

Challenging Experiences of the Fathers of the Premature Infants Admitted in the Neonatal Intensive Care Unit (NICU)

Zahra Shahkolahi¹, Zahra Mahdavi Lenji², Soheila Jafari-Mianaei^{3*}

1. Shiraz University of Medical Sciences, Shiraz, Iran

2. Isfahan University of Medical Sciences, Isfahan, Iran

3. Nursing and Midwifery Care Research Center, Faculty of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran

ABSTRACT

Background: Birth of premature infants and their admission in the neonatal intensive care unit (NICU) are unexpected crises for the fathers. Therefore, raising the awareness of fathers regarding their experiences in such conditions could be helpful in the care of these neonates. The present study aimed to investigate the experiences of the fathers of the premature infants admitted in the NICU.

Methods: This descriptive, explorative, qualitative study was conducted via purposive sampling, and 13 parents of the premature infants admitted in the NICUs of two hospitals in Isfahan, Iran, were enrolled. Semi-structural interviews were performed with the fathers of premature infants, and thematic analysis was used for data analysis.

Results: Three main themes emerged in the study, including 'emotions and responsibilities', 'information needs', and 'beliefs'. In terms of the emotions and responsibilities, fear and accountability were considered to be the major concerns among the fathers. With regard to information needs and beliefs, the need to obtain appropriate information and having faith in God and the infallible Imams were expressed by the fathers, respectively.

Conclusion: Experiencing preterm birth and NICU admission are accompanied by stress and anxiety for the parents of the infants. Meanwhile, several factors could impair the ability of the fathers to cope with the crisis. Identifying and addressing the needs of the parents and providing the necessary training since the beginning of pregnancy could result in the effective management of NICU admission. In addition, proper facilities should be offered to support the fathers of preterm infants, such as parental leave.

Keywords: Fathers, Infant, Nursing, Premature

Introduction

Despite the joy of having a baby, the birth of a premature infant and admission in the neonatal intensive care unit (NICU) is associated with considerable stress, which causes emotional and psychological trauma in the parents (1). Premature birth disrupts the receptive role of the parents, as well as the individual's mental presupposition of their parental role (2). Furthermore, this crisis leads to improper parent-infant interactions and anxiety and depressive disorders in the parents, adversely affecting the growth and development of the infant (1). Therefore, supportive measures must be taken for the parents of preterm neonates,

especially during the NICU admission.

Recognition of the experiences of parents about the NICU admission of premature infants could be beneficial in this regard (3). In fact, the stresses and challenges are two-fold for the parents of preterm neonates with the premature birth and NICU admission of the infant at the same time (4). Several studies have focused on the experiences of the mothers or both parents of preterm infants regardless of the possible differences in this regard, while only a few studies have addressed the experiences of the fathers upon the premature birth of neonates and their admission in the NICU.

* Corresponding author: Soheila Jafari-Mianaei, Nursing and Midwifery Care Research Center, Faculty of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran. Tel: 00983137927573, 09132027944; Email: M_jafari@nm.mui.ac.ir

Please cite this paper as:

Shahkolahi Z, Mahdavi Lenji Z, Jafari-Mianaei S. Challenging Experiences of the Fathers of the Premature Infants Admitted in the Neonatal Intensive Care Unit (NICU). Iranian Journal of Neonatology. 2018 Mar: 9(1). DOI: [10.22038/ijn.2017.23648.1293](https://doi.org/10.22038/ijn.2017.23648.1293)

It is notable that the father is the first to enter the NICU, communicate with the healthcare providers, and visit the premature infant (5).

Concerns regarding the maternal and infant health, clinical status of the infant, and acceptance of the parental role could give rise to anxiety and stress in fathers. As a result, fathers attempt to realize and manage stressful conditions through obtaining accurate information on the status of the mother and infant (6). Fatherhood and accepting this parental role is a major life change. If this new stage of life is accompanied by the early birth of the infant and NICU admission, fathers are faced with intensified stress. Therefore, it seems that the negligence of the fathers' role in the care of preterm neonates deteriorates the condition (7).

