Investigating the Relationship Between Mother-Child Bonding and Maternal Mental Health

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Received 2017 May 24; Revised 2017 December 08; Accepted 2018 February 14.

Abstract

Background: Mother-child bonding is rooted in the affective relationship between mother and child that is shaped during pregnancy and leads to the mental growth of infants.

Objectives: This study was conducted to determine the relationship between mother-child bonding and maternal mental health in Ilam.

Methods: In this descriptive-analytical study, 300 mothers in Ilam were selected using a two-stage cluster sampling method. The demographic characteristics questionnaire, the mother-infant bonding scale, Spielberger anxiety inventory, and Edinburgh postnatal depression scale constituted the data collection instruments in this study, which were completed in the eighth to tenth postnatal week. Data were analyzed in SPSS via descriptive statistics (means and standard deviations) and inferential tests (t tests and ANOVA).

Results: The results of this study revealed that the mean and standard deviation of the obtained mother-child bonding scores were 38.48 ± 12.86. Weakened mother-child bonding and risk of child abuse comprised the highest and lowest frequencies, respectively. Mother-child bonding had a statistically significant association with mothers’ state anxiety, trait anxiety, and depression, and these variables affected mother-child bonding (P < 0.05).

Conclusions: Considering the relationship between mother-child bonding and maternal mental health, proper screening is required to pursue secondary prevention in pregnant mothers. In addition, it is essential to perform necessary interventions to improve maternal mental health to facilitate better mother-child bonding.

Keywords: Mother-Child Bonding, Stress, Anxiety, Depression, Postpartum

1. Background

Mother-child bonding is rooted in the affective dimension of the mother-infant relationship (1), which is shaped during pregnancy and leads to the mental growth and development of infants (2). Mother-child bonding is influenced by different factors, which are as follow: infant-related factors including delayed birth, breastfeeding, physical problems, and restlessness; parental factors including attachment style, physical ailments, postpartum depression, and social support networks; and maternal mental health problems (3, 4).

Mother-child bonding leads to a mother’s gentleness, warmth, concern, and care about her child’s health and it is characterized by maternal behavior, such as looking at, touching, smiling, and talking with the child (5). In fact, mother-child bonding facilitates children’s mental, affective, and social health (6, 7). However, possible disruptions in the formation of this bond will affect children’s development and result in the appearance of complications, such as psychosocial disorders, avoidant personality disorder, separation anxiety disorder, failure to thrive, criminal activity, and/or borderline IQ (8, 9).

In the postpartum period, mothers experience several physiological and psychological changes, which sometimes lead to mental disorders. These postpartum mental disorders cause difficulties for the baby, the mother, and other family members. Also, postpartum depression can be a threat to the health and safety of the mother, the baby, and other family members (10-12). Indeed, postpartum depression is an important mood disorder that is the cause of 12.5% of hospital admissions in women (13, 14). Various factors, such as the instruments used to assess depression, sample size, and cultural background, affect the prevalence of postpartum depression, but the general

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prevalence of this disorder has been reported to be high in several studies (14, 15). Anxiety is another common postpartum mood disorder, which is experienced by 20% to 15% of young mothers. If this disorder persists, it can exacerbate the risk of postpartum depression (16-18).

The results of several previous studies have shown that maternal postpartum depression has adverse effects on mother-child bonding and relationships (19). Previous research on the effect of depression in pregnant women has been mainly conducted in relation to mothers’ demographic factors or other variables, such as unintended or intended pregnancy and gender of newborns (14), type of delivery (20), impact of anemia on depression (21), gestational diabetes (22), diet (23), and social support (24). Thus, research on the relationship between mother-child bonding and mental health has become more important than ever. Only 2 studies have been performed in Iran on the relationship between mother-child bonding and mental health. In one of these studies, only maternal depression was investigated. Galeshi et al. (2016) assessed maternal depression in Tabriz (25) and Aflakseir and Jamali assessed maternal depression and anxiety in Shiraz (19).

2. Objectives

Given the importance of mother-child bonding and the essential role of mental health in maternal health and considering the fact that few studies have been conducted in this field, the present study was conducted to determine the relationship between mother-child bonding and maternal mental health in Ilam in 2016.

3. Methods

In the present descriptive-analytical study, those mothers who were referred to the health centers in Ilam in 2016 were assessed. The optimal sample size of 300 participants was selected based on previous studies (25). A two-stage cluster sampling method was implemented in this study. Thus, each of the 10 clinics in Ilam was considered as a cluster, and 30 participants were enrolled in the study from each of the clusters. The inclusion criteria for participation in this study consisted of willingness to participate in the study, being at least literate, and having no history of mental disorder. The exclusion criteria included having a baby who died, the occurrence of an incident such as the death or hospitalization of a family member, and the hospitalization of pregnant women due to delivery complications.

