Original Article

Comparison of Nurses and Parents' Viewpoints Regarding the Needs of Parents of Premature Infants in Neonatal Intensive Care Units

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Abstract

Background: The birth of a premature infant and her/his hospitalization can cause the parents to experience a variety of needs. Understanding the needs of parents by nurses can lead to provision of high quality care to premature infants. This study aimed to compare the parents' and nurses' viewpoints regarding parents' needs in the neonatal intensive care units (NICU). **Materials and Methods:** In this descriptive cross-sectional study, 63 nurses, 120 mothers, and 120 fathers, who met the inclusion criteria, participated. Nurses were selected through a census method and parents through a simple convenience sampling method. Data were gathered using a researcher-made questionnaire and were analyzed using descriptive-analytic statistical methods in the Statistical Package for the Social Sciences software version 16. **Results:** From the viewpoint of mothers, the need for assurance with a mean score of 87.4 was the most important and the need for support with a mean score of 71.37 was the least important need. From the perspective of fathers, the need for assurance with a mean score of 78.5 was the most important and the need for support with a mean score of 51.20 was the least important need. From the viewpoint of the nurses, the need for assurance with a mean score of 77.6 was the most important and the need for support with a mean score of 59.77 was the least important need. The mean scores of the needs of mothers in all subscales were higher than that of the fathers' and nurses' ($P < 0.001$). **Conclusions:** From the viewpoint of nurses, the scores of parents' needs were significantly less than that of the parents' for all subscales. It is suggested that appropriate education programs be provided for nurses regarding how they can understand parents' needs to provide high quality care.

Keywords: *Iran, needs, neonatal intensive care units, nurses, parents, premature infants, viewpoint*

Introduction

Childbirth is a transitional phase in the life of every pregnant woman, and the role of a mother can be stressful. However, the birth of a premature or sick baby turns all the plans, hope, and joy of the family into despair, concern, and confusion, resulting in experiencing mental stress. Every year, approximately 12.5 million low birth weight (LBW) babies are born. The statistics of premature birth in developing countries is approximately 9.61%. Many of these babies are admitted to the neonatal intensive care units (NICUs).[1] In Iran, general statistics of frequency for preterm birth is not available. Nevertheless, a cross-sectional study in Yasouj, Iran, showed that the incidence of premature birth was 4–8%,[2] with most babies admitted in NICUs. NICU is equipped with highly advanced technologies and devices and provokes intense feelings of fear and anxiety in parents.[3] The presence of sources of stress in the NICUs disrupts the process of attachment between the mother and child and affects the effective communication between father, mother, and their child, also leading to parents' emotional incompatibility.[4] Parents need to receive help from nurses for adapting to these conditions.[5] Nurses are in a strategic position to help parents learn about their baby's condition.[6] Nurses can reduce stress in parents by supporting and providing them with all the required information, as well as provide better care for their infants by creating a calm environment.[7] In addition, supporting the parents will increase their satisfaction, thereby, leading to an increase in mother–infant attachment.[8]

