Original Article

The Effect of Postpartum Violence against Mothers on Mother-Infant Bonding

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Abstract

Purpose: The purpose of this study was carried out to determine the effects of intimate partner violence on postpartum mother-infant bonding levels.

Methodology: A total of 200 mothers (4-6 weeks) who were admitted to obstetrics, gynecology and pediatric outpatient clinics of a Training and Research hospital that are located in Turkey's Eastern Anatolia Regions participated in this descriptive study. Data were collected in 2015/ 2016.

Results: Mothers who were ignored, scolded, abused, scared, forced to sexual intercourse, and sexually humiliated by their partners received lower mean scores in MIBS than those who did not have exposure to these maltreatments (p<0.05). Additionally, those who planned their pregnancy, those who were satisfied with their baby's sex, those who breastfed their baby within the first 30 minutes after delivery, and those who had couple-initiated marriage received higher mean scores in the scale.

Conclusions: Intimate partner violence (IPV) in postpartum period negatively affects mother-infant bonding. Prevention of violence in this period is vital for the health of the mother, the baby and the community. There is a need for further action to detect and prevent this type of violence. From the start of pregnancy, parents should be trained on how to get used to the postpartum period and display positive parenting behaviors.

Key words: Intimate partner violence, mother-infant bonding, postpartum violence, postpartum period nursing

Introductıon

Postpartum is a period when a new family order is set up due to joining of a new member and when parents experience changes in their feelings and relationships in the process of transition to parenthood (Bicking Kinsey, Baptiste-Roberts, Zhu, & Kjerulff, 2014). This period can be both a positive period for the family and a period of experiencing crisis (Deave, Johnson, & Ingram, 2008). The first postpartum days are difficult for mothers who have to adapt to their infants, postpartum ailments, the new order in the family and the changes in their bodily images. The process of a mother's developing loving bonds with her baby as a result of a satisfactory interaction between her and her baby is referred to as 'maternal attachment' (Tietz, Zietlow, & Reck, 2014). Maternal attachment begins shortly before birth and continues to intensify during the postpartum months (Klaus, Kennel, & Klaus, 1995). Attachment of a mother to her baby with love is one of the most important components of healthy growth and development of the baby (Cınar & Ozturk, 2014)

Studies have specified some factors positively affecting the mother-infant bonding. They include the pregnancy being a planned and wanted one, mother and infant sharing the same

room in the postpartum period, a kangaroo care being given and breastfeeding having been started in the first half an hour, the infant being healthy, the mother being knowledgeable about child care, the mother adopting a motherhood role, the mother having had supportive attachment relationship with her own mother during her childhood, the socioeconomic status of the family being adequate and the mother being able to receive social support from her loved ones in coping with the problems she faces (Shin, Park, & Kim, 2006; Baker & McGrath, 2011; Dodwell, 2010; Kim et al., 2011; Johnson, 2013). Father's support to child care and good relations and marital satisfaction between parents are also among the factors affecting mother-infant attachment positively. (Gharaibeh & Hamlan, 2011; Durualp, Kaytez & Girgin Aykanat, 2017; Kivijarvia, Raiha, Virtanen, Lertola, & Riha, 2004).

The factors affecting mother-infant bonding negatively have been specified as the mother being stressful, strained or depressive, or suffering pain. (Bicking Kinsey, Baptiste-Roberts, Zhu, & Kjerulff, 2014; Edhborg, Nasreen, & Kabir, 2011; Zlotnick, Capezza, & Parker, 2011; Muzik et al., 2013). The difficulties experienced in the postpartum period may raise conflicts in the family and increase the possibility of domestic violence (Saito, Ceedy, Cooke, & Chaboyer, 2012; Adenisa, Oyugbo, Oladokun, & Olubukola, 2011; Islam, Broidy, Baird & Mazerolle, 2017). Intimate partner violence (IPV) is a worldwide public health concern and a chronic stressor that predominantly affects women of reproductive age (Beydoun, Al-Sahab, Beydoun, & Tamin, 2010). The Centers for Disease Control and Prevention defines intimate partner violence as ''physical violence, sexual violence, threats of physical/sexual violence, and psychological/emotional abuse perpetrated by a current or former spouse, common-law spouse, non-marital dating partners, or boyfriends/girl friends of the same or opposite sex'' (Chang et al., 2005). Physical violence is often the focus of research, despite the fact that psychological or emotional violence is more common, and has been shown to have as detrimental an impact on physical and mental health as physical violence. Psychological violence showed a strong association with postnatal depression, even in the absence of physical or sexual violence. (Ludermir, Lewis, Valongueiro, de Aravjo, & Araya, 2010). A study made with mothers in their