In this study, the data collection instruments included the demographic characteristic questionnaire, the mother-infant bonding scale (19), the Spielberger anxiety inventory (26), and the Edinburgh postnatal depression scale (25-27), which were completed in the eighth to tenth postnatal week. The mother-infant bonding scale was used for the early diagnosis of mother-child bonding disorder; it contains 25 items with 4 factors: rejection and anger (7 items), anxiety about caring for the baby (4 items), weakened bonding (12 items), and risk of abuse (2 items). The Spielberger anxiety inventory consists of 40 questions that measure state anxiety (20 items) and trait anxiety (20 items). The Spielberger anxiety inventory was examined and verified in Galeshi et al.’s study with a Cronbach’s alpha coefficient of 0.91 (26).

4. Results

Table 1 presents the demographic results. As shown in the most most mothers (n = 123, 49.2%) were high school graduates (n = 14, 45.6%). The mean scores and standard deviations for the 4 mother-child bonding factors were as follow: risk of abuse (2.16 ± 1.77), anxiety about caring for the baby (7.02 ± 3.55),
Table 1. Demographic Profile of Pregnant Mothers

| Variable         | No. (%) |
|------------------|---------|
| **Education**    |         |
| Below diploma    | 78 (31.2) |
| High school diploma | 123 (49.2) |
| University       | 49 (19.6) |
| **Occupation**   |         |
| Housewife        | 114 (45.6) |
| Self-employed    | 42 (16.8) |
| Employed         | 63 (25.2) |
| **Income**       |         |
| Less than 1 million | 88 (35.2) |
| Between 1 and 2 million | 89 (35.6) |
| More than 2 million | 31 (12.4) |
| **Number of pregnancies** | | |
| 1                | 98 (5.2) |
| 2                | 103 (5.2) |
| 3 or more        | 49 (5.2) |
| **Number of deliveries** | | |
| 1                | 57 (22.8) |
| 2                | 48 (19.2) |
| 3 or more        | 15 (6) |
| **Spousal support** | | |
| Low              | 66 (26.4) |
| Average          | 105 (42) |
| High             | 79 (31.6) |
| **Support of family members** | | |
| Low              | 13 (5.2) |
| Average          | 13 (5.2) |
| High             | 13 (5.2) |
| **Age, y**       | 27.04 (6.4) |
| **Duration of marriage, y** | 2.78 (1.3) |

Table 2. Mean Scores for Anxiety of Mothers

| Variable | Without | Slight | Moderate | Severe | M ± SD |
|----------|---------|--------|----------|--------|--------|
| Anxiety  |         |        |          |        |        |
| State anxiety | 36 (14.4) | 43 (17.2) | 100 (40) | 71 (28.4) | 46.23 (23.13) |
| Covert anxiety | 74 (29.6) | 55 (22) | 84 (31.6) | 37 (14.8) | 37.52 (21.79) |

5. Discussion

The findings of this research showed that most of the mothers suffered from a mother-infant bonding disorder. A weakened bond was the most prevalent type and the least common disorder was related to the risk of child abuse. In Galeshi et al.’s (2016) study, which was done in Tabriz (25), the highest and lowest levels of disorder pertained to weakened bond and anxiety about caring for the baby, respectively. In Aflakseir and Jamali’s study in Shiraz (19), weakened bond was the most prevalent disorder, which is consistent with the results of this study.

Moreover, most of the mothers in this study were depressed. Similar findings were found in a number of studies: Zangeneh et al.’s study on women in Kermanshah showed that 40.7% of the participants suffered from depression (14); in Ghojazadeh et al.’s study in Tabriz, 34.7% of the participants were depressed (28); Salary et al.’s study in Mashhad indicated that 9.9% of the participants suffered from depression (15); and 23.7% of the participants in Khorramirad et al.’s study in Qom were found to be depressed (13). Various factors, such as living in developing countries and cultural issues, were involved in the high prevalence of depression. In this regard, culture, beliefs, and traditions can affect the incidence of postpartum depression (29, 30).

The results of this study also revealed a statistically significant relationship between depression and mother-child bonding. In other words, with the increase of depression in mothers, mother-child bond disorders will also increase. This finding is consistent with that of the studies conducted by Galeshi et al. in Tabriz (25) and Aflakseir and Jamali in Shiraz (19) in which mother-child bonding disorders increased with the rise of depression in mothers. Bener et al.’s study in Qatar indicated that mothers with depression did not establish a good relationship with their children after childbirth (17). It seems that postpartum depression caused some changes in mother-child bonding, which is consistent with the results of the present study.

One limitation of this study was the employment of self-report measures, which may have affected the accuracy of the data. Therefore, future studies should focus on the diagnosis and clinical examination of depression. An-
other limitation was that father-child bonding was not assessed; thus, future studies should also consider this variable.