The nurse's ability to recognize the difference between stress and need is very

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important. Need is a disadvantage status in events, necessity, and shortcoming that is identified by judgment and varies for different ages and communities.[9] Nurses should consider not only the needs of hospitalized children but also the needs of their parents.[10] Unfortunately, as technology improves in the NICUs, the nurses' workload increases and they face challenges regarding supporting and understanding the parents' needs.[11] They also have perceptions regarding family needs, which in most cases are not compatible with the true needs.[12] Therefore, nursing care may fail to meet these needs.[13] Studies conducted so far have been mainly devoted to the needs of parents, and few studies have been conducted on the comparison of the perspectives of parents and nurses in relation to parents' needs. For example, a study conducted in 2010 by Vaskelyte and Butkeviciene showed that there was a significant difference between nurses' and parents' perspective regarding the needs of parents with premature infants admitted to the NICU.[10] The difference in perspective creates a gap between the care provided by the nurses and the care that was expected by the parents. Moreover, because parents' needs are not met appropriately, parental stress increases and a crisis situation arises.[14] By building an effective relationship with parents, nurses can recognize which requirement has high priority for parents considering their situation, and as a result, can understand parents' attitudes and motivations resulting from their needs.[15] They can increase parental satisfaction by addressing their needs, facilitating the infant–parent attachment process, and improving their family relationships.[16] Because of a lack of studies on the comparison of the perspectives of parents and nurses in this field, especially the lack of attention to fathers' views and social and cultural differences, which are a contributing factor in individual needs, research in this field appears necessary. The importance of paying attention to the needs of parents in family-centered care planning gives rise to the questions: "How close are the nurses" perspectives to the parents' needs in the NICUs of Iran compared to the views of the parents?" and "Do they also prioritize parental needs based on their perception due to shortage of time and high stress in the NICU?" Therefore, this study aimed to compare the perspectives of parents and nurses regarding the needs of parents with premature infants hospitalized in NICUs.

Materials and Methods

This was a cross-sectional, descriptive, comparative study (from August 2014 to May 2015). The participants consisted of 120 parents (120 fathers and 120 mothers) of premature infants admitted to the NICU selected via the simple continuous method and 63 NICU nurses were selected via the census method. The required sample size was calculated with 95% confidence interval, 80% test power, and assuming that the mean score of parents' needs in the NICU from the perspective of parents had at least d = 0.4 S and from the nurses' perspective d = 0.5 S difference to be considered statistically significant, and using the formula $N = (Z_1 + Z_2)^2 (2s)^2/d^2$. The research environment included Alzahra, Shahid Beheshti, and Amin hospitals affiliated to the Isfahan University of Medical Sciences, Isfahan, Iran. The inclusion criteria for the included parents having an infant with a gestational age of 28–34 weeks and seeing the baby at least once after 48 hours of hospitalization in the NICU. The inclusion criteria for the nurses included having a bachelor's degree and at least 6 months of experience of working in the NICU. The data collection tool was a two-part questionnaire. The first part included a demographic characteristics questionnaire and the second part included the Neonatal Intensive Care Unit Family Needs Inventory (NFNI) designed by Ward, which assessed the parents' needs.[9] First, the questionnaire was translated and distributed among a group of professors at the Department of Pediatrics, School of Nursing and Midwifery of Isfahan University of Medical Sciences and one neonates specialist. Then, their opinions were collected, and revisions were applied and the questionnaire was modified based on their suggestions, the studied literature, and interviews with parents. In order to determine the reliability of the questionnaire, the questionnaires were handed to 10 members of the nursing staff in the NICU and 10 parents of premature babies. The collected data were then entered into the Statistical Package for the Social Sciences software (version 16, SPSS Inc., Chicago, IL, USA) and using internal consistency, Cronbach's alpha reliability coefficient was determined as 0.92. The edited questionnaire had 59 items in 6 areas of assurances (11 items), support (16 items), information (9 items), proximity to the infant (7 items), physiological needs (2 items), and environment and equipment (14 items). The range of scores in the areas of assurance, support, and information, proximity to the infant, physiological needs, and environment and equipment was 0–44, 0–64, 0–36, 0–28, 0–8, and 0–56, respectively. Because the scores of parents' needs had different ranges in the areas, to compare these aspects with each other, all the scores were based on 100, and *P* value of less than 0.05 was considered to be significant. The participants were expected to complete the questionnaires as self-report. For parents who were illiterate, the questionnaires were completed through interviews. Data analysis was performed using descriptive statistics, such as mean, standard deviation, percentage, and frequency distribution, and one-way analysis of variance (ANOVA), least squares difference (LSD) *post hoc* test, and independent *t*-test.