postpartum periods in Bangladesh states that the type and time of the violence experienced are also important in the extent to which intimate partner violence affects psychological health (Islam, Broidy, Baird & Mazerolle, 2017).

Violence experienced in the postpartum period may affect mother-infant bonding negatively because studies have shown that women who are exposed to violence in their postpartum periods go into depression more (Beydoun, Al-Sahab, Beydoun, & Tamim, 2010; Kothari et al., 2016; Janssen, Heaman, Urquia, O'Campo, & Thiessen, 2012; Devries et al., 2013; Tsai, Tomlinson, Comulada, & Rotheram-Borus, 2016; Islam, Broidy, Baird & Mazerolle, 2017; Orun, Yalcın, & Mutlu, 2013) and women in depression exhibit poorer mother-infant bonding (Edhborg, Nasreen, & Kabir, 2011; Zlotnick, Capezza, & Parker, 2011; Muzik et al., 2013). Therefore, this study was carried out to determine the effects of IPV on postpartum mother-infant bonding levels.

Answers to the following questions were sought in the study:

1.   How is the mother-infant bonding in mothers who are exposed to violence in their postpartum periods?

2.   What are the factors affecting the mother-infant bonding in mothers who are exposed to violence in their postpartum periods?

Materıal and Methods

Study design

In this study, we employed a cross-sectional, comparative research design. Before starting the survey, no identity information was requested from mothers, and they were given an explanation about the importance of interview confidentiality, taking into consideration the questions on personal privacy. A separate interview room was set apart from the outpatient clinic room, in order for the mothers not to be exposed to any influence when responding to survey questions. A message of "Do Not Disturb" was attached to the interview room door to prevent others' entrance. The mothers were asked to read and respond all questions by themselves, without any intervention of the researchers. The researcher stayed with mothers in the room. The purpose of the study was explained, and all mothers completed the questionnaire in approximately 25 minutes. The mothers were asked to consider only the postnatal process while filling out the questionnaire

Participants and setting

The research population was who attended Erzincan Training and Research Hospital (Erzincan, Turkey). The sample was purposive among mothers who met the inclusion criteria for the research: 4-6 weeks postpartum period, understand and speak Turkish, aged between 18 and 44 years and who delivered a healthy baby who did not require extensive postnatal care at at both hospitals.

Data collection and instruments

The data were collected by the researchers between October 2015 and January 2016. A total of 200 mothers were collected. Volunteers who participated in the study that referred to the Gynecology and Obstetrics Clinic, and those who met the research criteria were included in the study between the date Training and Research s mentioned.

Personal Information Form

A form of 46 questions was used in the survey to directly question mothers' socio-demographic characteristics (age, education level, working status, income level and so on) and obstetric histories as well as physical, emotional, economic and sexual violence they experienced in the postpartum period. The researchers utilized the literature to create this form (Perrelli, Zambaldi, Cantilino, & Sougey, 2014; Kavlak, & Şirin, 2009; Alhusen, Hayat, & Gross, 2013). 'Yes' or 'No' questions, which could be easily answered by mothers, were asked to determine IPV. The mothers were asked to consider only their postpartum period while responding to the survey questions.

Maternal Attachment Inventory (MAI)

This scale was developed by Mary E. Muller in 1994 to measure maternal feelings and behaviors. Kavlak & Şirin (2009) adapted the scale into Turkish culture. This 26-item scale is a 4-point Likert-type scale ranging from "always" to "never".

