Viewpoint of Mothers of Premature Newborns about Nursing Supports in Neonatal Intensive Care Units

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Abstract

Introduction: Prematurity is the leading cause of mortality in newborns without congenital anomalies worldwide. A premature newborn has a devastating effect on parents'roles, especially the mothers', and creates sentimental and vague feelings for mothers. Although advances in technology and high levels of nursing care provide mothers with adequate support and relative independence in child care, it is practically difficult to terminate nursing care and leave it to the mothers.

Objective: The present study aimed to determine the viewpoints of mothers of premature newborns about the importance and amount of the support received from nurses.

Materials and Methods: This cross-sectional study was conducted with a gradual approach over three months on 160 mothers of premature newborns with a history of hospitalization for at least 24 hours in NICUs of Rasht educational-medical centers in 2014.Data collection tool was a mother/child demographic questionnaire and the 21-item Nurse-Parent Support Tool. Data was analyzed using descriptive statistics (mean and standard deviation) and inferential statistics (Spearman's correlation coefficient).

Results: The results showed that the highest and lowest amounts of support received by mothers were in the care giving support (69.87±3.0) and parental esteem (96.85±2.0), respectively. Also, according to the mothers, care giving support (39.7±4.0) was the most and emotional support (75.0±3.99) was the least important domain. The results revealed a significant relationship and inverse correlation between the mean score of giving and receiving parental esteem (r = -0.184, p = 0.02) and the mean total score of giving and receiving support from the viewpoint of mothers and nurses (r = -0.183, p = 0.012).

Conclusion: Mothers would like to have the highest amount of support in providing the best care for their newborns. Mothers' most dissatisfaction was with the supportive communication and parental esteem domains which were important for mothers but received little attention from nurses. Therefore, these domains should be addressed and ways should be introduced for their provision in family-centered care.

Keywords:**Mothers, Premature Infant, Nursing Care, Neonatal Intensive Care Units**

Introduction

Prematurity or gestational age less than 37 weeks from mother's last menstruation is the most important health indicator in any society [1].Unfortunately, despite extensive efforts to prevent preterm labor, premature newborns and low birth weight; they comprise a high proportion of live births [2].About 13 million premature babies are annually born in the world [3].Iranian studies reported prematurity rate from 5.5% in Shiraz [4] to 8.21% in Arak [5].According to global statistics, 60 - 80% of deaths among infants without congenital anomaly are caused by prematurity [6].Generally, prematurity can lead to dysfunction of each body organ or system; therefore premature infants are at risk of a variety of problems [7].Neonatal Intensive Care Unit (NICU) is one of the wards that cause anxiety in mothers if their newborns are admitted to it. NICU creates a source of fear and anxiety in parents, especially in mothers, because they should play a supporting role for other family members in addition to overcoming these stressful situations [8].Roughly 28-70% of mothers of premature newborns experience high levels of stress. Such stress and anxiety are more than those in any other mothers, with a negative impact on the mother-infant relationship and infant development outcomes in future [9].Nursing care supports parents, especially mothers, until they can adequately care for their baby and reach a relative independence. However, termination of nursing care of newborns and leaving them to mothers is often practically difficult, which is considered a crisis for mothers of premature newborns [10].

Mothers of premature newborns often complain about the incomplete information provided by healthcare workers about the condition and treatment of their newborns [11]. Kohan et al. studied the experiences of mothers of newborns hospitalized in NICUs and reported that mothers face three basic problems of "dealing with unfamiliar situations" (including NICU and unawareness about the care of premature babies); "the need to be understood" (family's need for support from healthcare team, especially nurses), and "loss of control over the newborn" (limited participation in care and unpredictability of newborn's condition) [12].In fact, the parents of these infants have less confidence [13].The influence of nurses over mothers can empower them in coping with stressors and providing a good maternal role [14].Mothers' experiences in hospitals show that there is insufficient information support, including provision of transparent information to mothers about the condition of the newborn, parental rights and responsibilities during neonatal hospitalization and emotional support that includes listening to and helping the mother to cope with the newborn's disease [15].Therefore, the present study was conducted to determine the viewpoints of mothers of premature newborns about the importance and amount of support received from the nurses in line with the health system goals in Iran.