Ethical considerations

The researcher conducted the necessary coordination with the head and Research Deputy of the Department of

Nursing and Midwifery of Isfahan University of Medical Sciences, and by obtaining a letter of introduction referred to Alzahra, Shahid Beheshti, and Amin hospitals. After fully explaining the research objectives to and obtaining an informed consent from the parents and nurses, the questionnaire was handed to them in a quiet environment.

Results

Based on the demographic findings, 57.5% of the infants were girls and 42.5% were boys with a gestational age of 28–33 weeks and mean birth weight of 1880 grams. 72.66% of them were the first child of the family and a majority of them (52.5) were hospitalized due to respiratory distress syndrome. Mothers participating in the study were in the age group of 14–46 years. Moreover, 16.5% had a history of infertility, and a majority of them had secondary school diploma degree (55.4%), were housewives (90.9%), and had visited their babies for an average of 9 days. Fathers participating in the study were in the age group of 23–48 years, and the majority of them had secondary school diploma degree (60.3%) and were self-employed (76%). Furthermore, 20% of them had a history of infertility and had visited their babies for an average of 7 days. Nurses in this study were in the age group of 25–52 years, and 74.2% of them were married. They had an average of 12 years of experience in the NICU, and most of them (82.3%) worked in rotation shift.

The mean score of the mothers', fathers', and nurses' perspectives regarding the needs of parents are presented in Table 1. Regarding the mothers' view, the need for assurance with a mean score of 87.4 (12.01) had the most importance and the need for support with a mean score of 71.37 (18.09) had the least importance. From the perspective of the fathers, the need for assurance was the most important with a mean score of 78.5 (15.7) and the need for support with a mean score of 51.20 (21.36) was the least important. From the viewpoint of the nurses, the need for assurance was also the most important with a mean score of 77.6 (14.2) and the need for support with a mean score of 59.77 (19.17) was the least important. One-way ANOVA results showed that the mean score of the needs of parents of hospitalized premature babies had significant differences in all aspects in the three groups (mothers, fathers, and nurses) ($P < 0.001$). LSD *post hoc* test also showed that the mean scores of mothers in all dimensions were significantly higher than the other two groups ($P < 0.001$). In addition, the mean scores of the fathers' needs regarding assurance, proximity to the infant, and information were higher than the nurses. Nevertheless, their scores in the areas of support, physiological needs, and environment and equipment were lower than the nurses. However, the difference in some of these areas was not statistically significant [Table 2].

Discussion

Results showed that the parents' needs in the areas of assurance and information were the most important from the perspective of each of the three groups of mothers, fathers, and nurses. Nevertheless, the mean scores of the mothers in these areas were higher than the fathers and the nurses. However, the need of the parents in the area of support in each of the three groups was considered as the least important need. Yet, the score of the mothers' needs in this area was significantly higher than that of the fathers and nurses. The time of parents' completion of the questionnaires was an average of 1 week after the baby was hospitalized. During these days, most parents felt shocked and uncertain and became anxious; thus, they were unable to hear the explanations provided by nurses and to participate in the process of care. Perhaps this situation was a reason for the parents' higher scoring of the needs for information and assurance areas. The results of the present study were consistent with previous studies. Studies conducted by Ward[9] and Vaskelyte *et al*.[16] also showed that the need for assurance and information were the most important needs, and the need for support was the least important.

Mundy, in a study among 43 mothers and 17 fathers (non-dependent), found that the need for assurance was the most important need, and there was no significant difference between the needs of mothers and fathers.[12] However, in the present study, the mean score of the mothers' needs was significantly higher than that of the fathers. This difference was due to the fact that

Table 1: Mean scores of the points of view of nurses, mothers, and fathers regarding the needs of parents of premature infants hospitalized in NICUs

