

Does Mindfulness Reduce Maternal Stress and Promote Mother-Infant Bonding in NICU?

Ashraf Khoramirad

Islamic Azad University

Mojtaba Ansarishahidi (✉ montazeri1475@gmail.com)

Islamic Azad University

Hasan Rezaei Jamaloei

Islamic Azad University

Parvaneh Sadeghi Moghadam

Qom University of Medical Sciences and Health Services

Research article

Keywords: mindfulness, maternal stress, bonding, NICU

Posted Date: January 10th, 2020

DOI: <https://doi.org/10.21203/rs.2.20602/v1>

License: © ⓘ This work is licensed under a Creative Commons Attribution 4.0 International License.

[Read Full License](#)

Abstract

Purpose Having an infant in the neonatal intensive care unit (NICU) is highly stressful and it is implicated in mother-infant bonding. This study investigated the relationship between mothers' dispositional mindfulness and level of stress and quality of bonding.

Methods Self-report measures of Dispositional Mindfulness, Parental Stressor Scale, and the Postpartum Bonding Questionnaire were administered to 120 mothers with newborns admitted in the NICUs in three hospitals in Qom city in Iran. The data analysis was carried out by using a hierarchical multiple regression.

Results Mean score of stress, bonding and mindfulness were 114.29 ± 27.33 , 67.77 ± 5.38 , and 126.27 ± 22.39 respectively. There was a significant inverse relationship between total mindfulness score and mother's parental stress. Also, high scores of stress were associated with greater impairment in bonding. Observing and acting with awareness led to better mother-to-infant bonding.

Conclusions Improvements in mindfulness could help mothers to reduce stress and better bonding with their infants.

Introduction

It is well proven that having an infant in the neonatal intensive care unit (NICU) is highly stressful and exposes parents at risk to trauma symptoms (1–3). Parenting stress in NICU is defined as an imbalance between expectations, perceived resources and demands of caregiving (4) and originates not only from uncertainty regarding neonate's baseline condition and prognosis but also from medical problems, because these babies are at greater risk of infection and nutritional problems (5) (6).

Infants in the NICU are usually less accessible to the mother because of the monitor leads, tubes for feeding and breathing and NICU itself experienced as the stressful, noisy and cold environment. In addition, mothers in the NICU are in the postpartum period that is accompanied by hormonal changes, family role changes, new responsibilities, fatigue and sleep problems (6).

Previous studies showed that high level stress experienced by mothers in the NICU is associated with depression, anxiety (7), symptoms of acute stress disorder and posttraumatic stress disorder in them (1–3)

These symptoms usually persist until after the baby is discharged from the hospital (8) and can negatively affect the mother-infant dyad and can cause subsequent problems such as sleep and feeding disorders (7).

Another reason to pay attention to mothers' stress in the NICU is that it interferes with mother-infant bonding (4). Bonding refers to the primary relationship between mother and infant that is characterized by an emotional response to the infant, especially in the first year after childbirth (9). It denotes the

development of parental feelings toward the baby and occurs within the first hours after birth and is reinforced by bodily contact(10).

The quality of the bonding between mother and infant impacts directly on the child's mental health and development. So this communication should be intimate, warm, steady and kindly and providing comfort and pleasure for baby also mum(11).

In the absence of a good attachment to the initial caregiver, babies are not only emotionally cut off from others, but also will preserve the inability to bond with other people around them and this circumstance put the basis at risk of future emotional and behavioral problems(12) (13).

When the infant spends the first few weeks or months in the NICU, the complexities of the ward, the specific clinical care and the individual circumstances and appearance of the infant negatively affects the formation of bonding. In addition, problems caused by parental stress impede parents' adaptation to the neonatal intensive care unit environment and have a long-term impact on the parent-child relationship and reduce their ability to care for the child(14).

According to above mentioned, reducing the levels of mother stress is important not only for improving mother psychological health but also to improve mother- infant bonding and mental and developmental health of baby(4).

