

Mothers' Strategies in Handling the Prematurely Born Infant: a Qualitative Study

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ABSTRACT

Introduction: Family, especially mother, is faced with numerous challenges by experiencing a premature birth. Since knowing about mother's efforts regarding prematurely born infant helps us in our comprehensive understanding of the impact of this incident on the family system and its performance. The present study was carried out to explore the mothers' strategies regarding prematurely born infant.

Methods: In a conventional qualitative content analysis, data was collected through purposive sampling by semi-structured deep interviews with 18 mothers who had prematurely born infant during 2012-2013 in the teaching hospitals of the north and northwest of Iran. All the interviews were recorded, typed, and finally analyzed.

Results: Data analysis resulted in the extraction of categories of "asking for help, elevating capacity and reducing personal responsibilities and commitments". These categories were revealed in mothers respectively by the different sub-categories of "religious appeal and relying on beliefs, seeking information from the treatment and caring team, participating in infant's care, companionship and support of family and friends", "focusing on positive thinking and imagination, patience and strength" and "ignoring some routine affairs and reducing role-related activities and duties".

Conclusion: Considering the uniqueness of the mother's role in responding to the needs of infants, healthcare system should consider mothers as real target in the intervention strategies in order to promote health and quality of life, so maybe this way, the burden of care and management of critical situations caused by a premature birth on the mother can be reduced.

Introduction

Premature birth can cause different emotional reactions in mothers.¹ Symptoms of anxiety, fear, worry, and stress associated with complications in premature infants and psychological hurt resulted from the lost dream of having a normal and healthy baby may affect not only the mothers' physical and mental capacity, but also the normal and routine affairs, stability,² and also function of the family³ and cause a delay in the recovery of pre-pregnancy and the early cessation of breastfeeding.⁴ In addition, the lack of

attention to mothers and their emotional and psychological concerns in the long term can affect their health and quality of life as sleeping and concentrating disorder, loss of ability to make decisions and communicate with other family members and friends⁵ and in infants cause social,⁶ cognitive, emotional and behavioral development disorders.⁷

The advancement of medical science in recent decades, especially in the field of reproductive induction methods and its laboratory procedures in one hand⁸ and abnormal growth in cesarean deliveries on

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the other hand have increased premature birth⁹; therefore, the number of mothers associated with this experience has also increased.¹⁰ These mothers are not usually in good physical condition and complain about lack of enough time to rest and sleep so they always feel tired¹¹ and inability to take care of their babies.¹² They describe that the caring of oneself and prematurely born infant as physically and emotionally in the critical condition is overwhelming and they are faced with more challenges in comparison with mothers with healthy infants.^{13,4}

According to the study of Lindberg and Ohrling mothers feel like their ability to manage and adapt to these conditions relied on appropriate emotional support from family and medical team in order to receive the required information.¹⁴ The finding of Cleveland's study showed that these mothers had experienced uncertainty in relation to infant care, inadequate services from community health nurses to pursue home care and their need for follow-up information and how to manage these babies' condition.¹⁵ There are so many different studies on premature infants and their mothers; none of these studies aim to focus on the experiences of mothers of premature infants in terms of which strategies manage such a condition.¹⁶⁻¹⁹

Changes in the Healthcare system (reducing the length of hospitalization, and an emphasis on outpatient treatment)²⁰ placed the caring responsibilities upon providers of informal care, so that nowadays care and support for mothers and babies is a major challenge for health care.²¹ The problems associated with the inadequate maternal care and attention need to be discussed more about managing mothers in this condition, because stress is experienced by the family and especially mothers and their subsequent problems²² may create a situation in which mothers' management of infants and their families is very sensitive and vital that needs to be supported so they can be applied more

effectively. With regard to the philosophy of holistic care²³ and family center care approach,²⁴ it is necessary to focus on all aspects of this rare and unique experience, so the treatment team can provide the best supportive care in order to increase mothers' performance.

Events such as premature birth is a surprise and crisis,^{25,26} which appears too fast and the people involved, do not have the opportunity to respond timely because it is a sudden and unexpected incident, and people have little experience about it. Although there is no doubt that a mother with condition after encountering such problems and different needs, will try to solve the problem and play her role as a manager of the family.

Also studies have shown that the experiences of mothers who have hospitalized premature infants in the NICU are different from each other based on cultural background and their beliefs.^{10,27,28} This study was conducted in order to explore mothers' strategies in relation to prematurely born infant.