Subscale	Mean (SD)			*F*	*P*
	Nurses	Mother	Father		
Assurance	77.60 (14.26)	87.04 (12.01)	78.55 (15.73)	14.51	<0.001
Proximity to the infant	71.11 (14.83)	85.99 (14.24)	70.26 (19.98)	31.93	<0.001
Information	70.48 (15.84)	85.43 (14.77)	71.83 (18.04)	26.15	<0.001
Physiological needs	68.81 (25.15)	77.68 (24.10)	66.38 (24.72)	27.01	<0.001
Environment and equipment	64.54 (24.79)	73.48 (20.89)	57.48 (20.54)	6.79	<0.001
Support	59.77 (19.17)	71.37 (18.09)	51.20 (21.36)	16.67	<0.001
Total	68.71 (15.36)	79.01 (13.78)	63.53 (16.28)	31.19	<0.001

Table 2: Pairwise comparison of the mean scores of the points of view of nurses, mothers, and fathers regarding the needs of parents of premature infants hospitalized in NICUs

Subscale Group	Assurance	Proximity to the infant	Information	Physiological needs	Environment and equipment	Support	Total
Mother and father	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nurses and mother	<0.001	<0.001	<0.001	<0.02	<0.008	<0.001	<0.001
Father and nurses	<0.679	<0.01	<0.600	<0.528	<0.037	<0.006	<0.031

The results of LSD post hoc test: pairwise comparison of the mean scores of the points of view of nurses, mothers, and fathers regarding the needs of parents of premature infants hospitalized in NICUs.

the mothers and fathers participating in this study were couples, however, in the study by Mundy, the mothers and fathers were unrelated.

Results showed that the mean score of fathers in areas of support and environment and equipment was significantly lower than the mean score of nurses in these areas. In the NICUs of Iran, only mothers are allowed to stay in the ward and fathers are permitted once daily for only a short amount of time; therefore, fathers do not have sufficient understanding of these needs. Thus, the importance of this need was less from fathers' perspectives compared to nurses who had several years of experience in the NICU.

Despite the fact that fathers, like mothers, are also put in a vulnerable position with hospitalization of their infant,[17] and also requiring training and support in order to contribute to caregiving for their infants,[18] results showed that the mean score of mothers in all the areas of parents' needs was higher than the fathers. This may be due to the fathers' inability to stay at the hospital and care for their babies, which results in their inability to express their real expected needs as a parent.

One of the important roles of nurses is providing support.[19] Wigert *et al*. conducted a study regarding the strengths and weaknesses of parents' and nurses' relationships in the NICU.[20] They concluded that nurses, by supporting the parents and providing them with complete and comprehensive information, reduce their stress and empower them in providing care for their babies. They also found that by providing a calm environment for the parents and working closely with them to facilitate parent–infant attachment, nurses can strengthen parents' sense of confidence, and thus, provide better care for the newborns.[20] When nurses underestimate the need for being supported, they do not seek to meet the needs of parents, which leads to stress, and hence, interfere with parental roles.[7]

The present study showed that the need for support in all the three groups had the least importance and nurses scored the least in this area. This finding could be due to the low ratio of nurses-to-patients in the NICUs of Iran; and hence nurses prioritize their tasks and communicate less with the mothers, and are not aware of this need. Climatic, cultural, and social differences affect the parents' understanding of their own needs. The challenges parents are faced with are also not the same in different societies. Moreover, various factors, such as the number of nurses, personnel's way of meeting parents' needs, and the policies of the wards, affect the views of parents and nurses regarding parents' needs. Because of the abovementioned factors and given that the present study was only conducted in grade three NICUs, its results cannot be generalized to other NICUs in Iran.

The limitations of this study were the cultural and personality characteristics of the participants, and the unequal ratio of nurses to parents. Therefore, the results of this study cannot be generalized to other cities and centers with people of different cultures in different parts of Iran. Similar studies in other cities are suggested.

