



## Original Article

# Emotional closeness in neonatal intensive care units: A qualitative study

✉ Ayşe Gürol,<sup>1</sup> ✉ Kadir Şerafettin Tekgündüz,<sup>2</sup> ✉ Serap Ejder Apay,<sup>3</sup>

✉ Süreyya Özdemir,<sup>4</sup> ✉ Ramazan Güven<sup>5</sup>

<sup>1</sup>Department of Nursing, Erzurum Technical University Faculty of Health Sciences, Erzurum, Turkey

<sup>2</sup>Department of Neonatology, Atatürk University Faculty of Medicine, Erzurum, Turkey

<sup>3</sup>Department of Midwifery, Atatürk University Faculty of Health Science, Erzurum, Turkey

<sup>4</sup>Medical Services and Techniques, Atatürk University Health Services Vocational School, Erzurum, Turkey

<sup>5</sup>Department of Emergency Medicine, Health Science University, Kanuni Sultan Süleyman Training and Research Hospital, İstanbul, Turkey

### Abstract

**Objectives:** The aim of this study was to explore perceptions and experiences of mothers with regard to the barriers and facilitators to emotional closeness and mothers' feelings of emotional closeness when their newborn infants are cared for in neonatal intensive care units.

**Methods:** This study applied a focus group methodology. The study group included a total of nine mothers who were staying in the Mother Room of the neonatal intensive care unit and agreed to participate in the study. For collection of data, a semi-structured emotional closeness form was administered through face-to-face interviews conducted with the participants in a suitable physical environment. A voice-recording device was used during the interviews.

**Results:** In this study, the mothers described the main barrier preventing them from feeling emotionally close to their newborn as the inability to touch and be with their newborn in the units. They defined emotional closeness as the mutual recognition achieved between mother and child through physical closeness. The mothers further emphasized the importance of being face-to-face and having eye contact with their child, and they believed that touching increased maternal feelings of emotional closeness, as it provided the reality that this was their baby. Breastfeeding was another feature highlighted by the mothers as being an activity that made them feel emotionally close to their newborn infants.

**Conclusion:** The findings from this study overall showed that when and how mothers feel emotionally close is grounded in the experiences and conditions that serve to either facilitate or debilitate emotional closeness.

**Keywords:** Emotional closeness; mother; neonatal intensive care unit; nursing; Turkey.

The physical and emotional closeness between a mother and her newborn can be affected in cases where the newborn has a medical condition or disease that requires hospitalization.<sup>[1-3]</sup> The hospital admission process of a newborn infant can be emotionally challenging for mothers when the interaction between the mother and child is interrupted.<sup>[4]</sup> Hospital practices and routines that limit the presence of mothers in the neonatal intensive care unit (NICU) may cause the mother to feel unimportant.<sup>[1,5]</sup> Although nurses and midwives pro-

vide the necessary care to newborn infants in NICUs, mothers still must cope with being separated from their newborn infants, relinquishing their power to make decisions about the care of their newborn infant, and losing sense of their maternal role. This can lead to problems in the physical and/or emotional closeness felt between the mother and newborn infant. Therefore, in these situations mothers must be given support to ensure that they experience adequate interaction with their newborn infants.<sup>[1]</sup>

**Address for correspondence:** Ayşe Gürol, Erzurum Teknik Üniversitesi Sağlık Bilimleri Fakültesi, Hemşirelik Bölümü, Erzurum, Turkey

**Phone:** +90 442 666 25 25 **E-mail:** ayseparlak42@gmail.com **ORCID:** 0000-0002-7408-5428

**Submitted Date:** January 18, 2019 **Accepted Date:** April 13, 2020 **Available Online Date:** December 04, 2020

©Copyright 2020 by Journal of Psychiatric Nursing - Available online at www.phdergi.org



**What is known on this subject?**

- What is known about this subject: Physical and emotional closeness is affected by the conditions governing the physical environment of the newborn infant. The practices and environment of the hospital can pose emotional challenges for mothers when interaction with their child is interrupted.

**What is the contribution of this paper?**

- What the research on this subject needs to focus on: Mothers are always in need of reliable, clear and comprehensible information about their baby's development and health status, and they need opportunities to take part in the basic care activities of their babies and to spend quality time with them.

