

Title: Emotional Closeness Among NICU Fathers: A Qualitative Descriptive Study

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Conflict of Interest

The authors declare no conflict of interest.

List of acronyms and abbreviations

NICU : Neonatal intensive care unit

SFR : Single-family rooms

Abstract

Background: The unique perspective of fathers with an infant in the neonatal unit on the development of emotional closeness toward their infant is not well understood. **The purpose** of this study is to explore experiences and instances of emotional closeness from the perspective of fathers as well as factors influencing emotional closeness during an infant's hospitalization in the neonatal unit.

Methods: This qualitative descriptive study employed one-on-one interviews with fathers recruited in a level 3 neonatal unit. The interview data were analyzed with thematic analysis, and emerging themes and subthemes were organized according to dimensional analysis.

Results: Eight fathers agreed to take part in this study. According to the participants, emotional closeness was a complex process composed of multiple dimensions. More specifically, emotional closeness was a difficult-to-describe, mixed, and growing feeling influenced by multiple factors such as the environment, co-parenting, and the father-infant relationship. It occurred in the contexts of presence and separation in the neonatal unit and was part of the development of the father-infant relationship.

Implications for Practice: The results presented in this paper are important for NICU nurses who support fathers in the development of their fathering role. By knowing more about the process and dimensions of emotional closeness, nurses can direct their interventions with fathers to enhance emotional closeness and better understand their experience.

Implications for Research: No previous study has addressed emotional closeness as a complex process with multiple components like the current study. These findings contribute to our understanding of the process of emotional closeness for fathers.

Keywords: fathers, emotional closeness, NICU, preterm infant, dimensions

Background

Having a preterm infant in the neonatal intensive care unit (NICU) is a unique experience for fathers.¹⁻⁴ They must adapt to their role as a father in the context of their infant's hospitalization. They often feel anxious, overwhelmed, and afraid of the unknown.¹ They sometimes feel as if caregivers consider them the second parent.^{1,3} Staff tend to contact the mother first, in person or on the phone, even though fathers are also present at the infant's bedside and their contact numbers are available.³ In addition, fathers must also learn to live with the fear related to the precarious clinical condition of their infant, and to take care of an infant with special needs and medical equipment.³⁻⁵ This fear can even prevent them from holding and touching their infant.^{3,4} They are preoccupied with the financial impact of their infant's stay in the NICU, as they are often the family provider.³ Many of them must juggle both work and time with their infant.^{1,6}

To enhance the father-infant relationship and improve the father's experience during the infant's hospitalization in the NICU, physical and emotional closeness appear to be essential for both the father and the preterm infant.⁷ Parent-infant physical closeness includes any physical contact ranging from skin-to-skin care to parental presence at the infant's bedside without physical contact.⁸ Physical closeness seems to promote fathers' psychological well-being by reducing anxiety, enhancing parental comfort in taking care of and interacting with the infant, increasing paternal involvement and a sense of usefulness to the infant, and favours the development of positive feelings toward the infant.^{4,9-12} For the premature infant, physical closeness such as skin-to-skin care may reduce pain during procedures,¹³ decrease nosocomial infection risks, improve physiological stability and feeding skills,¹⁴ and promote attachment bonds with parents.¹⁵

Emotional closeness, on the other hand, is an emotional state that includes feelings of love, affection, or connection between the parents and preterm infant.⁸ This sense of emotional closeness

between the father and infant seems to be important in establishing a parent-infant relationship and enhancing paternal role development in the NICU.¹¹ It has been reported that mothers and fathers feel emotional closeness when they have physical contact with their infant,^{8,16} when they ensure and contribute to the well-being of their infant, when they understand what is happening during the hospitalization, when they feel involved in their infant's care, and when they spend family time with the infant.⁸ Although several key moments when parents feel emotional closeness have been recently recognized, factors favouring or hindering its presence are not well known.^{8,17}

There has been little exploration of the point of view of fathers regarding emotional closeness. A recent meta-ethnography conducted by Thomson et al.¹⁶ on parents' experiences of emotional closeness with their infants in the NICU reported that only 7 of the 34 identified studies included fathers.^{4,11,18-22} Moreover, in several studies in which both parents participated, fathers were under-represented.²³⁻²⁵ Indeed, the unique perception of NICU fathers concerning emotional closeness is not well described. Considering that the NICU context presents challenges to the development of the father-infant relationship and the particularities of the fathers' experiences, it is important to explore their perceptions of emotional closeness during their infant's stay in the NICU. This study explored experiences and instances of emotional closeness from the perspective of NICU fathers as well as factors enhancing or reducing emotional closeness during an infant's hospitalization in the NICU.