An overall score is calculated as the sum of the scores received from all scale items. The lowest and highest scores in the scale are 26 and 104, respectively. A higher score indicates a higher mother-infant bonding level (Muller, 1994; Muller, 1996). MAI is applied after the first four weeks of the postpartum period. Therefore, the mothers into 4-6 weeks of their postpartum period participated in this study.

Data analysis

We analyzed data using SPSS version 20.0. Descriptive statistics are presented in the form of numbers, mean, standard deviations (SD), percentage, minimum and maximum values. The relationship of participants' socio-demographic characteristics and health histories with their mother-infant bonding levels were analyzed with a $\chi 2$-test. Normal distribution was determined by Shapiro–Wilk test. Mann-Whitney U test for comparison of binary variables of scores. Kruskall Wallis test for multiple group comparisons were used. Mann-Whitney U test was used as a further analysis in multiple group comparisons Spearman's correlation analysis was used for relationship analyses. In this study, Cronbach's alpha value of the scale was found to be 0.95.

Ethical consideration

Ethics committee approval was gained from the Erzincan University Ethics Board (approval no: 10/2). Verbal and written consent indicating their voluntary participation was obtained from the women who agreed to participate in the study after they had received information about the purpose of the study.

Results

Sample characteristics

The mean age of the mothers was 26.71 ± 4.58 years with a range of 17-40. The mean age of their partners was 30.78 ± 4.39 years with a range of 20-45. 24.5% and 23% of the mothers were primary and high school graduates, respectively. 24% of their partners were primary school graduates. 84% of the mothers benefited from social security and 72.5% had a "moderate" income level.

Among the mothers; 50.5% experienced a natural delivery in their last birth, 86.5% planned the pregnancy, 78% were trained on the postpartum period (87.9% of the trained mothers received this training from a health professional), and 51.5% had postpartum problems mostly including breast problems (69.2%). The mean number of pregnancies of the mothers was 2.37 ± 1.42 with a range of 1-9, and the mean number of their living children was 2.08 ± 1.06 with a range of 1-6.

Table 1. Comparison of the Mean MIBS Scores Based on Demographic Characteristics of Puerperants.

		n	Mean	S.D.	Test Value
Education level	Literate	22	54.41	16.82	x^2_{KW}=44.620[a] p=**0.000**
	Primary school graduate	49	86.67	14.26	
	Secondary school graduate	36	91.72	6.62	
	High school graduate	46	90.35	7.92	
	Associate Degree	12	93.17	5.94	
	University graduate	35	91.97	4.84	
Employment status	Employed	94	91.26	5.41	U=4054.000[b] p=**0.023**
	Not Employed	106	81.71	19.48	
Working Field	Agriculture	5	87.80	9.98	x^2_{KW}=1.134[a] p=0.769
	Industry	9	90.33	4.82	
	Service	47	92.06	5.46	
	Public officer	31	90.94	4.70	
The reason for being unemployed	Being a housewife	51	76.39	22.94	x^2_{KW}=2.200[a] p=0.532
	Having a small child	29	86.62	14.16	
	No partner permission	24	88.54	9.17	
	No training/education	7	82.86	23.09	
	Being a student	1	97.00	.	
Whether she has her own or a joint property	Yes	44	91.77	5.22	U=2749.500[b] p=**0.044**
	No	156	84.62	16.89	
Having own income	Yes	96	91.25	5.36	U=3981.000[b] p=**0.018**
	No	103	81.41	19.68	
Revenue expenditure status	Those who can decide to spend it by themselves	13	93.23	4.46	U=274.000[b] p=0.144
	Those who have to give some of it to their family	57	90.68	5.23	
Possibility of getting money in case of an emergency	Yes	57	91.53	9.07	x^2_{KW}=16.907[a] p=**0.000**
	No	124	86.26	14.51	
	Does not know	19	69.79	23.45	

[a] Chi-Square analysis and [b] Mann- Whitey U test were used for statistical analysis

Table 2. Comparison of the Mean MIBS Scores Based on Demographic Characteristics of Women's husband.