**What is its contribution to the practice?**

- Recommendations for today: Facilitators and barriers to emotional closeness include socio-economic factors, cultural norms, staff practices, and the relationships between staff and mothers. Considering these factors, nurses in the intensive care unit can perform family-centred care practices to improve the quality of care.

By focusing on mothers' experiences in the NICU, a better understanding of the desired, albeit challenging, aspects of this relationship can be attained.<sup>[6]</sup> In this study, the risks created by the hospital environment and mother-infant separation and the benefits of family-centred care approaches for mother and infant were investigated.<sup>[7]</sup> While insights into how the NICU environment may facilitate or inhibit mother–newborn infant closeness have been reported, to date, there has been a lack of qualitative data on these issues from the perspective of mothers.<sup>[8]</sup> Thus, the aim of this study was to explore perceptions and experiences of mothers in Turkey with regard to the barriers and facilitators to emotional closeness and their feelings of emotional closeness when their newborn infants are receiving care in a NICU.

## Materials and Method

### Design and Setting

A qualitative research method was used in the study, as these types of method are favourable for conducting systematic examinations of the meanings that emerge from individuals' experiences. From among these methods, the phenomenological design was applied, a design used to identify patterns in how people evaluate and perceive the events happening around them.<sup>[9,10]</sup>

### Participants

This study was performed in a level 3 NICU of a tertiary university hospital in eastern Turkey in February of 2017. The population of this study included all the mothers of the newborn infants receiving care in the NICU. In selecting the sample, the mothers who did not have sufficient verbal/written Turkish were excluded. A total of nine mothers took part in the study.

### Data Collection

The data for this study were collected via face-to-face interviews using a semi-structured emotional closeness form, which included questions related to the mothers' experiences of emo-

tional closeness to their newborn infants, such as "the first time they made eye contact with their babies and touched them, the emotions they experience, and their sense of emotional closeness". In the preparation of the interview questions developed by the researchers on the basis of study by Flacking et al. (2016), (2016)<sup>[11]</sup> particular attention was given to making the questions easy to understand and not multidimensional nor leading. A screening of the form was done before finalizing it. The form consists of a total of thirteen questions (Appendix 1), with the focus being on emotional interaction. The questions progress from general to more specific topics (i.e., from "When have felt emotionally close to your newborn infant?" to "What was happening when you first saw your newborn infant?").

Before the study, necessary permission from the academic board and informed consent from the participating mothers were obtained as part of the ethical criteria for the conduct of research studies. The NICU staff was notified about the study in advance, and all mothers were approached by the NICU staff to learn if they would be interested in taking part in the study. The mothers were invited to the examination room on a predetermined date, and their verbal consent was obtained after they were provided information about the study, including the voice recording. The face-to-face interviews were held by appointment in a suitable physical environment where the mothers who volunteered to participate could comfortably express themselves, all session were voice recorded using a voice-recording device. Interview questions were asked to all the mothers in the same tone of voice and with the same words to ensure that the meaning was clear and remained the same for all participants. Interviews were conducted with two researchers to prevent data loss. One of the researchers conducted the interview, while the other observed the interview and took notes. The focus group interviews lasted for approximately one hour and were moderated by a researcher. The names of the participants were removed from all forms to secure the mothers' anonymity.

### Data Analysis

The collected data was analysed using the content analysis method. There are four stages in content analysis: processing the qualitative research data obtained from documents, coding data, finding themes, arranging codes and themes, and defining and interpreting findings.<sup>[12]</sup> In this study, coding was performed based on analysis of the interviews conducted in the first stage, followed by identification of various themes and interpretation of their meanings.

In the process of creating sub-themes according to the data obtained from the research, the researchers read all the transcripts separately and created sub-themes independently of each other. The researchers then came together to discuss their opinions before reaching agreement that the data could be gathered under five themes. The responses were analysed and converted into themes. Direct quotations of the participants' responses are provided in the Results section below.

## Results

After analysis of the content of the research data, themes corresponding to emotional closeness emerged. The five main themes identified as supporting mothers' feelings of emotional closeness were: Physical closeness; Contact with the infant and breastfeeding; Understanding the present and the past; Participation in infant care; and Spending time together as a family.

