cope with breast-feeding. Women’s experience of support from their partners is well known to be important for breast-feeding. Duration of breast-feeding was correlated with time spent together with the partner after delivery in primiparas, which may reflect the couple’s closeness.
and confidence in their relationship.\textsuperscript{5} Breast-feeding self-efficacy and social support have a theoretical relationship based on Bandura's Social Cognitive Theory.\textsuperscript{19} A mother's support system is an essential part of her decision to breast-feed. This support system includes the baby's father family members, the health care professionals and others.\textsuperscript{6,20} In this study, it is seen that there is a significant medium-level positive correlation between the total BSES-SF scores of mothers and MSPSS family sub-scale scores. In the study by Reeves \textit{et al.} it is expressed that mothers get support from their husbands first, and then from their mothers about breast-feeding.\textsuperscript{21} In the study by Parkinson, Russell-Bennett and Previte, it is found out that personal social support is significantly effective on breast-feeding self-sufficiency and breast-feeding behaviour.\textsuperscript{22} Ekstrom \textit{et al.} emphasizes the importance of grandparents support in increasing the duration of breast-feeding. In the study by Handayani \textit{et al.}, it is detected that social support, knowledge, attitude, and self-efficacy are potentially to influence breast-feeding practice.\textsuperscript{5}

Social support was very strongly correlated to maternal self-esteem.\textsuperscript{23} In studies, it is pointed out that mothers who received more emotional and physical support from the baby's father and the mother's immediate family had significantly higher self-esteem.\textsuperscript{24} This inherently has a positive effect on mother-baby attachment and mother's efficacy in breast-feeding. In this study, when MAI scale scores of the mothers are compared with MSPSS total scale scores, it is seen that MAI and MSPSS family sub-scale scores have a significant medium-level positive correlation. Alan and Ege, (2013)'s study indicated that as mean MSPSS scores increase, mean MAI scores also increase positively.\textsuperscript{25} Therefore, nurses and midwives should be aware of risk factors affecting maternal attachment negatively in postpartum period and provide a healthy postpartum period for mothers and infants alike by taking essential measures in time.

During the process of taking a motherhood role, which evolves in time and binds the baby and the mother, familial and environmental support will both help the mother adopt this role easily and affect breast-feeding efficacy positively.

This data is obtained from a sole city in Türkiye, so it cannot be generalized. There should be further studies on different cultures using expanded samples. It is suggested that comparative studies be performed with multiparous and primiparous mothers.

**CONCLUSION**

Maternal attachment is a unique and special relationship which has an important role in the child's healthy growth and development. Attachment process starts in the prepartum period, and the minutes immediately after the birth are important for the mother, baby and the family in that they could adapt in this new situation and make up a special bonding. Healthy bonding and family support have a positive effect on the baby's feeding with breast-milk which is a perfect food for it. In this study, it is found out that maternal attachment, breast-feeding self-sufficiency and familial support all affect each other in a positive way.

**REFERENCES**

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