Methods

This qualitative descriptive study took place between August 2019 and April 2020.

Participants and Setting

This study is part of a larger study that aims to describe parent-infant physical and emotional closeness, the quality of family-centred care, and the psychological well-being of NICU parents.²⁶ According to the inclusion criteria, the convenience sample for the larger study was composed of parents

of infants born at less than 35 weeks' gestation and admitted to the NICU. Parents were excluded from the study if they had triplets, if the infant's length of stay was less than 3 days (insufficient time for data collection), if the infant's clinical condition was unstable, or if they did not wish to reply to text messages (one part of main study included replying to text messages). The present study focuses on a subsample of fathers from one study site. The study was conducted in a level 3 NICU in the Montréal region (province of Québec in Canada). Fathers (n=16) who participated in the larger research project were asked to participate in the present study during either the recruitment for the larger study or at the 4-month follow-up for the larger study. The unit design at the study site combines pods of 6 beds/incubators for critical care with single-family rooms (SFR) for step-down care. Unit staff members promote family-centred care. Parents can be with their infant 24 hours a day and are encouraged by staff members to participate in their infant's care.

Measures

A socio-demographic questionnaire was completed by the fathers following recruitment to the larger study to collect information on their characteristics and the characteristics of their infant. Fathers also completed a self-report diary every day for two weeks following recruitment to indicate when they felt emotional closeness and what they were doing at that time (e.g., present in the unit, doing skin-to-skin care, holding the infant, being involved in the infant's care, etc.). This chart format diary allowed participants to indicate how long (in minutes) and how many times a day they felt emotional closeness and what they were doing. They were asked to trace a line for every five minutes they did those activities. Emotional closeness was defined as an emotional state with feelings of love, affection, or bonding between parent and infant that may be strong and constant or more distant.⁸

An interview guide was used to conduct one-on-one semi-structured interviews in the father's native language (French or English). The questions probed fathers' perceptions of emotional closeness,

when it occurred, and the factors enhancing or reducing emotional closeness (See table 1). Interviews lasting approximately 30 minutes took place at a time and location chosen by the father or via Zoom (digital platform), after completion of the self-report diary. Each participant's diary was examined and referred to during the interview to enable explanation of the content and to improve the researcher's understanding. The interviews were recorded to permit verbatim transcription by a research team member.

Data Analysis

Descriptive statistics were used to analyze the data collected with the socio-demographic questionnaire and the self-report diary. The interview data were analyzed based on the thematic analysis method. To prepare the interview data for analysis, all recordings were transcribed word for word. A code was given to each meaning unit to group them into subthemes, and a team discussion took place to validate the coding of each interview and identify emerging themes.²⁷ Meaning units were translated into English if the interview was conducted in French. Subsequently, themes and subthemes were considered according to dimensional analysis, an analytic process intended to identify the elements that constitute and characterize a complex phenomenon.²⁸ To ensure scientific rigour, individual coding was completed by at least two team members for each interview and discussed as a team to ensure coding consistency among the team members. Disagreements were resolved by consensus. In addition, a member check was carried out, with every participant being successfully contacted by phone to validate the analysis of his interview data and propose modifications or additions if necessary.

Ethics

The main research project and this sub-study were approved by the ethics committee of the hospital where participants were recruited. Written informed consent was obtained from each father prior to their participation in the study. During the interview, the participants could refuse to answer

questions without justification and withdraw if they wished. A code was assigned to each participant during the transcription of the interviews to conceal their identities.