### 1. Physical Closeness

Mothers described emotional closeness as an embodied recognition of knowing their newborn infants, and recognition as a mother was attained through physical closeness. All the mothers stated that these feelings started when the first saw their newborn infant. The mothers emphasized the importance of being face-to-face and having eye contact.

Mother 1 reported that she saw her daughter for the first time in an incubator and described her feelings as follows.

*"My babies were immediately taken to the intensive care unit after the C-section. I could not see them, and I thought the only problem I had was the operation, which was over. But I truly felt like a mother when I saw my daughter for the first time because I had waited for six years, and I am very happy now."*

The same mother made the following statement, which was found to be quite interesting:

*"When I first went to see my daughter in the intensive care unit, she was sleeping. But when I approached her, she opened her eyes, looked at me and started crying. I was crying too. When she smiled at me, all I could think about was her. It is hard to express my feelings. I feel love and happiness all at the same time."* (Mother 1)

Mother 2 said that when she saw her daughter for the first time in the incubator, she had called her name, and at that very moment the newborn infant opened her eyes and looked at her. She went on to state that she had been greatly affected by this, but she never touched her daughter and could only watch her in the incubator for periods of five minutes at a time.

Mother 3 expressed the following feelings when she saw her newborn infant for the first time:

*"I felt really emotional, and thought she was so tiny and small. I felt sorry that I wasn't able to carry her to full term, and I was also scared. When I saw her in the intensive care unit for the first time, I felt such a strong sense of love for her that I bonded to her even more; I literally felt motherhood and became happy."*

Touching was reported to have increased maternal feelings of emotional closeness, as it provided a reality that this was their newborn infant. Mother 3 stated that when she touched and held her newborn infant, she had loved her more and felt motherhood, and that when the infant smiled at her, it changed her view of life and caused her to feel an even greater attachment to her newborn infant.

Mother 4 stated that she had barely seen her newborn infant when he was hospitalized in the second level. He had usually been asleep throughout those periods. She made eye contact with him and held him for the first time after he was transferred to level I, and the infant understood right away that she was his mother at their first eye contact. He touched her with his hand, smiled at her, and immediately calmed down after being held by her when he cried.

Giving a smile, the mother expressed her feelings about her first encounter with the newborn infant as follows:

*"My baby looked better than I expected. He smiled when he saw me. I felt there was great relief for him when I held him."* (Mother 5)

Mother 6 stated that she was not allowed in when her newborn infant was hospitalized in level three and did not breastfeed him. However, once he was transferred to the second level, she was able to see, hold and breastfeed him. She said that she had been devastated and cried when she saw him for the first time. When she saw her newborn infant for the first time in the secondary level, she said, he immediately understood she was his mother and recognized her; even the nurses said "Look, your baby knows you". She felt a sense of regret and guilt when the newborn infant touched her with his hand while she held him (Mother 6).

*"When I first saw my baby, I became very happy, as I was his mother. I saw him for just one minute while he was hospitalized in an incubator, and I couldn't touch him. I touched him for the first time when he was transferred to level I. He smiled at me when he saw me. I praised God for having him. I was alone when I met him for the first time. I cried when I held him in my arms. He recognized me and smiled."* (Mother 7)

### 2. Contact With the Infant and Breastfeeding

For many of the mothers, the reassurance of the infant's well-being was vital for feeling emotionally close. The mothers described that there was reassurance of their newborn infant's health and wellbeing when the newborn was placed in a cot instead of an incubator, when they heard the newborn cry, when they saw their newborn's arm and leg movements, and when they touched their newborn:

*"I watched my daughter from a distance when the door of the intensive care unit was open. I could see my baby girl for only 2-3 minutes a day when she was hospitalized in the intensive care unit. She started to move when she saw me, and I was happy when I saw her, but she was sick, and I felt desperate, as I couldn't touch her. I felt emotionally close to her the moment I saw her."* (Mother 2)

*"I could see my baby for only 15 minutes a day in the incubator. It was forbidden to touch her in the incubator, so I felt terribly unhappy and desperate. I wanted to touch, smell and hold my baby, but I just couldn't. When I approached the incubator, my baby sensed my presence and immediately opened her eyes and goggled. When I looked at her for the first time, I thanked God that she was my baby."* (Mother 3)

Another mother described her memories as follows:

*"I cried all the time when he was in the intensive care unit. I felt like I was not a mother because I couldn't smell him, and he couldn't smell me. I cried because he didn't know me. When I saw him in the incubator, my heart was racing. I felt sorry for his weakness. His wellness is very important for me. I felt sorry because he was so tiny."* (Mother 7)

The mothers stated that their emotional closeness started when they touched, held and breastfed their newborn infants for the first time.