Despite the higher levels of stress in the fathers of premature infants compared to term neonates, the supportive services in this regard are inadequate. Therefore, awareness of the challenges and experiences of the fathers in such conditions stress or other mental and psychological states in addition to the reception of fatherhood could be useful in providing supportive measures (3).

From this perspective, recognition of the experiences of the fathers whose infant is admitted to the NICU is crucial for nurses and other members of health care team, so that they could effectively support and address the needs of the fathers (8). According to the literature, interviewing patients can provide a more expressive picture in this regard compared to surveys. Moreover, qualitative studies have become a milestone in healthcare research to develop effective nursing interventions in various areas of medical healthcare (4).

The present study aimed to investigate the experiences of the fathers whose premature infants were admitted in the NICU using a qualitative approach.

Methods

This descriptive, exploratory, qualitative research was conducted to explore and describe the experiences of the fathers of the premature infants admitted in the NICU. A descriptive-exploratory qualitative approach is useful in summarizing and recognizing an area of interest (9), which was appropriately selected for the present study.

The current research was conducted in the NICUs of two hospitals affiliated to Isfahan University of Medical Sciences, Iran on 13 fathers whose premature infants were admitted in the NICU. Inclusion criteria were having a premature neonate admitted in the NICU for more than 24 hours and no congenital abnormalities in the neonates.

The fathers were invited to participate in the study during their stay at the NICU. Written informed Consent was obtained from the participants after explaining the objectives of the study. To ensure anonymity, the participants were assigned numbers (e.g., Respondent 1 [R1] and Respondent 2 [R2]). Moreover, the participants were allowed to withdraw from the study at any given time and assured of confidentiality terms regarding all the information and conversations. The study protocol was approved by the Research Ethics Committee of Isfahan University of Medical Sciences (ID number: 294 007).

Data were collected during September 2015-February 2016 through semi-structured interviews with the participants (60-90 minutes). All the interviews were performed in a private room next to the NICUs, starting with general questions to establish trust with the participants, followed by detailed, open questions. A sample of the interview questions is presented in Table 1.

Data analysis was performed using thematic analysis proposed by Braun and Clarke (2006), consisting of interviews with open-ended questions, transcription of the interviews, initial coding, and code classification in order to obtain themes (10). After listening to the interviews, verbatim transcription was carried out, and the contents were read several times for better realization. Afterwards, the primary ideas were recorded on the margins of the interview sheets. Finally, the entire texts were read to identify the meaning units guided by the aim of the study.

After the formation of the primary codes, the related codes were classified into a single category. In the next stage, the related categories were grouped together to form the themes of the study. The extracted themes were reviewed so as to ensure their correlation with the extracted codes.

Table 1. Samples of Interview Questions

	Questions
1.	What is your experience about having a premature infant who was admitted in the NICU?
2.	How did you feel when you were told that your infant was admitted in the NICU?
3.	What did you think about this event?
4.	How did you feel when you were in the NICU for first time?

Trustworthiness

The objective of investigating the reliability and validity of qualitative research is that the study exactly expresses the experiences of the participants (9). In qualitative research, the concepts of credibility, dependability, confirmability, and transferability have been used to describe various aspects of trustworthiness (11). In the present study, long-term engagement with the data increased the credibility of the results, and the peer review method was used to review the extracted quotations and codes. To enhance the credibility of the results, data were collected through a systematic approach, and fairness was respected in data interpretation and classification. In addition, the extracted data were recorded and reported with utmost precision in order track each step meticulously.

In order to enhance the dependability of the findings, the interview prescriptions were prepared immediately after the interviews and evaluated repeatedly. To achieve confirmability, the coding processes and data classification were continuously assessed by the research team. To improve data transferability, we used the data incorporation method (i.e., incorporating the place and personal information), and the data were collected in two different environments from individuals with diverse educational and professional backgrounds (12).

Results

Age range of the participants in the present study was 28-37 years. In terms of the education status, two participants were collegiate, four cases had high school diploma, and the others had lower education levels. With the exception of two subjects, all the participants were self-employed.

Data analysis revealed 151 primary codes, nine categories, and three themes. The thematic units were 'emotions and responsibilities', 'information needs', and 'beliefs' (Table 2).