Materials and methods

To explain the mothers' strategies in relation to prematurely born infant, qualitative method with content analysis approach was used. This method is commonly used to describe a designed phenomenon and when the existing theory or researches are limited about considered phenomenon.²⁹

From the total number of 18 participants, 21 interviews were conducted. In this study, 18 mothers with premature birth (< 37 weeks gestational), age ranging from 18 to 39 years and with educational levels from below high school to bachelor's degree, were interviewed from Babol and Tabriz cities.

Infants' profile: Minimum gestational age, weight, and duration of hospital stay were 28 weeks, 770 g, and 7 days, respectively, with the maximum of 34 weeks, 2700 g, and 50 days, respectively; most of the infants

were males and the maximum age of neonates was 6 months at the time of interview.

The participants surveyed in this study were only mothers who agreed to share their own experience. They were Iranian and fluent in the Persian language. Interview locations were determined based on the participants' preferences which were mostly the home, the doctor's clinic, and health center. Participants were selected on the basis of purposive sampling with a variety of different characteristics. The mean time of interview was 50 min. prior to the interview, the participants were given assurance that participating in the research would be optional and that the information would be used based on confidentiality rules.

Informed consent was also obtained from the participating mothers. Ethical approval was received from the Research Ethics Committee of Tabriz University of Medical Sciences (No. 91119). The study lasted during 2012-2013 until completing the formation of categories and sub-categories and/or lack of any new codes or categories.

The two final interviews were conducted in order to ensure data saturation. Semi-structured and in-depth interviews started with a general question regarding the research question, "Please talk about premature birth and the circumstances of those days. Explain how you handled this situation," and ended with more curious and specific questions such as "Please explain more in this regard ... and ...". Supplementary interviews were conducted in person or by phone.

To analyze the data, the researcher transcribed the interview in verbatim and read all those several times to obtain complete understanding of the data. All interviews were contemplated as units of analysis. Words, sentences, and paragraphs considered as meaning units and were condensed according to their content and context. The condensed meaning units were abstracted and labeled with codes. Codes

were sorted into subcategories and categories based on comparisons regarding their similarities and differences. Finally, the main categories were formulated as the expression of the latent content of the text.²⁹ The analysis process was repeated with the addition of each interview like this.

To ensure the accuracy and reliability of the data, four criteria including credibility, conformability, dependability and transferability were used according to Lincoln and Guba.³⁰ In this study, member check was used in addition to long-term involvement to increase the credibility of the data. Also after encoding, the interview transcripts were returned to the participants to ensure the accuracy of the codes and interpretations.

In order to control data conformability, peer check approach was used; for this purpose, the researcher coded and categorized the data which was evaluated by the research team. In terms of codes and categories on which there was no consensus, discussion would be continued to clarify the issue to reach a consensus. Audit trail was used to control the dependability of the data.

In this method, the researcher maintains the preliminary data, categories and themes until the end of the research process. Moreover, the review and analysis of the data by experienced individuals in the research team increased the reliability of the study. Transferability of the study has relied on this fact that the results are analyzed and approved by the people in a similar environment.³⁰ Sampling with a maximum variance also helped in the transferability and stability of the results as well as the credibility of the data.

Results

Data analysis resulted in the extraction of categories "asking for help, elevating capacity and reducing personal responsibilities and commitments" in premature infants' mothers. This section

presents descriptions about derived categories, and we will discuss about it.

1. Asking for help

Mothers who were participating in this study have used different ways to earn God, relatives and friends' assistance in order to overcome their problems. This category includes the following four sub-categories "religious appeal and relying on beliefs, seeking information from the treatment and caring team, care, companionship and support of family and friends".

1.1. Religious appeal and relying on beliefs

One of the important subcategory in participants' experiences from mothers' asking help behavior was seeking help from God, who has a supernatural power. So, the mothers participating in this study, following the spirituality resort and entrusting the destiny determined by God, struggled during a stressful event of premature birth and handled neonatal intensive cares. Religious well-being of participants was the background for some of their behaviors such as begging and trusting God, appealing to the Imams, adherence to the Qur'an and seeking help from God was experienced for most women. They supposed this event as God's will and surrounded them to the providence of God.

Following the experience indicates the same experience:

"Those days I was just crying and I embraced the Quran, only I beg God to save my child ... I always avow"?

Yet, a few mothers have threatened and haggled with God in a short interval after the event. In this regard, another mother said:

"First, I was complaining. I always told God why you should give me this after 12 years. For a moment, I even swore:"

Some participants considered premature baby as a God's punishment for their wrong deeds and behaviors.

One mother said: "I told my husband: we should have done something wrong and this is its consequence. Only God knows..."

Some mothers would mention these events as if they were examined by God and emphasized on the positive characteristics of this opportunity.