Materials and Methods

This cross-sectional descriptive-analytic study recruited all mothers with premature infants admitted to NICUs of teaching hospitals in Rasht in 2014.The sample size was determined based on the standard deviation of the mean score of received support in a study by Valizadeh and Akbarbegloo et al. [3], including 160 mothers of premature newborns selected gradually and non-randomly during three months (August-October).Inclusion criteria included mothers with premature newborns (gestational age under 37 weeks), whose newborns had no congenital abnormality, and were hospitalized for at least 24 hours in NICU.In this study, data was collected using two questionnaires. The first questionnaire consisted of mothers'

demographic information (age, marital status, educational level, number of deliveries, previous experience of hospitalization in NICU, number of children, family history of preterm labor or premature newborn, employment status, family economic status, place of residence) and newborns' demographic information (gestational age, gender, birth weight, duration of hospitalization). The second questionnaire was Nurse Parent Support Tool (NPST) designed by Margaret Miles in 1999.NPST has 21 items and four subscales of "emotional support, supportive communication, parental esteem, and care giving support". The scoring has two scales: (a) the importance of support (1=not important, 2=slightly important, 3=little important, 4=highly important, 5=extremely important); and (b) the amount of support received (1=almost never, 2=rarely, 3=sometimes, 4=often, 5=almost always) scored a 5-point Likert scale. This 21-item tool has 9 items for supportive communication(score=9-45); 3 items for emotional support(score=3-15); 4 items for parental esteem (score=4-20), and 5 items for care giving support(score=5-25).The final score in this tool ranges from 21 to 115 [16].The mean score for each domain

was between 5 and 1 and was obtained by dividing the total score of items by the number of items in that domain. Finally, the importance and amount of perceived nursing support according to the mothers' viewpoint was averagely classified as low (1-2.59), fair (3.59-2.60), and high (3.60-5).The validity of the tool was determined by content validity with the help of ten nursing and midwifery professors. The internal consistency of the tool was approved using Cronbach's alpha coefficient after conducting a pilot study on 20 eligible mothers (=0.98).

The researchers obtained an introduction letter from University Research Deputy and Ethics Committee and submitted it to the research setting authorities. Then they obtained written consents from the mothers and collected information through interviews 24 hours after newborns' hospitalization. Data was analyzed using descriptive statistics (frequency distribution, mean and standard deviation) and inferential statistics (Spearman correlation coefficient) in SPSS software version 20.The Kolmogorov-Smirnov test showed that data did not follow a normal distribution.

Table 1. The importance of nursing supporting according to the mothers

The Importance of Support	Frequency	Number (Percentage)
Mean and SD of importance of support in the supportive communications domain		4.18 ± 0.65
The importance of support in the supportive communications domain	Low	5 (3.1)
	Fair	22 (13.8)
	High	133 (83.1)
Mean and SD of importance of support in the emotional domain		3.99 ± 0.75
The importance of support in the emotional domain	Low	10 (6.2)
	Fair	18 (11.3)
	high	132 (82.5)
Mean and SD of importance of support in the parental esteem domain		4.13 ± 0.69
The importance of support in the parental esteem domain	Low	7 (4.4)
	Fair	22 (13.8)
	high	131 (81.8)
Mean and SD of importance of support in the caregiving support domain		4.39 ± 0.7
The importance of support in the caregiving support domain	Low	4 (2.5)
	Fair	13 (8.1)
	high	143 (89.4)

Results

The results showed that the majority of mothers (35.6%)were in the 22-27 age group, mostly nulliparous (60.6%), with natural delivery (74.4%), no previous experience of hospitalization (89.9%), the first child (59.4%), no family history of premature newborns (88.8%), educational level of high school diploma (35%), housewife (83.8%), city dwellers (71.2%), and with an income less than 5,000,000 Rials (43.1%).The majority of newborns were in the 35-37week age group (42.5%), male (56.3%), with a weight of 1500-2500g (61.61%) and hospitalized for one to four weeks (45%).

As Table 1 shows, the most important support domain according to the mothers was the care giving support (39.7±4.0) and the least important one was emotional support (75.0±3.99).After the care giving support, supportive communication (65.0±4.18) and parental esteem (69.0±4.18) were the most important for the mothers. In terms of importance, 89.1% of mothers expressed increased importance for the caregiving support and 6.2% of mothers expressed the least importance for the emotional domain.According to Table 2, the largest support received by mothers was in the care giving support 68.87±3.0) and the least received support was in the parental esteem (96.85±2.0).After the caregiving support, emotional support (89.15±3.0) and supportive communication(84.06±3.0) had the highest amount of received support according to the mothers. In terms of receiving supports, 66.9% of mothers expressed that the largest support they received was in the care giving support, and 33.8% of them said that the least support they received was in the parental esteem domain. Spearman test also showed a positive and statistically significant relationship between importance and amount of received support in the four nursing care domains for mothers (P<0.05).

Table 3 shows that among the personal-social factors, the following have a significant relationship and an inverse correlation with the viewpoint of mothers regarding the amount of received support: ageof 27-35 years, nulliparity, having a second child, having no history of premature infants in the family, having a Bachelor's degree, being a housewife, an income less than 200 $ per month, 35-37 weeks gestational age, and newborn' birth weight of 1500-2500 gr.