1. Emotions and responsibilities

This theme had five main categories, including the concerns about the newborn, concerns about the spouse, personal concerns, concerns about others, and concerns about the diagnostic and therapeutic procedures in the NICU.

According to the participants, fear, worries, and accountability toward the family, relatives, and friends constituted a major part of their experience about the NICU admission of their premature infants. In this regard, one of the participants stated:

"My wife and I do not want the rest of the family and our neighbors to know about the kind of problem our baby. On the other hand, we should worry about what people might say! People just cannot stop talking! If they find out, they will constantly reproach us, and we will suffer all the time. We will be the subject of every conversation."

Some of our participants expressed a sense of accountability toward their spouses, as well as concerns regarding her physical and mental conditions. In addition, concern about the other family members and friends constituted a major part of their experience. One of the participants remarked:

"... And that what will happen to the mother? It was worse. The mental damages affecting the mother made the situation much more difficult for me. I was faced with an extraordinary condition; on the one hand, I had to try to calm the mother and on the other hand, I had to stay calm myself. I also had to control our relatives not to worry her."

In addition, fear of the diagnostic and therapeutic procedures that were performed on the neonate and concerns regarding the fathers' personal affairs were mentioned by some of our participants. For instance, one participant said:

"When I visited the child, I saw something connected to his feet. There were some tubes in his mouth, and he was breathing through a tube. Watching these things, one may think the health condition of the child is very poor. Until you do not

Table 2. Main Themes and Categories

Main Themes	Categories
Emotions and Responsibilities	Concerns about the Infant
	Concerns about the Spouse
	Personal Concerns
	Concerns about Others
	Concerns about Diagnostic and Therapeutic Procedures
Information Needs	NICU Technology and Equipment
	Hospital, NICU Environment, Physicians, and Nurses
Beliefs	Faith in God and Resorting to Imams
	Confidence in Medical and Nursing Teams

know the results of the experiments, you will be really stressed. Yesterday, my wife was under lumbar puncture, and I could not relax until I knew the test results. I do not know. Really, I know nothing."

Alternatively, another father stated:

"I was very sad when I saw a very small child breathing oxygen with that system. It really upset me."

With respect to the personal issues of the fathers, the participants mentioned problems such as interruptions in attending their workplace, repetitive commuting, and hospitalization costs, among which the job-related issues were more important compared to the other problems. For instance, one participant commented:

"Now, for example, I should be at work, but I left my workplace and came here; it is just one percent of my problems."

Moreover, another participant said:

"The father must think about monetary issues since the infant is hospitalized and money is needed. There are many problems. These past two weeks have been a unique experience in my whole life. I mean, it is difficult. I have suffered a lot."

2. Information needs

This theme was classified into two categories of NICU equipment and attached devices to the neonates and medical environment and healthcare providers. Most of the participants in the present study considered acquiring information and becoming aware to be of great importance. However, they were dissatisfied with the current status of providing information on the hospital, care unit, and healthcare providers. Lack of familiarity with the care environment and the attached NICU equipment to the infant were also among the main causes of concern among the interviewed fathers. In this regard, a participant remarked:

"Medical teams who are constantly dealing with these cases and are adequately informed can certainly help the child more than me as a father with no medical information. If all the families are informed through the media or become aware of the possibility of this event by the physician at the beginning of pregnancy, they will be able to control themselves better in such critical conditions."

3. Beliefs

This theme was evaluated in two categories of having faith in God and demanding help from the infallible Imams (peace be upon them). Since the

participants were Iranian Muslims, many of the codes in this category encompassed the faith and trust in God and demanding help from the infallible Imams, followed by confidence in the performance of the medical team. In this regard, one of the participants stated:

"I resorted to God, Imam Reza, Imam Hussein, and other Imams that I really believed in. I resorted to the Imams who I completely trusted."

Another participant said:

"There is nothing we can but to have faith in God. Oh, my sadness cannot solve the problem. I should be mentally strong. I trust in God, no matter what happens. We cannot do anything. We can only trust in God and strengthen our will."