"Look how much God loves us to give us these babies so we should be grateful and worthy mothers by parenting them."

1.2. Seeking information from treatment and caring team

Analysis of mothers' experiences showed that obtaining information are their efforts to meet their information needs. Information supply includes prematurity and its complications, the reasons for the hospitalization of infants, present infant status, duration of treatment, the prognosis and care after discharge. Also mothers were expected this information to be stated in simple and understandable way.

Simply, the provision of information is one of the most important interventions of health and care team in line with the needs of mothers of premature infants, because usually mothers do not have any specific information about premature infants and even some women, have not seen such infants before. According to the mothers, they have received the required information through health care providers or the books or booklets presented by them, or by searching the Internet, which was different depending on the extent of the mother's desire and needs. A participant says in this regard:

"If I had any questions about the baby, I asked the NICU nurses, their advice was very effective and useful."

1.3. Participating in infant's care

Mothers' participation in infant care, in fact provides suitable ground for their learning in relation to infant care at home, and anyhow would increase the functionality

and performance in infant care. By inference in the participants' experiences, it seems that accompaniment and nurses' interest in this area is one of the factors that motivate mothers to participate and contribute to the care, and there was a relationship between them. Mothers of such babies often have experienced the feeling of helplessness and loss of control. From the nurses' perspective, even the partial participation of mothers in caring infants in the hospital, has an active role and less stress at discharge time. Mother said:

"After being discharged, I had no problem with taking care of baby and wasn't worried because I had learnt many from admission to day-to-day until discharge. Eventually, in the last days, I did myself my baby's works."

1.4. Companionship and support of family and friends

Experiences of mothers in this study indicated that they need help and support from spouse, family, friends, relatives and health care team. Due to the changes, they were not able to perform their roles completely and they need help in furthering their daily tasks towards infants and families.

Different forms of verbal, behavioral and emotional support given to mothers include: consolation and hope from husband, woman's mother, other close relatives and counterparts, sympathy and solidarity with high energy, positive talk and hopeful mood, interactions with other similar peer groups, and accountability of care team to questions by phone or in person. Helping and supporting in various situations reduce stress, give confidence, comfortable resistance in this condition and generally improve the mental condition of mothers, and have an effective role in the relief of tension and physically and psychologically soreness.

"I did take care of my baby, but did not do housework or other home purchases, much of the works done by my husband."

Counterpart support for each other in the form of sharing feelings and experiences among themselves, getting experience to help them deal with the issue (premature birth) and giving positive energy to one another. In this regard one mother said:

"All of us- mothers in the ward - get together and talk about our babies' condition, we learn from one another what we should do and when we have done this, we calm down."

2. Elevating Capacity

This category indicates mothers' attempt to enhance their mental and physical strength in terms of following subcategories: "focusing on positive thinking and imagination, patience and strength".

2.1. Focusing on positive thinking and imagination

Most participants' words became apparent that mothers in this study tried to see the existing situation positively by making changes in their psychological characteristics. They tried to think that everything was going well. Focusing on positive aspects, they were hopeful for future good days and conditions. They plan for future and try to calm down by thinking about positive aspects. In fact, they attempted to struggle with their negative feelings towards the condition.

Mothers also made use of their will and autosuggestion to elevate them. The use of this strategy is highly frequent in data. One mother said:

"Regularly, I was telling myself that the condition of my baby is better than before and will get well, these thoughts made me quiet and calm".

2.2. Patience and strength

One of the main strategies mothers used emerged to be patience, tolerance, and dealing and coping with problems. They tried to control the stress factor. Most mothers responded to the situation by

intense emotional reactions and negative feelings before touching the babies and giving motherhood care. It sapped their energy and made them feel too intolerant and weak to cope with these problems. But, when their motherhood instinct flourished, they tried to gradually accept their situation and fight with their weaknesses by not giving up and persistence.

With respect to their personal characteristics, the extent of support they received, infant's condition and effects of prematurity, mothers reacted in different ways.

In the same vein, a mother who expected to have a baby for several years says:

"When I talked with my daughter, I said: Dear Maya! We should fight. This path will end after a few months. You will be ok; we will be a mother and daughter like all others".

Mothers also attempted to pass through the hard and critical conditions of premature baby's birth and hospitalization. A mother who wondered how she had passed through these hard conditions says:

"Now whenever I thought of those days, I wonder how I tolerated this, it's strange for me now, God gives patience, God helps those who help themselves".

The mothers participating in the study also discuss the various forms of pre-set time. They were waiting for the time to pass quickly, and were hopeful that all things will change their current situation and the future looks well.