One of the psychological features that is nowadays highly interested is mindfulness. Mindfulness is defined as a dispositional (trait) property and as a provisional status of mind that can growth by mindfulness exercises(15). It is "the awareness that become by focusing on the goal in the present moment, and by being non-judgmental to the experience happening moment by moment"(16).

Mindfulness leads to a lasting sense of well-being by simply accepting what is happening and knowing that this experience is also passing and then will have been replaced by new experience(16).

Mindfulness techniques are increasingly incorporated into clinical and therapeutic interventions based on stress reduction (i.e. eating disorders ,obsessive-compulsive disorder, and generalized anxiety)(17) and its usefulness in daily activities as well as the more unusual conditions of stressors or serious illnesses even in pregnancy have been proven(18) (19).

But the answer to this question is still unclear, whether in the mother in the NICU; under the most difficult conditions after childbirth, hormonal changes, pain and fatigue, insomnia, exposure to new parental role and changing family responsibilities, the stressful condition of the baby, and the complexity of NICU environment, is mindfulness still helpful for mother to reduce her stress and make a better bonding with her infant?

Methods

Study Aim

This study investigated the relationship between mothers' dispositional mindfulness and the level of parental stress of mothers with newborns admitted in the NICU and the relationship between mothers' dispositional mindfulness and mother-infant bonding.

Design and participants

A cross-sectional study design was used with anonymous questionnaires that were completed between April 9, 2019 and September 11, 2019. The participants of the study were mothers of the neonates admitted in the NICUs in three governmental, academic hospitals in Qom city in IRAN. Purposeful and sequential sampling was performed until the sample size was completed. Mothers of all infants who met inclusion criteria (birth gestational age < 35 weeks, expected length of stay in NICU at least 10 days, mother Persian-speaking and have not specific illnesses and were not admitted to another ward, having at least one baby meeting in the NICU), and confirmed the informed consent were offered the opportunity to participate.

Ethical approval for this study was obtained from Ethical Committee of Qom University of Medical Sciences, Qom. Iran (IR.MUQ.REC.1398.006).

To obtain data, the researcher (who had no previous contact) approached the mothers at a time when they were visiting but not holding their baby, and when not involved with other NICU person and provided the questionnaires and was available for any explanation.

Instruments

General Demographic and infant clinical data Form: A researcher created infant clinical data collection form (birth gestational age, birth weight, delivery type, apgar scores, diagnoses, length of stay) and parental demographic data form (age, educational level, job, insurance, presence of other children, history of depression/anxiety, perception of support) completed by mother.

Parental Stressor Scale: NICU (PSS:NICU) : Sources of parents' stress were measured by using the Parental Stressor Scale: Neonatal Intensive Care Unit(PSS:NICU, 2002), a well-established self-report survey in which parents rated sources of stress by using a Likert scale (1 = not at all stressful, 5 = extremely stressful) within 3 domains: Infant Behavior and Appearance (17 items), Sights and Sounds (6 items), and Parental Role Alterations (11 items) (20). The higher score in this questionnaire, show the greater experience of stress.

Construct validity of the PSS: NICU has been demonstrated through correlation with measures of state anxiety ($r = 0.46-0.61$, $P < .001$) (21). Internal consistency of the PSS: NICU is reported as α greater than 0.70 for all domain scales and α equal to 0.89 to 0.90 for the entire instrument (20). The validity and reliability of the instrument have been previously confirmed in a study by Hosseini et al in Iran (22) In the present study, the Cronbach's alpha for 30 mothers was reported to be 88%.