Table 2. The status of received nursing supporting according to the mothers

Received support Frequency		Number (Percentage)
Mean and SD of received support in the supportive communications domain		3.06 ± 0.84
The status of received support in the supportive communications domain	Low	45 (28.1)
	Fair	78 (48.8)
	high	37 (23.1)
Mean and SD of received support in the emotional domain		3.15 ± 0.89
The status of received support in the emotional domain	Low	38 (23.8)
	Fair	64 (40)
	high	58 (36.2)
Mean and SD of received support in the parental esteem domain		2.96 ± 0.85
The status of received support in the parental esteem domain	Low	54 (33.8)
	Fair	70 (43.7)
	high	36 (22.5)
Mean and SD of received support in the caregiving support domain		3.69 ± 0.87
The status of received support in the caregiving support domain	Low	15 (9.3)
	Fair	38 (23.8)
	high	107 (66.9)

Table 3. The relationship between mothers' viewpoint about the amount of received support and some personal-social characteristics of the mother and newborn

	Mothers' viewpoint about received support		Personal-social characteristics of the mother and newborn
Number	Significance level	Correlation coefficient [*]	Variables
54	0.002	-0.404	Mothers aged 27-35
97	0.049	-0.2	Nulliparous mothers
48	0.007	-0.384	The experience of giving birth to a second child
142	0.268	-0.094	Having no history of premature infants in the family
28	0.003	-0.538	Having a Bachelor's degree
134	0.05	-0.165	Being a housewife
69	0.007	-0.319	An income less than 1250 $ per month
68	0.007	-0.322	35-37 weeks gestational age
98	0.016	-0.242	Birth weight of 1500-2500 g

* Spearman Test

Discussion

In this study, mothers expressed the highest importance for the care giving support and the least importance for the emotional support. In line with this study, Akbarbegloo et al. showed that the most important domain of nursing support for mothers was the supportive communication and the least important one was parental esteem [3]. In this regard, Seyedamini suggested that according to the mothers, the most and least important support domains were care giving support and supportive communication, respectively [17]. Mok and Leung also showed that mothers considered supportive communication and emotional support, respectively the most and the least important domains [13]. The researcher believes that cultural differences in any city or country affect mothers' perspective of the importance of each support domain. In fact, the researcher believes that the reason why mothers in this study underestimated the emotional domain is that they receive a lot of emotional support from their husband and family. This study also found that according to the mothers, the least and most received nursing support were in the care giving support and parental esteem domains, respectively. In this regard, the findings of Valizadeh and Akbarbegloo [3], Seyedamini [17] and Sanjari et al. [18] were in line with this

study and indicated that according to the mothers the least and most received nursing support were in the care giving support and parental esteem domains, respectively. Another study by Morsy on two groups of mothers of children hospitalized in the general ward and the intensive care unit showed that the most and least received nursing support in both groups were in the parental esteem and care giving support domains, respectively. The results of the present study contradicted the findings of that study [8]. Tandberg et al. showed that mothers were satisfied with the provided support, but expressed their dissatisfaction with nurses regarding parental participation and making decisions for newborn's care [19]. Al- Akour et.al also indicated that the majority of mothers of hospitalized children stated that nurses paid little attention to them and did not provide information about nurses' names and their duties towards their newborns [20]. The present study also found that some personal-social characteristics of mothers and newborns (mothers aged 27-35, nulliparity, having a second child, having no history of premature infants in the family, Bachelor's degree, being a housewife, an income less than 200 $ per month, 35-37 weeks gestational age, and newborn' birth weight of 1500-2500 gr.) had a significant relationship and inverse correlation with the

amount of support they received. In this regard, Sanjari et.al indicated that there was a significant difference between the mean emotional support and mothers' educational level. Also, there was a significant difference between supportive communication and gender of the newborn [18]. According to the results, it can be concluded that mothers wanted to get the highest amount of support in providing the best care for their newborns, but stated that they needed little emotional support from the nurses. Mothers expressed their highest dissatisfaction with nurses regarding communication with nurses and getting information about their newborns. In fact, mothers believe that, although the nurses provide care for the newborns in the best way, they do not provide enough information regarding the status of their newborns. Therefore, determining mothers' viewpoint about the importance and amount of nursing support will contribute to the better provision of nursing support and improves the health of premature newborns. Since the present study found that mothers' viewpoint was significantly related to some personal-social characteristics of the mother and newborn, it is recommended that future studies address the relationship between the amount of nursing support received by mothers and personal-social characteristics of mothers and infants and determine the most important factors so that convenient and efficient nursing support be provided for mothers of premature newborns. Mother's mental states at the time of interview and mothers' supporting systems outside the hospital were the limitations of this study.

Acknowledgement

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