Results

Socio-Demographic Data and Self-Report Diary Data

8 fathers agreed to take part in the study. Socio-demographic characteristics are reported in Table 2. The participants completed the self-report diary for an average of 11.5 days. Most participants only completed the diary when they were present at their infant's bedside. The detailed self-report diary data on emotional closeness are reported in Table 2.

Dimensions of Emotional Closeness

The emerging themes describing dimensions of emotional closeness included *context*, *properties*, *conditions*, *consequence*, and *process*. For the *context*, the subtheme identified was *hospitalization at the NICU*, including presence at the NICU and separation from their infant. Regarding *properties*, emerging subthemes included *difficult to describe*, *mixed feelings*, and *grows over time*. For *conditions*, many subthemes were identified: *environment*; *father*, *mother*, and *infant-related factors*; *co-parenting*; and *father-infant interaction*. For the *consequence* theme, the *father-infant relationship development* was identified as a subtheme. For the *process* theme, no subtheme was identified since this theme is overarching and refers to the entire process of emotional closeness. Figure 1 illustrates all themes and subthemes referring to the dimensions of emotional closeness according to fathers. Overall, emotional closeness was a difficult-to-describe, mixed, and growing feeling influenced by multiple factors – e.g., environmental factors, father-related factors, mother-associated factors, and others. It occurred in the contexts of presence and separation in the neonatal unit, and the consequences of this process fostered the development of the father-infant relationship.

Context of hospitalization at the NICU

The first theme is *the context of hospitalization in the NICU*, including the subthemes *presence at the NICU* and *separation from their infant*.

Presence. Some participants mentioned that having the possibility to be present at the neonatal unit at the time and for the duration of their choice promoted closeness with their infant. For example, Participant 6 mentioned, "*The fact that you can go 24 hours a day [to the neonatal unit], honestly, I really liked it...it's a big point that you could go and see the infant at any time. At any time of the day, any day. We really wanted to be close, so this helped a lot [to feel emotionally close].*" Participants also mentioned how important it was for them to be at their infant's bedside as often and for as long as possible, to spend time with them, to be close to them, to give them attention, and to see how they were doing. For example, Participant 5 said, "*...I tried to go as often as I could [to the hospital] in that context [being split between work, home and hospital]... when I was there, often it was me alone who did the care. I would say that the emotional closeness manifested itself mainly in the sense of enjoying the present moment with the infant [being present].*"

Separation. Participants also described emotional closeness as a feeling that can be experienced in the absence of their infant. Fathers felt emotional closeness when they were thinking about and missing the infant while they were not physically present with them. For Participant 1, thoughts about the infant were so intense that he sometimes had trouble sleeping or focusing at work: "*... we are always thinking about him. I wonder how he is doing, is he still in good condition, has something happened again? So, yes, at all times, we were really thinking about him a lot. So, sometimes, you can get up, even late at night, after work, you feel like, because I can't sleep, I think about him, so I have to go see him... We always have this emotional presence there, this feeling of always having the baby close to us, which reassures us more.*" Several participants also mentioned that keeping in touch with their partner via technology (i.e., cellular phone) allowed them to feel emotional closeness from a distance.

This contact allowed them to be informed about the infant and to see them via photos or videos. For example, Participant 8 stated, *“In my case, when I was not there during the day, at work, it is certain that, from time to time, we took photos, we took little videos, so, for sure, I was watching those. My wife also sent me photos during the day of what she was doing, how he was doing. I still felt it [emotional closeness] even though I was not there.”*

Properties

The second theme was *properties of emotional closeness*. This theme includes three subthemes because, according to fathers, emotional closeness has multiple properties: it is *difficult to describe*, composed of *mixed feelings*, and *grows over time*. Multiple fathers mentioned that it was difficult to put that special feeling they had for their infant into words. In this regard, Participant 7 mentioned, *“It's very hard to describe that [emotional closeness]. It's just having that sensation of closeness. I don't know how to describe it...”* They felt emotional closeness when they had positive feelings and when they had negative feelings: when they felt joy, pride, hope, and other positive feelings, as well as when they felt fear, worry, or sadness. Sometimes, they experienced both positive and negative feelings at the same time. Therefore, mixed feelings may also be linked to emotional closeness. Concerning this, Participant 1 said, *“Emotional closeness is when there is this feeling of joy, that is often mixed with... this worry, a great worry... So, sometimes joy, a lot of worry, even fear too ...”* In addition, participants described as another property of emotional closeness the fact that it grew over time. As they got to know their infant and learned how to interact with and take care of them, emotional closeness was enhanced. For instance, Participant 7 said, *“As time goes by, and the more you're involved with the baby, the closer you get... The first day, it's like a new person you don't know, and as time goes by, you develop a relationship with the child, and so you feel that [emotional closeness] more.”*