		n	Mean	S.D.	Test Value
Husband education level	Literate	16	46.75	10.22	x^2_{KW}=50.157 [a] p=**0.000**
	Primary school graduate	48	84.92	14.73	
	Secondary school graduate	41	89.71	9.65	
	High school graduate	33	93.42	6.59	
	Associate Degree	8	89.88	5.91	
	University graduate	54	91.39	4.82	
Husband occupation	Not working	26	59.35	21.40	x^2_{KW}=36.306 [a] p=**0.000**
	Public Officer	58	91.84	5.06	
	Worker	86	88.40	11.64	
	Self-employed	30	92.20	4.61	
Place where lived the longest	City center	98	90.98	7.98	x^2_{KW}=14.188 [a] p=**0.001**
	County	70	79.99	19.05	
	Village	32	85.13	18.77	
Family type	Nuclear family	164	89.08	11.38	U=1803.000 [b] p=**0.000**
	Extended family	36	73.06	22.96	
Social Security	Yes	168	91.14	6.96	U=705.000 [b] p=**0.000**
	No	32	60.22	20.74	
Income Status	Well	35	93.26	5.56	x^2_{KW}=27.408 [a] p=**0.000**
	Medium	145	88.02	12.22	
	Poor	20	60.60	22.07	

[a] Chi-Square analysis and [b] Mann- Whitey U test were used for statistical analysis

Table 3. Comparison Of The Mean MIBS Scores According To Postpartum Period Features.

		n	Mean	S.D.	Test Value
Being satisfied with the baby's sex	Yes	169	89.24	11.51	U=1241.500 [b] p=**0.000**
	No	30	69.10	22.40	
The first time to hold the baby after delivery	Within the first 30 minutes	152	87.17	14.13	U=3301.000 [b] p=0.320
	Within 31st minute or later	48	83.10	18.67	
The first time to breastfeed the baby after delivery	Within the first 30 minutes	138	88.66	12.22	U=3527.000 [b] p=**0.047**
	Within 31st minute or later	62	80.71	19.82	
Whether the partner wanted the pregnancy	Yes	176	86.60	15.17	U=1774.000 [b] p=0.203
	No	24	83.25	16.97	
Whether the baby stayed in an incubator after delivery	Yes	42	83.52	18.23	U=3174.500 [b] p=0.667
	No	158	86.91	14.52	
Whether the baby had any postnatal health problem	Yes	41	83.66	18.23	U=3213.000 [b] p=0.888
	No	159	86.85	14.56	
Marriage decision	Family-initiated marriages	73	80.08	20.52	U=3643.000 [b] p=**0.012**
	Couple-initiated marriages	127	89.71	9.96	

Mann- Whitey U test was used for statistical analysis

Table 4. Comparison of Mean Maternal Attachment Inventory Scores of Mothers with Respect to Characteristics of Their Relationship with Their Partners

		n	**Mean**	**S.D.**	**Test Value**
Relationship with partner	Good	77	91.00	10.52	x^2_{KW}=23.624 [a]
	Moderate	116	85.17	14.97	p=**0.000**
	Bad	7	50.29	18.39	
Whether there are times being afraid of the partner	Yes	96	81.39	19.18	U=3894.000 [b]
	No	104	90.63	8.75	p=**0.007**
Whether the husband slaps, pushes her or pulls her hair	Yes	45	80.13	20.85	U=2894.500 [b]
	No	155	87.95	12.96	p=0.082
Whether the husband threatens her with items such as a knife or gun	Yes	13	64.92	24.11	U=533.500 [b]
	No	187	87.67	13.49	p=**0.001**
Whether the husband prevents her from working in the postpartum period	Yes	83	88.76	10.34	U=4714.000 [b]
	No	117	84.38	17.96	p=0.725
Whether the husband gives money for her basic expenses	Yes	57	73.16	21.46	U=2033.500 [b]
	No	143	91.39	7.40	p=**0.000**
Whether the husband neglects / ignores her feelings and emotions	Yes	118	82.06	18.08	U=3287,000 [b]
	No	82	92.15	6.99	p=**0,000**
Whether the husband scolds her in front of others	Yes	63	76.84	20.86	U=2505.500 [b]
	No	137	90.50	9.44	p=**0.000**
Whether the husband curses or insults her	Yes	70	77.40	20.62	U=2761.500 [b]
	No	130	90.93	8.57	p=**0.000**
Whether the husband scares or oppresses her	Yes	75	78.75	20.64	U=3319.000 [b]
	No	125	90.66	8.49	p=**0.001**
Whether the husband forces her to sexual intercourse when she does not want to.	Yes	61	76.57	20.31	U=2364.000 [b]
	No	139	90.42	10.16	p=**0.000**
Whether the husband imposes sexually degrading treatment on her	Yes	40	68.15	21.50	U=1238.000 [b]
	No	160	90.71	8.98	p=**0.000**

