

## Importance and Availability of Nursing Support for Mothers in NICU: A Comparison of Opinions of Iranian Mothers and Nurses

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### Abstract

**Objective:** The current study was conducted to compare the opinions of mothers and nurses on the importance and availability of nursing support for parents with premature infants hospitalized in NICU. There is no overall picture of the nursing support for parents with hospitalized premature infants in Iran. Nurses, providing care in NICU, must view parent as an essential partner in care. But what is the situation? Assessing the viewpoints of both parents and nurses regarding the importance and availability of nursing support can elucidate this situation.

**Methods:** A comparative descriptive design was used. The population consisted of all mothers with hospitalized premature newborns in NICU (n=300) and all NICU nurses (n=32) in three teaching hospitals in Tabriz (Iran), in 2007. Data was collected through the NPST questionnaire. Data analysis was done with SPSS.

**Findings:** Mann-Whitney test showed that there were significant differences between nurses and mothers on four subscales of nursing support. Generally, mothers scored every subscale lower than nurses who cared for them and their children. On the other hand, it could be said that NICU nurses claimed more importance for the subscales and rated the provided support higher in comparison with mothers who did not think so.

**Conclusion:** The opinions of the nurses and mothers toward the availability and importance of the nursing supports in NICU were different. This study provides nurses with concrete information in order to better understand parents' need for support and try to meet their expectations, resulting in improved nursing care in neonatal intensive care units.

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**Key Words:** Premature Infant; Nursing Support; Mother; Neonatal Intensive Care Units

### Introduction

Recent advancements in science and technology have prolonged the survival of many newborns, even those with lower gestational ages. Approximately 12% of the infants are born prematurely which means that they are born before 37 completed weeks of gestation. Premature birth confronts infants with an

extended range of dangers and problems<sup>[1]</sup>. The infant is often treated for a long period at the neonatal unit depending on the degree of prematurity and severity of the illness<sup>[2,3]</sup>. So, hospitalization of premature newborns is inevitable most of the time.

The stressful nature of the Neonatal Intensive Care Unit (NICU) environment for the parents of the ill infants is well documented<sup>[4]</sup>. Preterm birth

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threatens not only the well-being of the affected infant, but also the well-being of the family members and the family system<sup>[5,6]</sup>.

It is conceptualized that nursing support of the parents of hospitalized children would help parents to maintain their role as a parent and to reduce stress<sup>[7]</sup>.

Nurses are in a unique position to help parents, as they provide care not only for the sick infant but also for the stressed parents<sup>[8]</sup>. There has been a number of studies which have explored the extent of nursing supports for parents with hospitalized premature infants<sup>[8-13]</sup>. However, most of the above-mentioned studies have considered the viewpoints of the parents, disregarding the viewpoints of the care givers. The present study was done in an Iranian context in an effort to address the following questions:

- Is there a difference between the opinions of the parents and nurses regarding the importance of the support provided by nurses for parents with hospitalized premature newborns in NICU?
- Is there a difference between the opinions of the parents and nurses regarding the availability of the support provided by nurses for parents with hospitalized premature newborns in NICU?

## **Subjects and Methods**

A comparative descriptive design was chosen to allow the examination of the opinions of mothers and nurses regarding the importance and availability of the support provided by nurses for parents with hospitalized premature infants in NICU.

The study population consisted of all mothers with hospitalized premature newborns (n=300) and nurses (n=32) in NICUs of three teaching hospitals affiliated to Tabriz University of Medical Sciences, Iran. This study was done during the first 6 months of the year 2007. The included individuals were mothers who had premature newborns (gestational age less than 37 weeks), without abnormality, hospitalized in the NICU for at least one week and nurses who worked at least once a week during the six months of research implementation in those NICUs.

Data was collected from mothers after their

children were discharged from NICU and on the first day of admission to the neonatal ward. After informing mothers about the purpose of the study, the questionnaires were completed through individual interviewing with mothers and in the end of the six months, NICU nurses completed the questionnaires.

The Nurse Parent Support Tool (NPST), developed by Miles, Carlson, and Brunssen in 1998 was used for data collection<sup>[9]</sup>. The tool consists of 21 items classified into four subscales: information giving and communication support (9 items); emotional support (3 items); esteem support (4 items) and quality care-giving support (5 items)<sup>[9]</sup>. The parents were asked to rate the NPST, which addressed two aspects of each item on a five-point Likert scale; initially, the level of the importance of the nursing support and then, the amount of support they received from the nursing staff. The rating of the level of importance of the nursing support was from 1 'not important' to 5 'very important'. For emotional support, the range of scores were from 1 'almost never' to 5 'almost always'<sup>[9]</sup>.

The validity of the scale for our samples was determined through content validity with the cooperation of ten faculty members of Nursing-Midwifery School of Tabriz, Iran, and also the accuracy of the translation was assessed. For this reason, the original questionnaire was translated into Persian by the researchers and then backward translation to English was done by one English language expert. Finally, the researchers compared the original questionnaire with the translated questionnaire. Reliability of scale was determined by Cronbach's alpha (0.9 for mothers and 0.96 for nurses) with participation of 30 mothers and 6 nurses indicating adequate reliability.