*"When I first held my baby, I felt an emotional closeness, like love and responsibility. I called her name and talked to her all the time, which increased our communication."* (Mother 3)

*"When I held my baby for the first time in the level I, I was so ready to be a mother. My view of life has changed, and I have become more emotional. My feelings were complicated; I was happy but sometimes scared because my baby was so tiny."* (Mother 9)

Breastfeeding was emphasized by the mothers as an activity that made them feel emotionally close to their newborn infants. However, all the mothers indicated that they could not breastfeed their newborn infants while they were being treated in level II or III, they had to milk themselves and give the milk to the nurses, and their milk would steadily decrease over time. Breastfeeding was experienced as a reciprocal act that constituted an evident link between the mother and her newborn infant:

Mother 1 described her first experience of breastfeeding as follows:

*"I had been craving for motherhood for years. I always asked myself, 'How would I be a mother? How would I breastfeed?' I have been breastfeeding my daughter for 10 days, and I cried when she held onto my breast and my milk came for the first time."* (Mother 1)

Another mother described her experience as follows:

*"I have been breastfeeding my baby for only the last one day. We practice for her to get used to nursing until we both get tired. When I first started breastfeeding, my feelings changed. But now I just want to breastfeed and take care of her more."* (Mother 3)

*"Breastfeeding is much more exciting than touching. My heart was racing when I was finally able to be rejoined with my baby. Breastfeeding is a special bond between the mother and infant. Even though I was milking myself, I felt that my milk was actually coming out and increasing when my baby sucked my breast for the first time."* (Mother 7)

### 3. Understanding the Present and the Past

The mothers described the importance of understanding what was happening in establishing the feeling of being emotionally close. Getting information of their infant's medical status through communication with staff made the mothers feel more confident in their maternal role:

*"My son is with me in level I now. The doctors told us that he needs oxygen continuously and so, we bought an oxygen machine to use at home. I don't know how to use the machine. I am scared of possible problems arising with my baby."* (Mother 8)

Mother 9 stated that she was not informed about the medical condition of her newborn infants, could not talk to the nurses, had lost her appetite and experienced great stress while staying in the Mother's room.

### 4. Participation in the Infant Care

The mothers expressed that they had feelings of pride and joy in providing 'normal' care for their newborn infant. Doing simple and ordinary maternal tasks, like changing diapers and dressing the newborn, made them feel that that the newborn infant was theirs.

One mother described how she felt emotionally close:

*"I was just a mother, in the biological sense, before I saw them, but now I know that they are a piece of me and I a piece of them. I can't imagine living without them."* (Mother 1)

*"When I touched my daughter for the first time, I was trying to dress her with a nurse and cried a lot. I said, she is so tiny, how can I even touch her? How can I dress her? But now I am able to dress her confidently and hold her and lift her up."* (Mother 3)

*"I have been routinely dressing him since he was transferred to the level I. I felt like a mother for the first time when he was brought to me in level I. I know when he is hungry or needs anything else. I actually know him now."* (Mother 7)

### 5. Spending Time Together as a Family

Many of the mothers reported that the presence of family in the unit and spending time with their husbands and the whole family made them feel emotionally close:

*"I feel more comfortable when my husband is with me."* (Mother 3)

*"When my son was brought to me in level I, I told my husband that he must me hungry, as he was crying, and he didn't want our baby to cry. It is fantastic to be parents."* (Mother 7)

Although it is important for parents to be together to help lower the mother's stress and establish emotional closeness, all of the mothers who participated in the study reported that their husbands were not with them while their newborn infants were hospitalized in the NICU because their homes were far from the city centre, where the hospital was located.