[a] Chi-Square analysis and [b] Mann- Whitey U test were used for statistical analysis

The mean MAI scores varied significantly based on the mothers education levels (p <0.05). The mean score of the literate mothers was found to be significantly lower than the mean scores of the mothers in all other education levels. The mean MAI scores varied significantly based on the mothers employment status (p <0.05). The mean score of the working mothers was found to be higher than the mean scores of the unemployed mothers The mean MAI scores also varied significantly based on whether the mothers had their own or joint property and whether they earned their own income (p<0.05). Those who had their own or joint property and those who earned their own income received higher mean scores on the scale (Table 1).

The mean score of the mothers with an illiterate partner was found to be significantly lower than the mean scores of the mothers with partners in all other education levels. The mean MAI scores of the mothers varied significantly based on their partners' occupations and the places where they lived the longest (p<0.05). The mean score of the mothers whose partners did not work was found

to be significantly lower than the mean scores of the mothers in all other relevant groups. The mean score of the mothers who lived in a city center was found to be significantly higher than the mean scores of the mothers who lived in county and village. The mean MAI scores of the mothers varied significantly based on their family type and social security status (p<0.05). The mean scores of the mothers who lived in a nuclear family and those who had social security were found to be higher than the mean scores of the mothers in other relevant groups. The mean score of the mothers with high income status was found to be higher than the mean scores of the mothers with medium and poor income levels, while the mean score of those with medium income level was found to be higher than the mean score of those with poor income level (Table 2).

The mean MAI scores varied significantly based on mothers' status of being satisfied with the baby's sex, the times of breastfeeding the baby after delivery, and the marriage decision type (p<0.05). The mothers who were satisfied with their baby's sex, the mothers who breastfed their baby within the first 30 minutes after delivery, and the mothers who had couple-initiated marriage were found to receive higher means scores in the scale. The MAI scores did not vary significantly based on their first time to hold the baby after delivery, whether the partner wanted the pregnancy, whether the baby stayed in an incubator after delivery, and whether the baby had any postnatal health problem (p>0.05) (Table 3).

The mean maternal attachment inventory scores change significantly depending on the level of relationship with the partner (p<0,05). An advanced analysis found that those who had a high level of relationship with their partners had higher mean scale scores than those who had moderate and low levels of relationship and those who had a moderate level of relationship had higher mean scale scores than those who had low level of relationship. Other than these, mothers who feared their partners, who were threatened with a knife/weapon by them, who were not given money for their basic needs and those whose feelings were neglected, who were scolded, cursed, scared, forced to have intercourse and imposed sexually degrading acts by their partners had higher mean scores (p<0,05). However, the mean scores did not change with respect to slapping, pushing and hair

pulling or prevention from work (p>0,05). (Table 4).

Discussion

This study aimed at testing the hypothesis that the maternal attachments of the mothers who suffer violence from their partners in their postpartum periods are low and investigating postpartum violence and maternal attachment with respect to some variables. It was found in the study that all kinds of violence experienced in the postpartum period affected maternal attachment negatively. Another study similar to this one found that mothers who did not suffer violence from their partners in the postpartum period had better maternal attachments (Durualp, Kaytez & Girgin Aykanat, 2017). Other studies have also shown that mothers who establish positive relationships with their partners had better maternal attachment behaviors (Gharaibeh, & Hamlon, 2011; Kivijarvia, Raiha, Virtanen, Lertola, & Riha, 2004). Violence leads to impairment of family relations and replaces love, respect and confidence, which constitute the emotional foundation of a family, with feelings of hate, anxiety and fear. Violence harms an individual greatly both physically and spiritually (Rogers & Deboer, 2001). The social and spiritual changes involved in having a baby, conflicts in marriage and exposure to violence may result in psychological problems in the mother, and as a result, the mother-infant bonding may be affected negatively.