Discussion

The present study aimed to describe the experiences of the fathers of the premature infants admitted in the NICU. The main themes of the study were 'emotions and responsibilities', 'information needs', and 'beliefs'. With regard to the theme of 'emotions and responsibilities', the participants expressed feelings of fear, concern, and accountability toward their relatives, friends, and acquaintances. Premature birth and NICU admission are unexpected events that could cause stress and anxiety, as well as other emotional and psychological problems for parents (5). In this regard, the findings of Heidari et al. (2012) indicated that parents were faced with the negative responses of their relatives, friends, and acquaintances, which considerably increased their stress and anxiety (13). However, in a systematic review of the related qualitative studies, Provenzi and Santoro (2015) observed no differences in the reports on the paternal emotions in different countries (8).

Similar to the study by Cinar et al. (2017), our participants expressed a sense of accountability in terms of the emotional support of their spouses, as well as concerns about their physical and psychological conditions, which is considered to be a positive approach (14). Fathers are often the first to enter the NICU, visit the infant, and deliver the information to the mothers. Although most fathers play the supportive role for their family, they may feel vulnerable due to being separate from their spouse and having a premature infant receiving critical care (15). In the study by Hollywood and

Hollywood (2011), it was reported that a sense of helplessness permeated throughout the interviews with the fathers of preterm neonates. It seems that vulnerability is as an inherent emotion for the fathers of the premature newborns that are admitted in the NICU. Inability to participate in the care of the premature infant is a fundamental cause of this vulnerability (16).

Our findings are consistent with the results of some studies in this regard (13), denoting that the fathers of NICU-admitted premature infants are commonly afraid of losing their job and other professional consequences. Furthermore, the previous studies have suggested that some of the needs and concerns of these parents (e.g., concerns about their job and cost of hospital admission) may act as obstacles against accompanying their neonate and spouse (17). A study in this regard also revealed work-related issues to be among the main factors affecting the involvement and participation of fathers in the care of premature infants in the NICU (5). Therefore, it is suggested that measures such as taking a leave of absence and insurance for financial protection be taken in this regard. In the current research, the majority of the fathers were self-employed; according to another study, self-employment is a major challenge for fathers since they are not able to take an unpaid leave of absence to concentrate on their preterm infant. Moreover, running a business while the infant is admitted in the NICU is particularly difficult as the father is constantly preoccupied with the health of the newborn (16).

In the current research, fear of the diagnostic and therapeutic procedures in the NICU was another source of concern for the parents. From the perspective of a father, the infant is weak and very vulnerable. As a result, the father may experience great stress and fear the risk of losing his child due to the lack of knowledge and awareness in this regard (18). Reporting of this experience in various studies and welcoming the family-centered approach in pediatric and neonatal care units shows the necessity of informing parents on the diagnostic and therapeutic procedures of their infants and justifying them on behalf of the medical team (19).

Several studies have indicated that parents are more distressed by the negative impact on their parental role than the unfamiliar, highly technological NICU environment since their primary need at this point is becoming

regularly informed and staying near to their newborn (5, 20). In this regard, fathers only need training and information mainly to ensure the health of the mother and child (8). Findings of Cinar et al. (2017) have denoted that fathers needed to obtain more information on their infants from healthcare professionals; otherwise, lack of sufficient information will intensify their anxiety and stress (14). Delivery of accurate information by the medical and healthcare staff increases the fathers' knowledge and facilitates their decision-making. Of note, parents may be temporarily unable to process the information properly after premature birth, in which case there is increasing need for their support and care. Therefore, knowledge of nurses regarding the importance of repeating information is emphasized (20).

Lack of familiarity with the NICU environment and its equipment was found to increase the stress and anxiety of the parents in the current research. In a study in this regard, the fathers were distressed by the attached devices to the neonates in the NICU, which added to their fear of caring for a premature, vulnerable infant (21). In the research by Værland et al. (2017), fathers perceived a feeling of physical distance from the infant due to the incubator and other medical equipment that were attached to the infant in the NICU, which could be an obstacle against establishing an affectionate bond with the infant (22). Therefore, it could be concluded that although health and medical technology and equipment are important to sustain the infant's life, they may indirectly cause the separation of parents and children by reducing their physical contact, which in turn might delay the process of fostering a strong parent-child attachment and adopting the parental roles. Consequently, certain barriers may arise despite the willingness of fathers to participate in the daily care of their preterm infants during NICU admission, which should be targeted by the nursing staff (8).