References

1. Burgess KB, Marshall PJ, Rubin KH, Fox NA. Infant attachment and temperament as predictors of subsequent externalizing problems and cardiac physiology. J Child Psychol Psychiatry. 2003;44(6):891–3. [PubMed: 12959491].
2. Feldman R, Weller A, Zagoory-Sharon O, Levine A. Evidence for a neuroendocrinological foundation of human affiliation: plasma oxytocin levels across pregnancy and the postpartum period predict mother-infant bonding. Psychol Sci. 2007;18(1):965–70. doi: 10.1111/j.1467-9280.2007.01910.x. [PubMed: 17958701].
3. Hoffenkamp HN, Tooten A, Hall RA, Croon MA, Braeken J, Winkel FW. Bonding experiences in mothers of infants with severe congenital heart disease. Arch Womens Ment Health 2018;11(6):715–20. doi: 10.1007/s00737-018-0180-4. [PubMed: 20859644].
4. Martini J, Knape S, Reesdo-Baum K, Lieb R, WitchenHU. Anxiety disorders before birth and self-perceived distress during pregnancy: associations with maternal depression and obstetric, neonatal, and early childhood outcomes. Early Hum Dev. 2010;86(5):305–10. doi: 10.1016/j.earlhumdev.2010.04.004. [PubMed: 20547016].
5. Mellow T. Postpartum depression and related factors: a 4.5 months study between mode of delivery and postpartum depression. J Fundamentals Ment Health. 2010;34(14):302–11. Persian.
6. Ross LE, McLean LM. Anxiety disorders during pregnancy and the postpartum period: A systematic review. J Clin Psychiatry. 2006;67(8):1285–8. [PubMed: 16965210].
7. Bener A, Gerber LM, Sheikh J. Prevalence of psychiatric disorders and associated risk factors in women during their postpartum period: a major public health problem and global comparison. Int J Womens Health. 2012;4:191–200. doi: 10.2147/IJWH.S29380. [PubMed: 22654244].
8. Marc I, Toureche N, Ernst E, Hodnett ED, Blanchet C, Dodin S, et al. Mind-body interventions during pregnancy for preventing or treating women’s anxiety. Cochrane Database Syst Rev. 2011(7). CD007559. doi:10.1002/14651858.CD007559.pub2. [PubMed: 21735411].
9. Aflakseir A, Jamali S. Relationship between Mother-Child Bonding with Postpartum Depression among a Group of Mothers in Shiraz, Iran. Prevent Care Nurs Midwifery J. 2014;3(2):61–9. Persian.
10. Bahrami N, Bahrami S. Correlation between prenatal depression with delivery type and neonatal anthropometric indicators. Koomesh. 2013;45(1):39–45. Persian.
11. Sahebi S, Fathi Najafi T, Bahri N. Effect of iron deficiency anemia in pregnancy on post partum depression: A review article. Iran J Obstetr Gynecol Infertil. 2016;19(3):12–9. Persian.
12. Nehbandani S, Sahidi F, Kariman N, Nasiri M. Relationship between gestational diabetes and postpartum depression. Iran J Obstetr Gynecol Infertil. 2016;19(7):23–8. Persian.
13. Edalati Fard F, Mirghafoorvand M, Mohammad-Alizadeh-Charandabi S, Farshba Khaledi A, Asghari Jafariabad M. The relationship between diet and postpartum depression in postpartum women in Tabriz. Iran J Obstetr Gynecol Infertil. 2018;28(3):1–10. Persian.
14. Abedian Z, Soltani N, Mokhiber N, Esmaiili H. Relationship between social support and postpartum depression in women with preeclampsia. Iran J Obstetr Gynecol Infertil. 2015;17(136):30–8. Persian.
15. Galeshi M, Mirghafoorvand M, Alizadeh-Sharajabad F, Sanaati F. Predictors of mother-child bonding. J Hayat. 2016;22(1):23–6. Persian.
16. Mahram B. Validity of Spielberger state-trait anxiety inventory (STAI) in Mashhad city. Tehran: Allameh Tabatabaei University; 1993. Persian.
17. Cox JL, Murray D, Chapman G. A controlled study of the onset, duration and prevalence of postnatal depression. Br J Psychiatry. 1993;163(3):27–31. [PubMed: 8358995].
18. Ghajareh M, Mohamadrezaei Z. Study of relationship between some predisposing factors and postpartum depression. J Ardabil Univ Med Sci. 2008;8(1):54–61. Persian.
19. Tannous L, Gigante LP, Fuchs SC, Busnello ED. Postnatal depression in Southern Brazil: prevalence and its demographic and socio-economic determinants. BMC Psychiatry. 2008;8:1. doi:10.1186/1471-244X-8-1. [PubMed: 18173833].
20. Bina R. The impact of cultural factors upon postpartum depression: a literature review. Health Care Women Int. 2008;29(6):568–92. Persian. doi:10.1080/07399330802089149. [PubMed: 18590445].