## Discussion

### 1. Physical Closeness

In the study, the mothers emphasized the importance of being face-to-face and having eye contact with their newborn to help them feel like a mother. Studies have shown that physical closeness between parents and newborn infants after birth may contribute to the development of attachment, and that

both the parents and the newborn infants play a role in this process.<sup>[13]</sup> A newborn infant is separated from their mother for weeks or months throughout their hospitalization in the NICU. This critical care environment creates a number of difficulties in establishing parent-newborn infant closeness. Mothers desire to have physical contact with their newborn infants throughout this process, and it is particularly important that they can hold and touch them.<sup>[14]</sup>

When a mother sees, touches and starts to interact with her newborn infant, this helps the mother to have a positive perception of them.<sup>[15]</sup> In the study by Öztürk and Saruhan<sup>[16]</sup> involving premature infants, 40.7% of the mothers reported that they saw their infants within postpartum 7 days, and a large majority of them disclosed that they were not able to touch their infants during this period of waiting. It was further reported that the mothers with premature infants were not able to see or hold their infants until much later after giving birth, they struggled to perceive the newborn as their own, and consequently, they developed a negative mother- infant relationship.<sup>[16]</sup> Enabling the mother and infant to spend more time together could positively contribute to the development of the mother's self-confidence, the infant's recovery process and mother- infant attachment.

## 2. Contact With the Infant and Breastfeeding

In the study, it was observed that when the mothers saw their infants in incubators, heard them cry and watched their hand-arm or body movements, they perceived it as a reassurance of their newborn's health. The mothers reported that their emotional closeness started when they touched, held and breastfed their infants for the first time. Breastfeeding should be strongly encouraged as a measure to sustain the health of the infant. In addition, breastfeeding has a number of psychological benefits for mothers, such as establishing a bond with their infants, meeting motherhood expectations, and gaining motherhood identity.<sup>[17]</sup> Breastfeeding increases infant attachment because the mother is in close contact with their infant.<sup>[18]</sup> Early breastfeeding and making as much eye contact as possible during breastfeeding increases oxytocin secretion and strengthens the communication between mother and infant.<sup>[19]</sup>

## 3. Understanding the Present and the Past

In the study, all the mothers stated that they did not have sufficient information about the clinical condition of their infants and were unable to establish communication with healthcare professionals. A case in point would be Mother 8, who expressed fear that she did not have enough knowledge about how to use the nebuliser required for her infant or how to discern changes in the infant. Among mothers, lack of knowledge about the needs of preterm infants is one of the primary reasons for emergency admissions to NICUs after discharge. The knowledge mothers have about the special care of preterm infants is very important for preventing complications in infants.<sup>[20]</sup> Thus, the mother plays an important role in prevent-

ing future chronic diseases and other medical issues in infants. This role also serves to develop the emotional bond between the mother and infant.<sup>[21]</sup> Healthcare professionals should encourage mothers to participate in medical decisions in order to prevent serious complications that may develop in infants in the future and to increase their commitment to and self-confidence about taking responsibility for their infant's care.<sup>[4]</sup>

Ayyıldız Kuzlu et al.,<sup>[22]</sup> indicated in their study that 17.8% of the mothers were not involved in their children's care and treatment, mainly due to the fear of doing something wrong. In another study conducted to determine the difficulties experienced by families of newborn infants hospitalized in NICUs, it was reported that a great majority of the mothers were not involved in their children's care.<sup>[23]</sup> As indicated from these results, mothers' disinclination to participate in some applications could be associated with their lack of knowledge about these applications and their anxiety in performing interventional procedures that could potentially harm their infants.