Five Facets of Mindfulness Questionnaire (FFMQ): Five Facets of Mindfulness Questionnaire (15) is a 39-item self-report measure based on a factor analytic study of five independently developed mindfulness questionnaires. Analysis of these five mindfulness questionnaires yielded five factors that capture core aspects of mindfulness: (1) observing, (2) describing, (3) acting with awareness, (4) non-judging of inner experience, and (5) non-reacting to inner experience. Items were rated on a 5-point Likert scale ranging from 1 (never or very rarely true) to 5 (very often or always true). The scales may be combined for an overall level of dispositional Mindfulness with a sum score ranging from 39 to 195. Prior work has established that the subscales demonstrate good internal consistency ranging from .75 to .91(15). The Cronbach's alpha for the full scale for this study was 0.84.

The Postpartum Bonding Questionnaire (PBQ): (PBQ) is a 25-item scale reflecting a mother's feelings or attitudes towards her baby (e.g. "I feel close to my baby", "My baby irritates me") (23). Participants rated how often they agreed with these statements on a 6-point Likert scale ranging from always (score=0) to never (score=5) When the statement reflects a negative emotion or attitude, the scoring is reversed, so low scores denoting good bonding. The PBQ has four subscales which reflect impaired bonding (Scale 1) (12 items, ranging from 0 to 60), rejection and anger (Scale 2) (7 items, scores ranging from 0 to 35), anxiety about care (Scale 3) (4 items, scores ranging from 0 to 20) and risk of abuse (Scale 4) (2 items, scores ranging from 0 to 10). Brockington et al. (2001) suggest cut-off scores to identify problematic bonding of 12 for Scale 1, 17 for Scale 2, 10 for Scale 3 and 3 for Scale 4 and for the entire scale 38(23). In previous studies in Iran the validity and reliability of this instrument were reported as acceptable(24,25). In the present study, the Cronbach's alpha for the whole instrument was calculated 0.87, and for the components of impaired bonding 0.63, rejection and anger 0.75, anxiety about care 0.73 and risk of abuse 0.70, respectively.

Data Analyses

Multivariate regression model was used to examine the relationships between variables by moderating the effect of independent variables, Multi collinearity analysis of variance inflation factor was used, all cases had a VIF <2. Residual plots versus predicted values were used to evaluate the regression models. The above analyzes were performed in R 3.6.1 at 95% confidence level. Based on the regression results, variables of maternal age, maternal education, and length of stay in the NICU were estimated as demographic factors related to the graft variable, in order to modify their effect, the relationship between the other variables with the linkage variable was examined further by modifying the effect of these three variables.

Results

The average of Parental Stressor score, FFM score and PB score were estimated 114.29 ± 27.33 , 126.27 ± 22.39 , and 67.77 ± 5.38 respectively (Table1). The mean and standard deviation of the variables are visible in table:1, as can be seen. In the Influential Variables Mother age, Educational level, length of stay has impact on Bonding. Table:2. The table 3 showed the Quantile regression model for effects of

dispositional mindfulness (total and subscale scores), on bonding. The Quantile regression model results of mother stress on Bonding has been shown in table 4. The Quantile regression model results of effects of dispositional mindfulness (total and subscale scores), on mother, stress Provided in table:5.

Discussion

This study adds to our understanding about mother's stress and mother-to-infant bonding in the NICU and the role of the mindfulness in this field. According to the findings of this study the mean score of mothers' stress was 114.95 ± 27.33 , that as expected, indicates high level of perceived stress in mothers with hospitalized infants in the NICU, also findings showed the mindfulness can protect mothers against parental stress in the NICU environment and can facilitate maternal- neonatal bonding, i.e. higher total scores of mindfulness were significantly associated with lower scores in parental stress and higher scores of observing and acting with awareness were significantly associated with lower total scores of bonding dysfunction. Interestingly the effect of acting with awareness still remained after adjusting the impact of influential demographic variables.

In confirmation of our findings Hicks & et al(2018) showed that more levels of dispositional mindfulness were associated with lesser depression symptoms and better prenatal bonding in the sample of expectant parents(26). Yamamoto & et al(2017) also proved in their study that mothers' mindfulness was correlated with their state and trait anxiety negatively(27).