"It's time to solve all the problems involved with myself, all for upping the penalty for us, the same way we overcame this period will last."

3. Reducing personal responsibilities and commitments

Reducing role-related activities and duties, ignoring some routine affairs to pay more attention to the infant and taking care of him were among the mothers' strategies in order to overcome the existing problems. So, they

could reduce their responsibilities and activities and paid attention to the infant and took special care of him.

3.1. Relieving some routine affairs

By limiting or withdrawing many of their pastimes, paying less attention to homemaking, cleaning, education, and not monitoring other children's school affairs, mothers are able to take care of infant and do their motherhood duty perfectly.

The extent of mothers' devotion and disregard went beyond their ordinary personal and familial needs; they even devoted their social and educational needs to take care of their premature infant. One mother said:

"I have sacrificed everything for my baby. I stopped going to parties, getting education, and doing household chores. I don't pay attention to any other things except my baby".

3.2. Reducing role-related activities and duties

The experiences of our participants are proving the claim such as: temporarily quitting job or losing job, weak presence in other roles (marriage, motherhood for other children and ...), and delegating some house responsibilities to husband. In this regard, one mother said:

"Now, my husband was doing much of the work related to housekeeping or cooking...".

Discussion

After analyzing the mothers' experiences, their strategies appeared in three categories: "asking for help, elevating capacity and reducing personal responsibilities and commitments". In conditions where mothers had extremely emotional reactions resulting from unexpected birth and immediate admission of infant in NICU, their motherhood kindness led them to use suitable strategies for taking care of their premature infant.

Making use of different sources- like trusting in God's immortal power- they tried to deal with the problems and difficulties of the situation and asked God's help. In their study, Schenk and Kelley 2010 also implied that some mothers went to church and pray when they were extremely worried about their infant condition in NICU.³¹

Seeking for information from treatment and caring team is another characteristic of asking for help. It alleviated mothers' stress and concern. This led mothers to manage their daily life better. Based on mothers' experiences, it was proven that their attitude changed when they gained more information. This information can be applied practically. It can be transferred to infant by taking care of him. Actually, this strategy is associated with the concept of family-based care approach. That is, providing the infant with good care means to take better care of the mother and vice versa. Guillaume et al., in their studies, stated that receiving information when infant is admitted in NICU helps in the bonding among mothers and infants.³²

Most participated mothers in the present study expected to continuously get informed from their infant's treatment and care process. Hence, information related to disease, treatment plan, and its process and result should be stated in simple, honest, and comprehensible words for mothers.

Their questions must be answered because based on the Gaucher and Payot this will help in establishing trust between mothers and care and treatment team as well as satisfying their needs. As a result, mothers will be at the center of attention which has positive effect on the infant and family. Also they found that premature infant' mothers - as caregivers - need accurate, clear and transparent information about infant's condition.³³

In the present study, emotional supports from husband, relatives and friends were another strategy. Giving birth to premature

infant leads to several emotional distresses in mothers. It requires the sympathy and company of other people. In Holditch-Davis and Miles study, mothers sought for different sources support to cope with their stress and concern about premature infant's health condition, appearance, suspicious survival and the probability of losing their motherhood role.³⁴ Also, Barclay et al., realized that giving support enhances mothers' confidence and reduces their emotional reactions. In this study, mothers accepted support from husband and their mothers especially in the early of events.

Like our finding, in Barclay's study, mothers considered it to be significant to receive their own mothers' help and support, but all support isn't welcome, however; sometimes women felt ambivalent about accepting help, particularly from their husband, as it made them feel guilty.³⁵

In the present study, mothers also exploited peer group's support. They learnt skills regarding how to take care of infant from each other. It is noteworthy that peer support is a unique one and not accessible from any other source. It can be useful, if it does not contain partial and stressful information. In this regard, Bracht et al., found that initiation and maintenance of a hospital-based parent group for parents of premature infants is the key factor for success.³⁶ According to Preyde and Ardal, support from individual and trained peers were found to be effective in helping mothers who were dealing with the stress of very preterm birth.³⁷

Participating in infant's care is also another property of asking for help. By active participation in taking care of infant, mothers tried to learn how to take care of these premature infants. This is because- besides able to take care of the infant- their trust and confidence was elevated. In a study by Fenwick et al., they also used the same strategy to gain skill and ability to do motherhood duties.³⁸

In the present study, in addition to asking for help, mothers used other strategies such as elevating capacity, and reducing personal responsibilities and commitments to take better care of infant and do their daily duties best. Yet, in Cheon's study, most of coping strategies focusing on emotion and gradually turned into problem-based strategies after two weeks. The intensity of mothers' mental and physical stresses and lack of evidence-based interventions to handle this situation affected mothers' coping strategies.³⁹

In the present study, mothers tended to organize and prioritize their daily affairs and routine lives and withdrew from some of their unnecessary expectations and needed to maintain their infants' health and provided the best care. They made attempt to focus on taking care of the infants by holding balance between personal responsibilities and commitments via ignoring some of their personal needs and reducing their role-dependent activities.