Conditions

The third theme was *conditions* because emotional closeness was influenced by multiple factors, according to fathers. Subthemes included *environment; factors related to the father, the mother, or the infant; co-parenting; and the father-infant interaction.*

Environmental Factors. Regarding the physical environment, when fathers had privacy in the NICU, they felt more emotional closeness, because they tended to be more involved in the infant's care and to interact more with them. For example, Participant 5 explained that having more privacy allowed him to do more skin-to-skin care and interact more with his infant, so he felt greater emotional closeness. In addition, some elements present in the environment, such as the special chair for skin-to-skin care, could facilitate emotional closeness by improving their comfort. For instance, Participant 6 mentioned, "*...I tell you, to have some privacy, that sure helps [for emotional closeness]. So, having the room has been really good for us. Also, the room had a low chair, I think, or a skin-to-skin chair there. To have facilities that allow us to enjoy certain moments in the hospital in comfort, that is helpful too.*"

Related to the social environment, support received by nursing staff and other significant people was a factor that influenced emotional closeness for NICU fathers. When staff were welcoming and encouraged fathers to interact with their infant, and when relatives supported them with other obligations to allow them to spend more time with their infant, emotional closeness was promoted. For example, Participant 6 indicated, "*The staff members there were really good. They really supervised us there; they allowed us to enjoy these moments [of emotional closeness] when we could.*"

Other obligations outside the neonatal unit, including work, other children, and household responsibilities, also influenced emotional closeness. Several fathers said they felt torn between their infant and their other obligations that prevented them from coming to the NICU as often as they wished. In addition, for participants who had to continue working despite the hospitalization of their infant, being at work prevented them from thinking about the infant and feeling emotional closeness. Regarding

this, Participant 1 stated, *“Since there is work, we have to concentrate on something else, so it's the fact of doing something else that can bring us out of this emotional presence at this moment...”*

Father-Related Factors. According to participants, they had to be in a good mental state to develop and feel emotional closeness toward their infant. If they were too tired or stressed, they might do things automatically, without giving the infant all their attention and feeling emotional closeness. If the fathers were not mentally available when they were with their infant, they did not feel emotional closeness despite being in physical proximity. Participant 5, for example, mentioned, *“Even sometimes, for some care, I think I didn't even hold him, because, at some point, you are tired, and it even happens automatically. At some point, sometimes we get tired, and it even becomes automatic ... and it is like, okay, we change the diaper... There is the possibility of touching [the infant] and not necessarily experiencing [emotional] closeness at the same time.”* In addition, fathers with an optimistic point of view looked at the situation in a positive way, which enhanced emotional closeness. When fathers focused on the positive aspects of the situation, they were able to focus their attention on the infant and enjoy moments spent with them. For instance, Participant 5 stated, *“Taking advantage of the moment, rather than being worried, rather than doing the care automatically. I tell you, that is probably when there were moments of emotional closeness.”*

Co-Parenting. Another factor influencing emotional closeness was the relationship between the fathers and their partner. According to fathers, when they had a harmonious relationship with their partner, communication was easier, and it was easier to share responsibilities and to work as a team to care for and be there for the infant, which enhanced emotional closeness. For example, Participant 5 mentioned, *“I think the spouse-spouse relationship is important here as well. If there are already frustrations, there are several possible sources of frustration there, like fatigue, stress, the other children, the stress with the baby. If the relationship between the two parents is not already good, it can*

also create a problem [for emotional closeness].” The fathers also reported feeling emotionally close to their infant when they were emotionally supporting and caring for their partner. They felt that taking on the role of supporting the mother allowed them to feel closer to the infant and experience emotional closeness. In this regard, Participant 6 explained that when he supported the infant’s mother, he felt useful to her and the infant and he felt emotional closeness. He thought his role was to complete his partner to be an efficient team with her and to be there for their infant.