In the present study, the fathers expressed their beliefs and faith in God, resorting to Imams, and having confidence in the medical team as the coping mechanisms during the admission of their infants in the NICU. Similarly, other studies have identified religious and spiritual attitudes as the influential factors in achieving more confidence and decreasing the mental and

psychological turmoil of parents (23). Therefore, it could be concluded that spirituality is a supportive source or effective coping mechanism in the parents of the neonates admitted in the NICU. A systematic review in this regard also confirmed the impact of cultural differences on the type of coping strategies in fathers, emphasizing on its significance in the provision of basic services to the parents of the premature infants admitted in the NICU (8). Ideological and religious factors in different cultural contexts and communities could remarkably affect coping mechanisms and crisis control (24, 25). Moreover, these inclinations could decrease parental stresses in the NICU, helping parents to cope with the premature birth crisis and NICU admission. In the study by Heidari et al. (2017), the majority of the parents considered spirituality and prayers to be effective in reducing anxiety and gaining self-control. Prayer and reading the Holy Quran (Muslim's holy book) denotes direct contact with God in order to seek blessing, find hope, and calm mental sufferings (26).

Conclusion

The present study aimed to explore the experiences of the fathers whose infants were admitted in the NICU due to premature birth. According to the results, experiencing preterm birth and NICU admission are accompanied by significant stress and anxiety in fathers. Meanwhile, several factors may disrupt the ability of fathers to cope with the crisis, such as the fear of losing their job, feeling of shame in the family and among friends, and acquaintances, separation from the spouse and newborn, and lack of knowledge regarding the NICU equipment and care procedures. Therefore, identifying and addressing the parental needs through proper training since the beginning of pregnancy and considering the effective facilities to support fathers (e.g., leave of absence, possibility to attend the NICU and participation in the care of the neonate) could result in the efficient management of the condition.

One of the limitations of the present study was difficulty in interviewing the fathers. Although the questions were expanded, some participants avoided detailed explanation and comprehensive answers, which could be due to the different gender of the participants and interviewer. The gender difference might have discouraged expressing emotions and affections

by the participants.

Acknowledgments

Hereby, we extend our gratitude to the Nursing and Midwifery Research Center of the Faculty of Nursing & Midwifery at Isfahan University of Medical Sciences for the financial support of the study. We would also like to thank all the participants, especially the fathers of the premature infants, for assisting us in this research project.

Conflicts of interest

None declared.

References

1. Mianaei SJ, Karahroudy FA, Rassouli M, Tafreshi MZ. The effect of creating opportunities for parent empowerment program on maternal stress, anxiety, and participation in NICU wards in Iran. *Iran J Nurs Midwifery Res.* 2014; 19(1):94-100.
2. Obeidat HM, Bond EA, Callister LC. The parental experience of having an infant in the newborn intensive care unit. *J Perinat Educ.* 2009; 18(3):23-9.
3. Sloan K, Rowe J, Jones L. Stress and coping in fathers following the birth of a preterm infant. *J Neonat Nurs.* 2008; 14(4):108-15.
4. Russell G, Sawyer A, Rabe H, Abbott J, Gyte G, Duley L, et al. Parents' views on care of their very premature babies in neonatal intensive care units: a qualitative study. *BMC Pediatr.* 2014; 14(1):230.
5. Soares RL, Christoffel MM, da Rodrigues E, Machado ME, Cunha AL. Ser pai de recém-nascido prematuro na unidade de terapia intensiva neonatal: da parentalidade a paternidade. *Escola Anna Nery Rev Enferm.* 2015; 19(3):409-16.
6. Shahkolahi Z, Abdeyazdan Z, Mehrabi T, Hajiheidari M. Supporting fathers of premature infants hospitalized in Neonatal Intensive Care Unit (NICU). *J Crit Care Nurs.* 2014; 7(1):31-40.
7. Abdeyazdan Z, Shahkolahi Z, Mehrabi T, Hajiheidari M. A family support intervention to reduce stress among parents of preterm infants in neonatal intensive care unit. *Iran J Nurs Midwifery Res.* 2014; 19(4):349-53.
8. Provenzi L, Santoro E. The lived experience of fathers of preterm infants in the Neonatal Intensive Care Unit: a systematic review of qualitative studies. *J Clin Nurs.* 2015; 24(13-14):1784-94.
9. Polit DF, Beck CT. *Nursing research: generating and assessing evidence for nursing practice.* Philadelphia: Lippincott Williams & Wilkins; 2016.
10. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitat Res Psychol.* 2006; 3(2):77-101.
11. Guba EG. Criteria for assessing the trustworthiness of naturalistic inquiries. *ECTJ.* 1981; 29(2):75-91.
12. Elo S, Kääriäinen M, Kanste O, Pölkki T,