Similar results have also been reported in other studies regarding mothers' attempt to provide their infants with the best care.⁴⁰⁻⁴²

Flacking *et al.*, pointed that premature infants' mothers made attempt to hold balance between their own needs and the infants' needs.⁴³ However; they did not mention the aspects and course of the balance. In their study, this strategy was intended for mother's success in breastfeeding her infant as a symbol of motherhood after being dismissed. In a study by Danerek and Dykes, mothers took action to manage and handle premature labor by interacting with each other and reorganizing affairs. That is, parents handled the situation by mutual understanding of each other and other family members and treatment and care team. Mothers tried to reorganize their responsibilities at home and accepted other people around and relatives' aids which helped with family's performance.⁴⁴

Patience and strength were among other strategies. When intensive prematurity conditions made mothers helpless, they resorted for patience and strength. "Time" was another concept mothers mentioned repeatedly. They gave time to some problems and believed that time can resolve problems. Hence, time played as a facilitator for mothers to adapt themselves to the situation. Doucett and Pinelli also describe the adaption of parents with premature infants as a matter of time.⁴⁵ During this process, mothers change from feeling strange to feeling familiar and responsible. Then, they can trust more.⁴³

In the present study, personal characteristics, past learning, problem-solving strategies, and ability in managing emotions affected mothers' strategies. In addition, social support and relying on friends and interacting with other mothers in the hospital were effective in the time of staying in NICU. In this regard, Lasik *et al.*, wrote about parents' ability in handling and adapting to these conditions: factors like understanding infant's health status, the time spent in suspension, being doubtful if the infant survives, familial and personal sources, the quality of parents' relationship with treatment staff, and accessibility of social support affects parents' strategies.²⁵

In the present study, mothers made attempt to cope with the stressful condition via positive, and being optimistic to infant's future, and using their will and autosuggestion power. They believed that this strategy facilitates dealing with problems. Studies indicate that coping strategies are also used in threatening conditions of life.^{46,47}

The results of this study showed that mothers should not be forgotten after their infants being discharged. They need support and help to develop their coping strategies.

At the same time, nurses can facilitate their management and coping skills in giving care and using sources by guiding mothers on how to search for help and

support. Lack of information on how mothers manage life and ignoring their quality of life prevent nurses and physicians to take proper and appropriate decisions regarding these susceptible infants' care and treatment.

The results from several studies indicate that mothers with premature infants reported the negative effect of infants' health on their family and performance. Although infant's health condition has no direct effect on mother's quality of life and performance, her perception of the infant affects the family.⁴⁸⁻⁵⁰ In this regard, the role of society's nurses is critical. They must be able to distinguish the expectations of mothers with premature infants and problems as the long term caregivers of the infants. Because these infants are more dependent in comparison with other ones. Hence, providing mother with periodical consultations and reviewing their problems as well as visiting them at home are suggested.

Conclusion

Premature infant's mothers make several attempts in order to manage this problematic situation. Data analysis resulted in the extraction of categories of "asking for help, elevating capacity and reducing personal responsibilities and commitments".

These categories were revealed in mothers respectively by the different sub-categories of "religious appeal and relying on beliefs, seeking information from the treatment and caring team, participating in infant's care, companionship and support of family and friends", "focusing on positive thinking and imagination, patience and strength " and "ignoring some routine affairs and reducing role-related activities and duties".

Knowledge resulted from this study can enhance treatment and care team information to understand Iranian mothers' experiences regarding premature infant birth management. Because treatment system requires identifying managerial attempts

that mothers make to manage and control conditions and discovering their strengths and weaknesses in order to administer appropriate interventions. One of the limitations of this study which should be taken into account is: any interviewee was not conducted with fathers and their experiences.

Also this study focused on mothers with infants below or at six months of age.

Perhaps, parents with infants over six months of age have experiences different from participated mothers in this study. It is suggested that further studies could carry out on the strategies of mothers with infants suffering from long-term prematurity conditions.

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Ethical issues

None to be declared.

Conflict of interest

The authors declare no conflict of interest in this study.

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