Mother-Related Factors. The mother’s attitude and previous experience also influenced fathers’ experiences of emotional closeness. When fathers felt welcome at the infant’s bedside and when their partner was happy to see them, the fathers felt their role was important, which enhanced their sense of emotional closeness. Some fathers also mentioned that if the mother had previous experience of caring for a baby it was reassuring to them, and this fostered feelings of emotional closeness. For example, Participant 7 mentioned that his partner was more involved in the infant’s care at the beginning because she was a nurse and was more comfortable taking care of a baby. This reassured him and fostered his sense of emotional closeness.

Father-Infant Relationship. When fathers were interacting with their infant, they felt emotional closeness. According to participants, the interaction was achieved in many ways (e.g., eye contact, exchanging smiles, talking to the infant). Participant 8, for example, mentioned, “... *emotional closeness is when you're there and you can talk to him, you can sing songs to him, you can talk to him. That's when we had emotional closeness with him.*” In addition, when fathers were actively involved in the infant’s care (e.g., changing the diaper, feeding), it enhanced their sense of emotional closeness. In this regard, upon being asked what he was doing when he felt emotional closeness, Participant 4 said, “*It's sure that when you take care of your infant, when you can touch him, when you can have him on you in the kangaroo position, it generates a little bit more emotion* [emotional closeness].” Several participants

also mentioned that they had periods of interaction with their infants when they were providing care, and several participants talked about interacting and caring for their infants as two complementary elements.

Infant-Related Factors. When their infant's clinical condition was stable, the fathers could interact with the infant and feel emotionally close. When the infant's clinical condition was unstable, the fathers were preoccupied, and it was difficult to interact with the infant and develop emotional closeness. For example, Participant 4 said, "*It depends on whether he's having a good day or a bad day. But when he's having a good day, the emotions come for you [emotional closeness], and... it creates a special bond... when he's not doing well, it's a little more unpleasant.*"

The infant's state and responsiveness are also factors that influenced fathers' emotional closeness. According to participants, when the infants were in a comfortable, calm state, they were able to interact with their father, which enhanced emotional closeness. About this, participant 5 declared, "*...the state of the child is also a key success factor in this [emotional closeness]. If the baby is crying, or if the baby is not feeling well, or if the baby is uncomfortable... I think the conditions for success are much more difficult.*" Responsiveness – when the infant responds to the father's tactile and verbal stimulation – promotes the father's sense of emotional closeness. For example, Participant 6 mentioned, "*...he is able to detect that it is you holding him, and it looks like, from there, it's like that the relationship begins. Honestly, I feel the same [emotional closeness] myself, and with the smile that he makes, I think the baby also feels it.*" In addition, when an infant's growth or maturation allowed for longer periods of wakefulness, interactions with the father were easier, enhancing emotional closeness.

Consequence

The fourth theme identified was *consequence*, with the subtheme *development of the father-infant relationship*. According to fathers, the ultimate consequence of emotional closeness was the development of the father-infant relationship. When participants felt emotional closeness toward their

infant, it promoted the development of their relationship. In this regard, some fathers explained that their relationship with the infant started with closeness, involvement in care, and the creation of a routine with the infant during the hospitalization at the NICU. According to them, this routine promotes father-infant attachment, emotional closeness, and the development of the father-infant relationship. Additionally, Participant 5 mentioned that his sense of emotional closeness allowed the father-infant relationship to develop throughout the infant's hospitalization: *"... As it evolved, it was not just when I was giving care that I had a connection with him [emotional closeness], and I was looking at him. I was having quality time [with the infant] and sharing something. As time went on, I was able to spend more time with him, so that is the difference between the beginning and the end [evolution of the relationship]."*

Process

The final emerging theme was the process of emotional closeness. It is an overarching theme describing the relations between the diverse components of emotional closeness. According to the fathers' interviews, emotional closeness is a complex circular process with various properties, occurring in specific contexts, influenced by multiple factors, and creating a consequence, as described earlier in the text. Emotional closeness is a circular process because the identified dimensions mutually influence each other. For example, during the hospitalization of their infant, fathers were present as long and as often as possible (context), which allowed them to obtain support from the health care staff and their partner (influencing factors) and to be involved in the infant's care (influencing factors), which promoted their feelings of emotional closeness (properties) and the development of the father-infant relationship (consequence). See Figure 1 for details.