- Utriainen K, Kyngäs H. Qualitative content analysis: A focus on trustworthiness. *Sage Open*. 2014; 4(1):2158244014522633.
13. Heidari H, Hasanpour M, Fooladi M. The Iranian parents of premature infants in NICU experience stigma of shame. *Med Arh*. 2012; 66(1):35-40.
 14. Cinar N, Kuguoglu S, Sahin S, Altinkaynak S. The experience of fathers having premature infants in neonatal intensive care unit. *Open J Pediatr Neonatal Care*. 2017; 2(1):1-12.
 15. St John W, Cameron C, McVeigh C. Meeting the challenge of new fatherhood during the early weeks. *J Obstet Gynecol Neonat Nurs*. 2005; 34(2):180-9.
 16. Hollywood M, Hollywood E. The lived experiences of fathers of a premature baby on a neonatal intensive care unit. *J Neonat Nurs*. 2011; 17(1):32-40.
 17. Wigert H, Berg M, Hellström AL. Parental presence when their child is in neonatal intensive care. *Scand J Caring Sci*. 2010; 24(1):139-46.
 18. Lindberg B, Axelsson K, Öhrling K. The birth of premature infants: experiences from the fathers' perspective. *J Neonat Nurs*. 2007; 13(4):142-9.
 19. Zargham-Boroujeni A, Mahdavi-Lenji Z, Hasanpour M, Sadeghnia A. Discovering the barriers to spread the usage of peripherally inserted central venous catheters in the neonatal intensive care units: a qualitative research. *Iran J Nurs Midwifery Res*. 2013; 18(4):259.
 20. Hynan MT. Supporting fathers during stressful times in the nursery: an evidence-based review. *Newborn Infant Nurs Rev*. 2005; 5(2):87-92.
 21. Feeley N, Waitzer E, Sherrard K, Boisvert L, Zerkowitz P. Fathers' perceptions of the barriers and facilitators to their involvement with their newborn hospitalised in the neonatal intensive care unit. *J Clin Nurs*. 2013; 22(3-4):521-30.
 22. Værland IE, Vevatne K, Brinchmann BS. Fathers' experience of starting family life with an infant born prematurely due to mothers' severe illness. *Sex Reprod Healthc*. 2017; 13:8-13.
 23. Ekas NV, Whitman TL, Shivers C. Religiosity, spirituality, and socioemotional functioning in mothers of children with autism spectrum disorder. *J Autism Dev Disord*. 2009; 39(5):706-19.
 24. Rosenbaum JL, Smith JR, Zollfrank R. Neonatal end-of-life spiritual support care. *J Perinat Neonat Nurs*. 2011; 25(1):61-9.
 25. Brelsford GM, Doheny KK. Religious and spiritual journeys: brief reflections from mothers and fathers in a neonatal intensive care unit (NICU). *Pastoral Psychol*. 2016; 65(1):79-87.
 26. Heidari H, Hasanpour M, Fooladi M. Stress management among parents of neonates hospitalized in NICU: a qualitative study. *J Caring Sci*. 2017; 6(1):29-38.