In their study, Valizadeh, Akbarbeglou and Asad<sup>[24]</sup> observed that when parents heard noise from the monitors or other devices, saw the devices surrounding and/or attached to their infants, or witnessed abnormal breathing patterns, sudden skin colour changes or their infants suffering during medical procedures, they experienced high levels of stress. They further identified separation from their newborn infants and inability to help or protect their newborns during painful procedures as other stress factors.<sup>[25]</sup> At hospitals, parents feel anxious and nervous due to the atmosphere in the NICU, have concerns about their roles as parents, and experience fear regarding the appearance and mental state of their infants and potential serious consequences, like death. In general, giving information to parents and allowing them to participate as team members in decision-making processes concerning their newborn infants would help decrease their level of anxiety. Mitigating the effects caused by the duration of separation between the mother and infant and providing regular updates about the condition of the infant are necessary for reducing the fears of parents.<sup>[4]</sup>

## 4. Participation in the Infant Care

In the study, the mothers expressed anxieties about how to clothe their infants and how to understand their needs when they touched them for the first time. It is known that mothers in NICUs experience stress due to being separated from their infants and being unable to feed them, spend time with them or relieve their pain. Studies have indicated that applying a family-centred approach in NICUs will reduce that stress.<sup>[4]</sup> Montirosso et al.<sup>[25]</sup> reported in their study that the stress levels of parents decreased when they were able to see their infants' behaviours. Throughout the period of time infants are in NICUs, their parents are unable to touch, hold, or see their infants and are powerless to meet their needs. Due to all these deprivations, there might be a delay in establishing the mother- infant relationship, and mothers may experience difficulties taking care of their infants and adopting the role of parenthood.<sup>[16]</sup>

## 5. Spending Time Together as a Family

Although the time parents have together is important in terms of reducing the levels of stress experienced by mothers and developing emotional closeness, all of the mothers who participated in the study reported that their husbands were not with them throughout the time the newborn infant was in the NICU, as their homes were far from the city centre, where the hospital was located. The presence and involvement of parents in infant care at the hospital enable parents to know their infants and to develop self-confidence concerning care.<sup>[26]</sup> Studies have shown that many fathers interact with their children in their effort to provide support and reassurance to the mothers.<sup>[27]</sup>

## Conclusion

When examining the results of the study, it is quite clear that emotional closeness starts and grows stronger at the point of physical contact and/or closeness. The factors that this study has found to affect emotional closeness, independent of the socioeconomic status, are similar to those reported in the literature.<sup>[5,8,11]</sup> Both physical and emotional parent-infant closeness should be facilitated, being sure to keep in mind socio-economic, political and cultural factors. To better understand the problems related to establishing closeness, the barriers and facilitators for closeness need to be further explored, and new strategies aimed at establishing closeness need to be developed. A corporate culture where all limitations about parents in the unit are removed and parents play a larger role in care practices should be created. In other words, this corporate culture should support the formation of strong parent-newborn infant relationships by meeting the physical and emotional needs of both parents and infants.

Physical contact and breastfeeding are the most important determinants of building strong emotional closeness. The mothers defined NICUs and their surroundings as an environment that separates them from their infants physically, and the devices and equipment around their infants were reported by the mothers to be the biggest barrier to establishing closeness with their infants. Physical separation was also shown to negatively affect the emotional satisfaction and pleasure of the mothers. It was determined that the mothers had a lack of knowledge about the physical health of their newborn infants and did not have sufficient knowledge about how to perform care practices for them. Healthcare professionals working in NICUs need to be aware of the importance of supporting parents and getting them involved in care practices. A first step would be introducing the parents to the devices in the unit and informing them about physical changes that might be observed in their infants.

## Acknowledgements

This study was undertaken as part of the SCENE (Separation and Closeness Experiences in the Neonatal Environment - [http://www.utu.fi/en/sites/scene/research-projects/emotional\\_closeness/Pages/home.aspx](http://www.utu.fi/en/sites/scene/research-projects/emotional_closeness/Pages/home.aspx)) portfolio of activities network.

**Funding information:** The authors declare no receipt of any financial support for the research, authorship, and/or publication of this article.

**Conflict of interest:** There are no relevant conflicts of interest to disclose.

**Peer-review:** Externally peer-reviewed.

**Authorship contributions:** Concept – A.G. Design – A.G., S.E.A.; Supervision – A.G.; Fundings - A.G., K.Ş.T., S.E.A., S.Ö., R.G.; Materials – A.G., K.Ş.T., S.Ö.; Data collection &/or processing – A.G., K.Ş.T., S.Ö.; Analysis and/or interpretation – A.G., K.Ş.T.; Literature search – S.E.A., R.G.; Writing – S.E.A., R.G. Critical review – A.G., K.Ş.T., S.E.A., S.Ö., R.G.