Conclusion

In the present study, according to the rules of the ward, the fathers were permitted to visit their babies once a day. The results showed a significant difference between nurses' and parents' viewpoints regarding the needs of parents of premature infants admitted to the NICU. This difference leads to a gap between the care provided by the nurses and the care that is expected by the parents. It is recommended that nurses prioritize establishing suitable communication with parents as part of their duties. In this manner, nurses can understand parents' real needs, and thus, increase their satisfaction, provide better care for infants, and facilitate parental participation in the care process by providing their needs.

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Conflicts of interest

There are no conflicts of interest.

References

1. Beck S, Wojdy D, Say L, Betran A, Merialdi M, Harris J, *et al*. The worldwide incidence of preterm birth: A systematic review

of maternal mortality and morbidity. Bull World Health Organ 2010;88:31-8.
2. Abdeyazdan Z, Ghassemi S, Marrofi M. The effects of earmuff on physiologic and motor responses in premature infants admitted in nicu. Iran J Nurs Midwifery Res 2014;19:107-12.
3. Obeidat HM, Bond EA, Callister LC. The Parental Experience of Having an Infant in the Newborn Intensive Care Unit. J Perinat Educ 2009;18:23-9.
4. Heidari H, Hasanpour M, Fooladi M. The experiences of parents with infants in Neonatal Intensive Care Unit. Iran J Nurs Midwifery Res 2014;3:208-13.
5. Sargent AN. Predictors of needs in mothers with infants in the neonatal intensive care unit. J Reprod Infant Psychol 2009;27:195-205.
6. Novak JC. Facilitating nurturing fathering behaviour in the NICU. Neonatal Netw 1990;12:68-77.
7. Maxwell KE, Stuenkel D, Saylor C. Needs of family members of critically ill patients: A comparison of nurse and family perceptions. Heart Lung 2007;36:367-76.
8. Ghadery-Sefat A, Abdeyazdan Z, Badiee Z, Zargham-Boroujeni A. Relationship between parent–infant attachment and parental satisfaction with supportive nursing care. Iran J Nurs Midwifery Res 2016;21:71-6.
9. Ward K. Perceived needs of parents of critically ill infants in a neonatal intensive care unit (NICU). Pediatr Nurs 2001;27:281-6.
10. Vaskelyte A, Butkeviciene R. Needs of parents with premature newborns in the Neonatal Intensive Care Unit: Parents' and nurses' perceptions. Medicina 2010;46:43-53.
11. Johnson AN. Engaging fathers in the NICU: Taking down the barriers to the baby. J Pediatr Nurs 2008;22:302-6.
12. Mundy CA. Assessment of family needs in neonatal intensive care units. Am J Crit Care 2010;19:156-63.
13. Punthmatharith B, Buddharat U, Kamlangdee T. Comparisons of needs, need responses, and need response satisfaction of mothers of infants in neonatal intensive care units. J Pediatr Nurs 2007;22:498-506.
14. Latour JM, Hazelzet JA, Duivenvoorden HJ, Goudoever JB. Perceptions of parents, nurses, and physicians on neonatal intensive care practices. J Pediatr 2010;157:215-20.
15. Reis MD, Rempel GR, Scott SD. Developing Nurse/Parent Relationships in the NICU. JOGNN 2013;13:675-83.
16. Vaskelyte A, Butkeviciene R, Klemmac D. Assessing needs of families with Premature newborns in the Neonatal Intensive Care Unit. Medicina 2009;45:320-6.
17. Shellabarger SG, Thompson TL. The critical times: Meeting parental communication needs throughout the NICU experience. Neonatal Netw 1993;12:39-45.
18. Goldstein LA. Family support and education. J Pediatr 2013;33:139-61.
19. Kavanaugh K, Moro TT, Savage T, Reyes M, Wydra M. Supporting Parents' Decision Making Surrounding the Anticipated Birth of Extremely Premature Infant. J Perinat Neonatal Nurs 2009;23:159-170.
20. Wigert H, Dellenmark MB, Bry K. Strengths and weaknesses of parent communication in the NICU: A survey assessment. BMC Pediatr 2013;7:13-71