Discussion

The findings of this study contribute to our understanding of the process of emotional closeness for NICU fathers. According to the participants, emotional closeness was a complex process composed

of multiple dimensions. Some aspects of our findings are consistent with the results of previous studies, while others add to existing knowledge on emotional closeness among NICU fathers. No previous study has addressed emotional closeness as a complex process with multiple components like the current study. Previous studies have focused more on the different ways of feeling emotional closeness and the factors that facilitate it.^{8,16} By identifying multiple dimensions of emotional closeness, our study highlights the complexity of the process of emotional closeness for NICU fathers. The results of this study support the notion that fathers develop their sense of emotional closeness while present with their infant or while separated from their infant.^{8,16} Although previous studies include samples primarily composed of mothers, it is interesting to note that fathers' perceptions of emotional closeness are not completely different from mothers' perceptions.^{17,29,30,31} Like mothers, fathers felt emotional closeness when they were interacting and caring for their preterm infant in the NICU and when they stayed connected with the infant while they were away from the NICU. In the current study, fathers pointed out the variety of emotions, both positive and negative, that can accompany emotional closeness. This finding differs from previous studies on the subject, as no identified studies described that fathers may experience emotional closeness when experiencing negative feelings (e.g., fear, discouragement).^{8,17} This study also extends our understanding of emotional closeness by revealing the evolution of emotional closeness over time. No previous study reported that fathers' feelings of emotional closeness grow over time.

It is known that physical and social environmental factors, influence fathers' involvement with their infant and their sense of emotional closeness.^{6,7,11} In line with previous studies, the present study found that emotional closeness is facilitated when fathers have privacy and access to certain facilities, such as a comfortable chair in which spend time with the infant.¹¹ Father-related factors have not been identified in previous research; however, our study highlights that both the mental state and optimistic

outlook of fathers influence emotional closeness. The results also point out that it is possible for fathers to be physically close with their infant without feeling emotional closeness if they are not in a favourable mental state. The present study's results relating to the infant, the mother, co-parenting and father-infant interactions replicate previous studies' findings. Similarly to the present study, Flacking et al.⁸ indicate that it is easier for parents to experience emotional closeness when they are reassured about their infant's health status and when they have harmonious couple interactions. Additionally, the meta-synthesis of Thompson et al.¹⁶ highlights the importance of the mother's encouragement of the father to develop an emotional connection with the infant, and the relevance of parental involvement in the infant's care to the development of a sense of emotional closeness. The development of the father-infant relationship as a consequence of emotional closeness is an addition to the current body of knowledge about emotional closeness. No previous studies explicitly mention that emotional closeness can foster the development of the father-infant relationship for NICU fathers.

Nurses must be aware of the multiple factors influencing fathers' senses of emotional closeness, in order to enhance the development of father-infant relationships. In addition, they should provide fathers with emotional support to foster the father-infant relationship, since the lack of emotional support from health care professionals has been documented.³² Nurses should also support parents in co-parenting their infant by emphasizing parenting skills, teamwork, and mutual support³³ to enhance the development of parent-infant relationships, and to ensure equal support of fathers and mothers during their infant's hospitalization. By recognizing that the father and mother are both in need of support to learn to develop their co-parenting skills, the nurse's approach may reduce fathers' feelings of being considered second parents.^{1,33}

This study has some limitations that should be considered. First, the sample size is small, which limits the transferability and credibility of the results. Unfortunately, it was not possible to recruit more

fathers to participate in the study, since all fathers who participated in the primary study at the study site were approached. However, it is important to note that data saturation was reached, despite the small sample size.³⁴ In addition, the member check added to the rigour of the findings of this study since all participants were contacted to validate the analysis of their interviews. The homogeneity of the sample must also be considered, since the participants were recruited from a single neonatal unit and are likely to have had similar experiences (i.e., all the participants were working during their infant's hospitalization – see Table 1). Moreover, the self-report diary about emotional closeness is an imprecise tool for measuring the frequency and duration of emotional closeness experienced by fathers, because participants sometimes forgot to complete it. For this reason, those data were not reported in this paper.