It seems mindfulness features such as acting with awareness which is the tendency to act with the full presence at any moment that is in conflict with action automatically(27), might help mothers to avoid attentional and interpretative processing biases, that can explain why more mindful mothers reported less stress in this study.

furthermore, the mindfulness can increase one's ability to withstand negative and difficult emotional states that cause more stress(28). This cognitive-behavioral approach may reduce the stress of exposure to different parenting needs and may therefore allow mothers to be more relaxed during parenting(27).

Linehan MM(1993) mentioned that mindfulness practices may facilitate mothers' capacity to tolerate chronic and acute stressors and promote awareness while reducing stress related emotions and physiologic responses(29). Other studies showed dispositional mindfulness is related to better emotion regulation ability(30) and greater adult attachment security(31)

In the present study a significant negative relationship between the domains of observing and acting with awareness and bonding remained after adjusting the effects of mother age, mother education level and length of stay in NICU.

In explaining this finding, observing as a feature of the mindfulness that tends to view the situation of herself and the infant objectively, helps the mother to better communicate with the baby in the present experience of motherhood, free of distracting thoughts about interpreting ambiguous and unknown

circumstances of her baby; in addition acting with awareness that means paying attention to one's ongoing behavior tends to diminish automatic behaviors rather than using the information currently available for adaptive self-regulation(28) in fact, when observing and awareness increase, mother's ability to stand back and view conditions without drowning in them improved, as a result, she gets rid of automatic behavior patterns so she is not stressed, but rather be free from these emotions(32) so she creates better bonding with her baby.

In the present study, the total score of mindfulness showed an inverse relationship with total score of bonding, but this relationship was not statistically significant. In explaining this finding, it should be noted that in the present study mindfulness traits were examined rather than using mindfulness exercises. It seems that under stressful conditions in the NICU, mindfulness exercises such as deep conscious breathing, body scan and ... may need to be implemented until the mother take more advantage of the benefits of the mindfulness.

Also, given that the findings indicate a significant inverse relationship between stress from infant behavior and appearance and bonding, it seems that mindfulness helps the mother to build a better relationship and better bonding with her baby by observing the baby's appearance rather than judging its appearance that led to she doesn't be engaging in negative and disturbing thoughts.

In a study by Beddoe(2007) it has been emphasized that integrating mindfulness meditation and yoga into the daily life of pregnant women can improve prenatal attachment by permitting mothers to be more present in the moment and be more attentive to bodily sensations such as the fetus movements(17)

Study limitations:

First Since in the environment of this study due to cultural issues, fathers could not be present in the ward of the NICUs and their communications were limited, the study was done only on mothers. Second the cross-sectional nature of the study limits the conclusions about causal relationships between variables.

Conclusion

Because of the mindfulness is considered as a kind of innate capacity or ability of human, that though can be enhanced through practice and intervention. Improving mindfulness by related interventions could assist mothers to reduce parental stress in the NICUs and bonding better with their infants.

The results of this study highlight the importance of the mindfulness on prenatal bonding and parental stress in the NICUs. Further studies suggested to explore longitudinal and experimental research to assess the effects of improving mindfulness on parental and neonatal outcomes.

Declaration

1. Ethical approval for this study was obtained from Ethical Committee of Qom University of Medical Sciences, Qom. Iran (IR.MUQ.REC.1398.006).
2. Sampling was completely voluntary and excluded if they did not wish to continue participation.
3. All samples were informed about the study before entering the study and entered into the study when completing the informed consent form. The information was retained for confidentiality and used for study purposes only.
4. The results of the study were made available to all participants.
5. All scientific norms were considered for the study.
6. The authors participated in the research as follow:

Dr. Mojtaba Ansarishahidi designing and implementing study and writing articale ,Ashraf Khoramirad data collecting, Dr. Hassan Rezaei statistical analyzing, Dr. parvaneh Sadeghi Moghadam scientific research advising.

7. The cost of personal research is borne by the authors and no financial support has been received from any individual or entity.
8. Researchers acknowledge the respected participants and staff of the research environment.