Although the NPST was prepared for parents, researchers changed verbs in items for nurses and used items in the third person format for mothers and first person for nurses. For example, in mothers' sheet, it was "nurses allowed me to be involved in my child's care whenever possible" and in nurses' sheet it was "I allow parents to be involved in their child's care whenever possible". Permission for data collection was obtained from the deans of the hospitals and nurse managers. The nurses and mothers were informed verbally regarding the purpose of the study and were

subsequently asked to decide whether or not to participate. In addition, the nurses and mothers were informed that all responses would be confidential. To ensure confidentiality, no names were used. Participation in the study was voluntary. Mother's and nurses' consent was implied by participating in interview and returning completed questionnaires, respectively. Ethical approval of the research was obtained from the Research Office of Tabriz University of Medical Sciences.

Data analysis was done with SPSS. For NPST scale, the Mann-Whitney test was used to determine any significant differences in the two independent groups (mothers and nurses). Two-tailed *P* values less than 0.05 were considered to be significant.

## Findings

### Demographic profile

**Mothers:** From 300 participating mothers, 55.3% had their first delivery and 62% had a cesarean section. Regarding the education level of the mothers, about 7% of them had finished college or obtained a bachelor's degree, 34% had a high school diploma, 26% had secondary school education, and 33% had primary school education or were illiterate. Most of them (94%) were housewives, 4.3% had a governmental job and 1.7% worked in the private sector. The mothers' age ranged from 15 to 41 years (mean=25.57, SD=5.6) and 98.3% of them had no NICU experience before.

**Infants:** Majority (64%) of the infants were the

first child of the family, 61% of the newborns were male, birth weight ranged between 500 and 3500 gr (Mean=1685, SD=614), gestational age was between 20 and 36 weeks and the duration of the hospitalization ranged from 8 to 90 days (Mean=18 days). About 66.4% of the premature infants in our study were in incubator, 23.3% were ventilated and the rest were under phototherapy and oxygen therapy using hoods or tents.

**Nurses:** In the current study, nurses had a mean age of 31 years, mean work experience of 10 years and mean NICU work experience of 5 years. About 68% were married and 32% single. About 62 percent of the married nurses had at least one child.

There was a statistically significant difference in the importance of all subscales of nursing support between nurses and mothers, except for communication- information (Table1).

There was a statistically significant difference in the four subscales of provided nursing supports from the viewpoint of the nurses and mothers (Table 2). Also, mothers rated the importance and availability of supports in four subscales lower than nurses.

## Discussion

The findings of this study demonstrate the nurses' perception of mothers' supportive needs and the importance of providing support for mothers with hospitalized premature newborn in NICU.

Statistical analysis of this project showed a significant difference between mothers and nurses

**Table 1:** Mean values of mothers (n=300) and nurses (n=32) regarding the importance of nursing support subscales and their comparison

Provided nursing support subscales		Mean (SD)	Mean rank	Mann-Whitney U	P value
Communication-information	mother	3.75 (0.33)	163.4	4036	0.1
	nurse	3.86 (0.50)	197.97		
Emotional	mother	3.65 (0.48)	163.95	3793	0.046
	nurse	3.71 (0.68)	190.38		
Esteem	mother	3.23 (0.38)	160.89	3118	0.001
	nurse	3.56 (0.52)	219.06		
Quality care-giving	mother	3.71 (0.39)	157.82	2194.5	0.001
	nurse	4.15 (0.64)	247.92		

SD: Standard Deviation

**Table 2:** Mean values of mothers (n=300) and nurses (n=32) regarding provided nursing support subscales and their comparison

Provided nursing support subscales		Mean (SD)	Mean rank	Mann-Whitney U	P value
Communication-information	mother	2.1 (0.55)	151.62	335.5	<0.001
	nurse	3.82 (0.56)	306.02		
Emotional	mother	1.73 (0.59)	150.6	47	<0.001
	nurse	3.54 (0.63)	315.03		
Esteem	mother	1.54 (0.48)	151.15	195	<0.001
	nurse	3.39 (0.56)	310.41		
Quality care-giving	mother	3.44 (0.33)	154.04	1063	<0.001
	nurse	4.18 (0.51)	283.28		

SD: Standard Deviation

on support (all subscales) and the importance of support (all subscales except for communication and information). This exception can be due to the less statistical power secondary to the sample size of the nurses, which could not be avoided because of the few available NICU nurses in our research field.

Generally, mothers scored every subscale (both about the importance and provided support) lower than the nurses who provided care for them and their children. On the other hand, it could be said that NICU nurses claimed more importance for the subscales and rated the provided support higher in comparison with mothers who did not think so.