Future research on this topic should include a larger number of participants from multiple NICUs to learn from fathers with different hospitalization experiences. In addition, a longitudinal study with several measurement points could allow for further investigation of the effect of time on emotional closeness, from the fathers' perspectives. Future research on this topic should use triangulation to promote rigorous validation of results. It would also be interesting to use another quantitative data collection method to measure emotional closeness more precisely. For example, the use of a technological tool such as a smart phone application could allow fathers to more frequently document when they feel emotional closeness, even if they are not in the NICU.

Conclusion

From the perspective of NICU fathers, emotional closeness toward their preterm infant is a complex process that includes several dimensions. The results presented in this paper are important for NICU nurses who support fathers in the development of their fathering role. By knowing more about the process and dimensions of emotional closeness, nurses can direct their interventions with fathers to enhance emotional closeness and better understand their experience.

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Figure and Table Legends

Table 1: Primary interview questions

Table 2: Socio-demographic characteristics of participants and self-report data about emotional closeness

Figure 1: Dimensions of emotional closeness according to fathers

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Table 1: Primary interview questions

Interview guide

1. Questions for contextualization and getting to know the participant:

- a. How long has your baby been hospitalized in NICU?
- b. How do you describe your involvement with your baby's care in NICU?

2. Questions related to the completed Closeness diary:

- a. Can you describe that day when you completed the diary?
- b. When you indicated the presence of emotional closeness on the diary, how did you feel?
- c. When you indicated the presence of emotional closeness on the diary, what were you doing?
- d. Are there times when you felt emotional closeness and you were not with your baby?
 - i. If so, can you describe these moments?

3. General questions to explore what closeness to fathers is:

- a. In your opinion, what is physical closeness?
 - i. Can you give me some examples?
- b. When do you experience physical closeness with your baby?
- c. In your opinion, what is emotional closeness?
 - i. Can you give me some examples?
- d. When do you feel emotionally close to your baby?
- e. According to you, are there barriers to emotional closeness?
- f. According to you, are there facilitators to emotional closeness?

4. Is there something you would like to add regarding the topics covered during the interview?

Table 2 : Socio-demographic characteristics of participants and self-report data about emotional closeness

Characteristics N=8	Results		
	Mean (\pm SD)	Min/Max	n (%)
Mean gestational age at birth (weeks)	29 (3.24)	24/34	
Mean birth weight (g)	1427.50 (433.03)	710/1920	
Mean father's age (years)	32 (3.12)	28/39	
Mean distance from home to hospital (km)	34.75 (48.14)	5/151	
<u>Birth type :</u>			
Vaginal			5 (62.5%)
Caesarian section			3 (37.5%)
<u>Multiple birth :</u>			
Single infant			7 (87.5%)
Twins			1 (12.5%)
<u>Native language :</u>			
French			6 (75%)
English			1 (12.5%)
Spanish			1 (12.5%)
<u>Education level :</u>			
Pre-university program			4 (50%)
University			4 (50%)
<u>Employment status :</u>			
At paid work			8 (100%)
Unemployed			0 (0%)
<u>Family/parents situation :</u>			
In relationship cohabiting/married			8 (100%)
Single			0 (0%)
<u>Children at home :</u>			
0			7 (87.5%)
1			1 (12.5%)
<u>Self-report diary data about emotional closeness :</u>			
Emotional closeness while present at NICU			8 (100%)
Emotional closeness while the mother is present			8 (100%)
Emotional closeness while the mother is involved in care ¹			8 (100%)
Emotional closeness while holding or skin-to-skin care			7 (87.5%)
Emotional closeness while involved in care ¹			6 (75%)

Emotional closeness while the mother is holding or doing skin-to-skin care			5 (62.5%)
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¹ Feeding, pumping/assist with pumping, bathing, diaper change, singing, talking, reading and other

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