References

1. Miles MS, Funk SG, Kasper MA. The neonatal intensive care unit environment: sources of stress for parents. *AACN Advanced Critical Care* 1991; 2 (2): 346–354.
2. Shaw RJ, Deblois T, Ikuta L, Ginzburg K, Fleisher B, Koopman C. Acute stress disorder among parents of infants in the neonatal intensive care nursery. *Psychosomatics* 2006; 47 (3): 206–212.
3. Lefkowitz DS, Baxt C, Evans JR. Prevalence and correlates of posttraumatic stress and postpartum depression in parents of infants in the Neonatal Intensive Care Unit (NICU). *Journal of clinical psychology in medical settings* 2010; 17 (3): 230–237.
4. Deater-Deckard K. Parenting stress and child adjustment: Some old hypotheses and new questions. *Clinical psychology: Science and practice* 1998; 5 (3): 314–332.
5. Morgan J, Robinson D, Aldridge J. Parenting stress and externalizing child behaviour. *Child & Family Social Work* 2002; 7 (3): 219–225.
6. Mendelson T, McAfee C, Damian AJ, Brar A, Donohue P, Sibinga E. A mindfulness intervention to reduce maternal distress in neonatal intensive care: a mixed methods pilot study. *Archives of women's mental health* 2018; 21 (6): 791–799.
7. Pierrehumbert B, Nicole A, Muller-Nix C, Forcada-Guex M, Ansermet F. Parental post-traumatic reactions after premature birth: implications for sleeping and eating problems in the infant. *Archives of Disease in Childhood-Fetal and Neonatal Edition* 2003; 88 (5): F400-F404.
8. Kersting A, Dorsch M, Wesselmann U, Lüdorff K, Witthaut J, Ohrmann P, et al. Maternal posttraumatic stress response after the birth of a very low-birth-weight infant. *Journal of psychosomatic research*

- 2004; 57 (5): 473–476.
9. Klaus M. Mother and infant: early emotional ties. *Pediatrics* 1998; 102 (Supplement E1): 1244–1246.
 10. Busse M, Stromgren K, Thorngate L, Thomas KA. Parents' responses to stress in the neonatal intensive care unit. *Critical Care Nurse* 2013; 33 (4): 52–59.
 11. Bowlby J. Una Base Segura: aplicaciones clínicas de la teoría del apego. In: Una base segura: aplicaciones clínicas de la teoría del apego, 1989.
 12. Klaus MH, Kennell JH. Mothers separated from their newborn infants. *Pediatric Clinics of North America* 1970; 17 (4): 1015–1037.
 13. Perry BD. Applying principles of neurodevelopment to clinical work with maltreated and traumatized children: The neurosequential model of therapeutics 2006.
 14. Dudek-Shriber L. Parent stress in the neonatal intensive care unit and the influence of parent and infant characteristics. *American Journal of Occupational Therapy* 2004; 58 (5): 509–520.
 15. Baer RA, Smith GT, Hopkins J, Krietemeyer J, Toney L. Using self-report assessment methods to explore facets of mindfulness. *Assessment* 2006; 13 (1): 27–45.
 16. Kabat-Zinn J. Mindfulness-based interventions in context: past, present, and future. *Clinical psychology: Science and practice* 2003; 10 (2): 144–156.
 17. Beddoe AE. Mindfulness-based yoga during pregnancy: a pilot study examining relationships between stress, anxiety, sleep, and pain. UCSF, 2007.
 18. Grossman P, Niemann L, Schmidt S, Walach H. Mindfulness-based stress reduction and health benefits: A meta-analysis. *Journal of psychosomatic research* 2004; 57 (1): 35–43.
 19. Beddoe AE, Lee KA, Weiss SJ, Powell Kennedy H, Yang C-PP. Effects of mindful yoga on sleep in pregnant women: a pilot study. *Biological research for nursing* 2010; 11 (4): 363–370.
 20. Miles MS, Funk SG, Carlson J. Parental Stressor Scale: neonatal intensive care unit. *Nursing research* 1993.
 21. Franck LS, Cox S, Allen A, Winter I. Measuring neonatal intensive care unit-related parental stress. *Journal of advanced nursing* 2005; 49 (6): 608–615.
 22. Ss H, Baniasadi H, Pouraboli B. Stressors Of Parents Of Hospitalized Preterm Infants: A Study In Neonatal Intensive Care Unit Of Afzalipour Hospital. Kerman, Iran 2016.
 23. Brockington IF, Oates J, George S, Turner D, Vostanis P, Sullivan M, et al. A screening questionnaire for mother-infant bonding disorders. *Archives of women's mental health* 2001; 3 (4): 133–140.
 24. Galeshi M, Mirghafourvand M, Alizadeh-Sharajabad F, Sanaati F. Predictors of mother-child bonding. *Hayat* 2016; 22 (1): 13–26.
 25. Aflakseir A, Jamali S. Relationship between Mother-Child Bonding with Postpartum Depression among a Group of Mothers in Shiraz-Iran. *Preventive Care in Nursing & Midwifery Journal* 2014; 3 (2): 61–69.
 26. Hicks LM, Dayton CJ, Brown S, Muzik M, Raveau H. Mindfulness moderates depression and quality of prenatal attachment in expectant parents. *Mindfulness* 2018; 9 (5): 1604–1614.