In reviewing the literature, no data was found on the comparison of the viewpoints of mothers and nurses regarding the importance and availability of support of the nurses for parents with hospitalized premature newborn in NICU; especially using NPST. However, the results of previous researches concerning professionals' and parents' perspectives regarding other fields such as caring for children with chronic conditions [14,15] and caring for a hospitalized family member in the Intensive Care Unit [16] have indirectly addressed the differences between these two groups and reported inconsistencies between the assessment of the professionals and the clients regarding support, the notion that the members of different social sectors hold different perspectives of illness and health care, and the differences in action on the basis of their own beliefs and values [17]. This study supports the premise that mothers and nurses see available support and its importance from different viewpoints.

With an accurate assessment of results, it is revealed that mothers rated three of the four

subscales in NPST lower than moderate (Table1). They rated "Quality care giving" higher than moderate. There is little empirical support for the above-mentioned issue, but Boxwell stated that neonatal nurses generally focused on the technical components of clinical care and added that few nurses came to neonatology to care for parents and that nurses' reasons for working in the area were usually providing care for sick infants and working with intensive technology [18]. Furthermore, Griffin, Wishba, and Kavanaugh described nurses as directing their energies towards their patients' physical needs. As they noted, physical care may temporarily take priority over the family's needs [19].

On the other hand, nurses in our study rated all four subscales in NPST supports availability more than moderate. As mentioned, it may have resulted from what Boxwell and Griffin et al claim, highlighting the difference between the viewpoints of nurses and mothers of premature newborns regarding delivered and received nursing supports in NICU [18,19].

Bruce and Ritchie assessed perception of nurses about family centered care activities. They noticed that all of the items were important and necessary in family centered care. However, although nurses claim that they are well aware of their importance, they do not regard them in their routine [20].

As Boxwell stated, it is obvious that parents in NICU want to participate in care activities and also want the staff to help them understand and anticipate the infants changing physical appearance and to provide them with honest and accurate information about the infants condition [18]. Bialoskurski, et al showed that the need for accurate infant-related information was a

priority for 93% of the parents. Good communication skills with professionals were also valued [10]. Jackson, et al concluded that from the viewpoint of mothers, nurse's knowledge was important, as well [21].

Seideman, et al revealed that for parents, information regarding their child's progress, good physical technical care and information/communication support were the most helpful items in coping with their child's hospitalization [22]. In this regard Mundy 2010 study answered two questions of Do parents' needs differ at admission and discharge? And Do the needs of mothers and fathers differ? The study showed the parents at admission rated support needs higher than parents at discharge rated those needs. Needs of mothers and fathers did not differ significantly [23].

Furthermore, Davis et al 2003 study showed that increased perception of support from nursing staff resulted in decreased likelihood of maternal depressive symptoms [24]. Heermann et al (2005) through qualitative study about mothers' experience of becoming a mother while their infants were receiving care in the NICU showed that mothers developed from outsider to engaged parent along four continua: (1) focus: from NICU to baby; (2) ownership: from their baby to my baby; (3) caregiving: from passive to active; and (4) voice: from silence to advocacy. Mothers entered the continua at different points and moved at different rates toward "engaged parenting." The final stage, partnering, required active participation of nurses. Mothers' development evolved in predictable patterns. The results of this study can be considered in implementation and evaluation plans for NICUs moving to family-focused developmental care [25].

While nurses and other health care workers provide specialized care for sick and premature infants in hospital, many mothers struggle with limitations in their maternal role [26]. Nurses who engage with mothers are good listeners and share their observations with the mother. They also talk about the infant with the mother, asking open ended questions which allow the mother to feel like they are 'good' mothers, who are involved in their baby's care [27]. Neonatal staff must act as role models, be open to answering questions and be supportive of the mothers concerns [28,29]. Therefore nurses need to be aware of their authority and positively assert non-judgmental,

trustful and open relationships with mothers. Practice standards should reflect nursing commitment to support open relationships where nurses engage with mothers to ease their anxiety. Staff education should aim towards positive communication and support to provide family focused care [30]. Kim et al 2011 work - titled Family-Provider Alliance Program in Intensive Care Units - indicated that family—nurse therapeutic alliance explained 7.2% and 11.4% of the variance in nurses' job satisfaction and perceived quality of care, respectively. The Program was marginally effective in improving nurses' perception of family empowerment. The quality of family—nurse therapeutic alliance predicted small to moderate fractions of the variance in nurses' job satisfaction and perceived quality of care [31].

**Study limitation:** In this study it seems that the gestational age and medical condition of preterm infants can affect mothers' responses. Other limitation is related to facilities in the ward or hospital that can affect the mothers and the nurses' responses.

## Conclusion

The results of this study confirmed that the opinions of nurses and mothers toward the availability and importance of the nursing supports provided for parents with hospitalized premature infants in NICU were different.

Considering the results of the current study, providing better support for parents in neonatal intensive care units through supporting an individual parent (especially mothers) is an option.

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**Conflict of Interest:** None

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