## References

1. Phuma-Ngaiyaye E, Kalembo FW. Supporting mothers to bond with their newborn babies: Strategies used in a neonatal intensive care unit at a tertiary hospital in Malawi. *International Journal of Nursing Sciences* 2016;3:362–6.
2. Niela-Vilén H, Feeley N, Axelin A. Hospital routines promote parent-infant closeness and cause separation in the birthing unit in the first 2 hours after birth: A pilot study. *Birth* 2017;44:167–72.
3. Raiskila S, Axelin A, Toome L, Caballero S, Tandberg BS, Montiroso R, et al. Parents' presence and parent-infant closeness in 11 neonatal intensive care units in six European countries vary between and within the countries. *Acta Paediatr* 2017;106:878–88.
4. Heidari H, Hasanpour M, Fooladi M. The experiences of parents with infants in Neonatal Intensive Care Unit. *Iran J Nurs Midwifery Res* 2013;18:208–13.
5. Dykes F, Thomson G, Gardner C, Hall Moran V, Flacking R. Perceptions of European medical staff on the facilitators and barriers to physical closeness between parents and infants in neonatal units. *Acta Paediatr* 2016;105:1039–46.
6. Fegran L, Helseth S. The parent-nurse relationship in the neonatal intensive care unit context—closeness and emotional involvement. *Scand J Caring Sci* 2009;23:667–73.
7. Boztepe H. Pediatri Hemşireliğinde Aile Merkezli Bakım. *Türkiye Klinikleri J Nurs Sci* 2009;1:88–93.
8. Flacking R, Lehtonen L, Thomson G, Axelin A, Ahlqvist S, Moran VH, et al; Separation and Closeness Experiences in the Neonatal Environment (SCENE) group. Closeness and separation in neonatal intensive care. *Acta Paediatr* 2012;101:1032–7.
9. Creswell JW. *Qualitative inquiry & research design choosing among five approaches*. Sage Publications; 2007.
10. Özdemir M. Nitel Veri Analizi: Sosyal Bilimlerde Yöntembilim Sorunsalı Üzerine Bir Çalışma. *Eskişehir Osmangazi Üniversitesi Sosyal Bilimler Dergisi* 2010;11:323–43.
11. Flacking R, Thomson G, Axelin A. Pathways to emotional closeness in neonatal units - a cross-national qualitative study. *BMC Pregnancy Childbirth* 2016;16:170.
12. Yıldırım A, Şimşek H. *Sosyal bilimlerde nitel araştırma yöntemleri*. 9th ed. Ankara: Seçkin Yayıncılık; 2013.
13. Pennestri MH, Gaudreau H, Bouvette-Turcot AA, Moss E, Le-