27. Yamamoto N, Naruse T, Sakai M, Nagata S. Relationship between maternal mindfulness and anxiety 1 month after childbirth. *Japan Journal of Nursing Science* 2017; 14 (4): 267–276.
28. Brown KW, Ryan RM. The benefits of being present: mindfulness and its role in psychological well-being. *Journal of personality and social psychology* 2003; 84 (4): 822.
29. Linehan MM. *Skills training manual for treating borderline personality disorder*. Guilford Press, 1993.
30. Desrosiers A, Vine V, Klemanski DH, Nolen-Hoeksema S. Mindfulness and emotion regulation in depression and anxiety: common and distinct mechanisms of action. *Depression and anxiety* 2013; 30 (7): 654–661.
31. Goodall K, Trejnowska A, Darling S. The relationship between dispositional mindfulness, attachment security and emotion regulation. *Personality and Individual Differences* 2012; 52 (5): 622–626.
32. Wallace BA, Shapiro SL. Mental balance and well-being: building bridges between Buddhism and Western psychology. *American Psychologist* 2006; 61 (7): 690.

Tables

Table1. The mean and standard deviation of the variables

	Mean	Sd	Min	Max	95% CI for mean
PSS:NICU score	114.95	27.33	48	188	[109.75, 120.15]
Infant Behavior and Appearance	32.14	10.93	14.3	59.4	[30.06, 34.22]
Sights and Sounds	65.03	18.01	23.14	108	[61.6, 68.46]
Parental Role Alterations	23.99	6.65	7	42	[22.71, 25.27]
FFM Score	126.27	22.39	59	181	[125.45, 127.1]
observing	23.92	5.71	10	35	[23.7, 24.13]
describing	26.44	7	10	40	[26.18, 26.7]
acting with awareness	23.74	5.26	8	36	[23.54, 23.93]
non-judging of inner experience	22.08	5.84	2	34	[21.86, 22.29]
non-reacting to inner experience	27.1	7.03	9	39	[26.84, 27.36]
PB Score	67.77	5.38	54	80	[67.25, 68.3]
impaired bonding	52.12	4.50	39	59	[51.69, 52.56]
rejection and anger	30.95	2.63	19	37	[30.7, 31.21]
anxiety about care	13.90	3.00	1	20	[13.61, 14.19]
risk of abuse	11.78	0.85	6	12	[11.7, 11.87]