Mothers who themselves and whose partners both have low education level were found to have poorer maternal attachments in the study. Education is important for parents to read better the behavioral hints their baby convey to them and to improve their qualification on baby caring skills. Education is also an important factor enabling mothers to feel more confident about baby care and hence to build more positive interaction with their babies (Thoyre, Park, Pados, & Hubbard, 2013).

The maternal attachment scores of the mothers who did not have social security, whose family income was less than their expenses and who themselves and their partners did not have a job had lower maternal attachment scores in the study. It was found in another similar study that mothers whose family incomes were more than their expenses had significantly higher maternal attachment scores (Durualp, Kaytez & Girgin Aykanat, 2017). Evaluation of social and

financial support sources of parents plays an important role to achieve a successful parent-child relationship (Fowlie & McHaffie, 2004). Parents whose basic needs such as food, shelter, transportation and social support have not been met have been observed to experience difficulties in harmonizing with their babies (Shin, Park & Kim, 2006). Having a new baby affects financial responsibilities and needs. Mothers with low income level may struggle more to purchase the materials they need for their babies and this may influence their bonding negatively.

It was found in the study that the maternal attachment scores of the mothers whose infant was born in the desired sex were higher. We think that having a baby in the desired sex is important in terms of bonding for mothers as persons who communicate with the baby most. Since mothers who have an infant in the undesired sex will have difficulty in accepting the baby, they may experience psychological problems. We think such a situation will affect their marriage and their relations with their partners.

It was found in the study that those who got married with their husbands after fraternizing with them had higher maternal attachment scores. Women who had a prearranged marriage did not have any chance of choosing their husbands. Couples who get married after fraternizing, on the other hand, decide on marriage consciously out of love and desire. We think that as a result of this, couples who got married after fraternizing support each other more in the postpartum period and the probability of experiencing violence decreases.

It was found in the study that mothers who breastfed their babies in the first 30 minutes had higher maternal attachment scores. The physical contact and loving interactions that occur during breastfeeding improve the emotional tie between the mother and the baby (Kim et al. 2011). Mother-baby bonding becomes stronger and stronger with each breastfeeding. Owing to these interactions, the interest of the mother towards her baby starts to emerge and the baby also exhibits positive behaviors to the mother (Kennell, & McGrath, 2005).

Study limitations

While evaluating the results of this study, it should be taken into consideration that probability sampling method was not used in selection of the participants and the study was conducted with patient relatives coming to only two hospital. The sample size could be considered as small; however, the statistical power of the study was found to be enough to interpret the data obtained in the study.

Conclusıon

According to the study result, the factors negatively affecting mother-baby bonding include intimate partner violence experienced in the postpartum period, the mother's and her partner's low level of education, absence of social security, family income being less than expenses and the mother and/or her partner being unemployed. According to this result, it can be said that if there is a problem in the economic status of the family, the probability the family members would treat each other badly increases. Conversely, the factors positively affecting mother-baby bonding include the baby having been born in the desired sex, the mother having fraternized with her husband before marriage and the mother having breastfed her baby within the first 30 minutes.

To prevent violence before it is experienced in the postpartum period, healthcare professionals should develop interventions and prepare families to adapt to the period from prenatal to postpartum physically, psychologically and socially. It is quite important for spouses to get to know each other well after marriage before they decide to have a child so that they can adapt to the postpartum period and harmonize with the newly born baby. Healthcare professionals and nurses should use their educational and consultancy roles to protect the health of mothers and their babies from the negative effects of violence. According to another result of this study, health professionals can enhance mother-baby bonding by helping mothers to embrace, have physical contact with and breastfeed their babies within the first 30 minutes.

Acknowledgments

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