- compte V, Atkinson L, et al; Mavan Research Team. Attachment disorganization among children in Neonatal Intensive Care Unit: Preliminary results. *Early Hum Dev* 2015;91:601–6.
14. Feeley N, Genest C, Niela-Vilén H, Charbonneau L, Axelin A. Parents and nurses balancing parent-infant closeness and separation: a qualitative study of NICU nurses' perceptions. *BMC Pediatr* 2016;16:134.
  15. Arslan FT, Turgut R. Prematüre bebek annelerinin evdeki bakım gereksinimleri ve bakım verme yeterliliklerini algılama durumları. *Dokuz Eylül Üniversitesi Hemşirelik Fakültesi Elektronik Dergisi* 2013;6:119–24.
  16. Öztürk R, Saruhan A. 1-4 aylık prematüre bebeği hastanede tedavi gören annelerin depresyon ve maternal bağlanma ilişkisinin incelenmesi. *Hemşirelikte Araştırma Geliştirme Dergisi* 2013;1:32–47.
  17. Watkinson M, Murray C, Simpson J. Maternal experiences of embodied emotional sensations during breast feeding: An Interpretative Phenomenological Analysis. *Midwifery* 2016;36:53–60.
  18. Güleşen A, Yıldız D. Erken postpartum dönemde anne bebek bağlanmasının kanıta dayalı uygulamalar ile incelenmesi. *TAF Preventive Medicine Bulletin* 2013;12:177–82.
  19. Köse D, Çınar N, Altınkaynak S. Yenidoğanın anne ve baba ile bağlanma süreci. *STED* 2013;22:239–45.
  20. Spittle AJ, Anderson PJ, Lee KJ, Ferretti C, Eeles A, Orton J, et al. Preventive care at home for very preterm infants improves infant and caregiver outcomes at 2 years. *Pediatrics* 2010;126:e171–8.
  21. Subhashini L, Radha MS, Baby GK. Mothers Perception of Health Care Needs of Preterm Neonates in Intensive Care Unit. *J Clin Biomed Sci* 2016;6:59–62.
  22. Ayyıldız Kuzlu T, Kalıncı N, Köse Topan A. Üniversite hastanesinde çocuklara verilen bakımın aile merkezli bakım yönünden incelenmesi. *Fırat Sağlık Hizmetleri Dergisi* 2011;6:1–17.
  23. Konukbay D, Arslan F. Yenidoğan yoğun bakım ünitesinde yatan yenidoğan ailelerinin yaşadıkları güçlüklerin belirlenmesi. *Anadolu Hemşirelik ve Sağlık Bilimleri Dergisi* 2011;14:16–22.
  24. Valizadeh L, Akbarbeglou M, Asad EM. Stressors affecting mothers with hospitalized premature newborn in NICUs of three teaching hospitals in tabriz. *Med J Tabriz Univ Med Sci* 2009;31:1–2.
  25. Montiroso R, Provenzi L, Calciolari G, Borgatti R; NEO-ACQUA Study Group. Measuring maternal stress and perceived support in 25 Italian NICUs. *Acta Paediatr* 2012;101:136–42.
  26. Toivonen M, Lehtonen L, Löyttyniemi E, Axelin A. Effects of single-family rooms on nurse-parent and nurse-infant interaction in neonatal intensive care unit. *Early Hum Dev* 2017;106:107:59–62.
  27. Guillaume S, Michelin N, Amrani E, Benier B, Durrmeyer X, Les-cure S, et al. Parents' expectations of staff in the early bonding process with their premature babies in the intensive care setting: a qualitative multicenter study with 60 parents. *BMC Pediatr* 2013;13:18.

## APPENDIX 1

### Emotional Closeness Form

This was written by :  Mother  Father

Mother's/Father's date of birth : .....

Baby's date of birth : .....

How old was your baby at delivery (Weeks and days)? : .....

Today's date : .....

Baby's mode of delivery (vaginal/C-section/emergency C-section/vacuum/forceps) : .....

Post-natal age of infant : .....

Gender of infant : .....

Is the infant singleton or twin mate? :  Yes  No

Which number child (i.e. first, second, third, etc.) : .....

Can you please describe or record, in your own words, the times, if any, you have felt emotionally close to your infant (e.g. feelings of love, connection, engagement etc.) and include information on what this felt like, why you felt this way, what was happening at the time and who was involved.

### Please answer and complete the following questions with your own statements.

1. Have you ever been face to face with your infant and made eye contact with him/her? How did you feel? What was your infant's reaction at that moment? Can you describe that moment, when and where you made an eye contact for the first time, and who was with you?
2. How did you feel when you touched her/him and when she/he smiled at you? Have your feelings changed since the moment?
3. What was your infant's reaction when you touched and held her/him for the first time?
4. Do you breastfeed? Do you remember when you breastfed for the first time? When was it? How did you feel?
5. What do you think about breastfeeding and breast milk, and do you feel it is sufficient for your infant or not?
6. Were you able to see your infant in the intensive care unit every day? How long could she/he stay with you?
7. Did your infant feel you inside of the incubator? Did she/he know that you were her/his mother?
8. How did you feel the moment she/he looked at you?
9. How did you feel on the first day when she/he was taken out of the intensive care unit and brought to you in the room? How did you feel when you looked at her/his body and hands, and dressed and touched her/him?
10. When did you start feeling love, responsibility, contact and emotional closeness towards your infant?
11. How is your infant today? Can you understand the medical changes on her/him? How is your communication with medical personnel?
12. How have your feelings changed with each passing day?
13. Do you spend time in the room and the clinic as a family with your husband? How do you feel about it?