Table2. Relationship between demographic variables on Bonding

	B	SE	Standard B	t	P-value	95% CI for B
FFMQ Total	-0.016	0.033	-0.061	-0.485	0.630	[-0.08, 0.05]
Mother age	-0.160	0.120	-0.192	-1.340	0.185	[-0.4, 0.08]
Mother job	-0.502	0.687	-0.097	-0.732	0.467	[-1.87, 0.87]
Educational level	1.828	0.860	0.341	2.126	0.037	[0.11, 3.54]
Presence of other children	0.270	0.679	0.063	0.398	0.692	[-1.09, 1.63]
Delivery type	-0.708	1.471	-0.059	-0.481	0.632	[-3.65, 2.23]
Sex of neonate	-1.297	1.576	-0.110	-0.823	0.413	[-4.44, 1.85]
Apghar.(1min)	0.645	0.615	0.188	1.048	0.298	[-0.58, 1.87]
length of stay	-0.036	0.044	-0.127	-0.814	0.419	[-0.12, 0.05]
Mother age	-0.184	0.093	-0.220	-1.984	0.051	[-0.37, 0.001]
Educational level	1.215	0.586	0.227	2.075	0.042	[0.05, 2.38]
length of stay	-0.055	0.031	-0.195	-1.762	0.082	[-0.12, 0.01]

Table3.The Quantile regression model results of effects of dispositional mindfulness (total and subscale scores), on bonding

FFMQ	B	SE	Standard B	t	P-value	95% CI for B
Total	0.014	0.027	0.052	0.529	0.598	[-0.04, 0.07]
Observing	-0.274	0.114	-0.312	-2.402	0.018	[-0.5, -0.05]
Describing	0.054	0.163	0.050	0.333	0.740	[-0.27, 0.38]
Acting With Awareness	0.158	0.135	0.179	1.172	0.244	[-0.11, 0.43]
Non-Judging Of Inner Experience	0.031	0.151	0.027	0.206	0.837	[-0.27, 0.33]
Non-Reacting To Inner Experience	0.129	0.121	0.122	1.064	0.290	[-0.11, 0.37]
Final Model						
Observing	-0.209	0.088	-0.238	-2.380	0.019	[-0.38, -0.03]
Acting With Awareness	0.214	0.088	0.242	2.420	0.017	[0.04, 0.39]

Table4.The Quantile regression model results of mother stress on Bonding

PSS:NICU score	B	SE	Standard B	t	P-value	95% CI for B
Total	-0.057	0.021	-0.251	-2.643	0.009	[-0.1, -0.01]
Infant Behavior And Appearance	-0.087	0.062	-0.153	-1.400	0.165	[-0.21, 0.04]
Sights And Sounds	-0.084	0.042	-0.237	-2.012	0.047	[-0.17, -0.001]
Parental Role Alterations	0.093	0.106	0.101	0.879	0.381	[-0.12, 0.3]
Final Model						
Infant Behavior And Appearance	-0.089	0.034	-0.253	-2.643	0.010	[-0.16, -0.02]

Table5. The Quantile regression model results of effects of dispositional mindfulness (total and subscale scores), on PSS: NICU score

FFMQ	B	SE	Standard B	t	P-value	95% CI for B
Total	-0.519	0.108	-0.425	-4.789	0.0001	[-0.73, -0.3]
Observing	0.286	0.470	0.074	0.610	0.543	[-0.65, 1.22]
Describing	-0.939	0.669	-0.196	-1.403	0.164	[-2.27, 0.39]
Acting With Awareness	-0.776	0.554	-0.199	-1.400	0.165	[-1.88, 0.32]
Non-Judging Of Inner Experience	-0.721	0.622	-0.139	-1.159	0.249	[-1.95, 0.51]
Non-Reacting To Inner Experience	-0.534	0.499	-0.114	-1.070	0.287	[-1.52, 0.46]
Final Model						
Acting With Awareness	-1.649	0.347	-0.422	-4.748	0.0001	[-2.34, -0.96]