Maternal Participation in Caring for Newborns in an NICU

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ABSTRACT

The idea of maternal participation in caring for newborns in an NICU has been embraced into many hospitals nowadays. However, the caring practices used in NICU often intimidate the mother in performing her role. The purpose of this study is to understand and describe maternal participation in caring for newborns in an NICU. Non-participant observation and in-depth interview were used to collect the data in this qualitative research. 12 Thai mothers of newborns admitted to an NICU of a tertiary hospital in northern Thailand were recruited in this study as informants. Maternal participation is a continuous process, consisting of two phases; the initiation of participation and the best on-going actions for the sake of the baby. Moreover, mothers provided seventeen activities to the baby in both phases. These activities can be divided into two groups based on mothers' intentions: activities intended to give warmth and encouragement to the babies and activities intended to ensure the babies' safety.

Key words: Maternal participation, Caring for newborns in NICU, Critically-ill newborns, NICU

INTRODUCTION

The babies in an NICU have to be separated from their mothers to be under the care of medical staff for long periods (Whitfield, 2003) due to prematurity and abnormality which are major causes of their illnesses, requiring special treatments and NICU medical equipment (Ehrenkranz, 2006). Such departure since the babies' birth not only interrupts the attachment process between the mothers and the babies (Schenk et al., 1992) but also brings suffering, stress and anxiety to the mothers (Holditch-Davis and Miles, 2000; Neu, 2004; Franck et al., 2005). As a result, the babies are often at a greater risk for cognitive and developmental problems, failure to thrive syndrome, parental abuse and neglect (Pillitteri, 1999; Hunter and Maunder, 2001; Aucott et al., 2002; Browne, 2003; Vorria et al., 2003; Ree, 2005). On the other hand, the mothers often depress and have problem in developing their role (Bell, 1992; Holditch-Davis and Miles, 2000; Hummel, 2003; Whitfield, 2003; Neu, 2004).

In order to eliminate negative effects of separation, hospitals facilitate mothers in building up a relationship with their babies by supporting the idea of maternal participation in NICU such as using a concept of family-centered care, development of NIDCAP program and using a kangaroo care (Cisneros Moore et al., 2003; Saunders et al., 2003; Malusky, 2005). However, the impact of the NICU environment, presence of highly trained professionals and the caring practices used in NICU often intimidate the mother in performing her role (Davis et al., 2003; Hall, 2005; Heermann et al., 2005), although she desires to provide both physical and spiritual supports to her baby (Schepp, 1992; Balling and McCubbin, 2001; Taya et al., 2002; Wigert et al., 2006). Moreover, some studies revealed that mothers feel their participation do not correspond to their need (Taya et al., 2002; Hall, 2005). This is due to factors such as inconsistency of policies, concern over infection and nurses' attitude (Franck et al., 2002; Davis et al., 2003; Chia et al., 2006; Thomas, 2008).

However, in bringing Thai mothers into the care appropriately, apart from the knowledge from those studies nurses must have clear knowledge about maternal participation process and activities. Unfortunately, this crucial knowledge, which is documented, is rare, especially about newborns in the Thai culture. It is important to recognize that Thai and western concepts of participation are based on different socio-cultural contexts. Therefore, the results gained from previous studies may not be sufficient to describe maternal participation in Thailand. To clarify, Thai mothers usually believe that professionals know best about how to take care of the babies, so they tend to remain humble when decisions about the babies' treatments have to be made (Pongjaturawit and Harrigan, 2003). In addition, Thai people from different regions have their own superstitious beliefs about possible causes and treatments of illnesses, as a result, Thai mothers often cope with the child illness problems in the ways corresponding to such beliefs, for example, longevity ceremony and changing the babies' name (Jintrawet, 2005).

This qualitative study aimed to understand and describe characteristics of maternal participation in caring for newborns in an NICU in Thailand. The results of this study will provide nurses with critical insight and improve nurses' understanding of mothers who have their babies in an NICU and their experiences. Therefore, nurses can improve their current and future care and practice to promote maternal participation with an aim to give more benefits to both mothers and babies.

METHODOLOGY

Informants included 12 Thai mothers of newborns admitted to the NICU of a university hospital in northern Thailand from August, 2007 to January, 2008. All participants volunteered. Inclusion criteria for informants were: (a) mothers of newborns admitted to the NICU for at least one week; (b) have visited the baby at least twice; and (c) ability to communicate in Thai. Once Faculty of Nursing and university hospital ethical approval was granted, mothers who matched the criteria were approached by a staff nurse of an NICU before they met the researcher. A

consent form was signed after the researcher informed mothers of the aims and details of the study.

Data were collected by using in-depth interviews and non-participant observations. After the written consent forms were returned, the researcher made an appointment with the participant for the first observation and interview. All participants were interviewed by the researcher three to four times, depending on the baby's length of stay. Each interview took thirty to forty-five minutes in a private room or a comfortable area in the pediatric and obstetric ward. The first interview took place after the first observation while the last took place during last week of the baby's admission in an NICU. Other interviews were done during the admission period of the baby. The researcher used an interview guide with general questions such as "Could you tell me about your experience in caring for your baby here?" or "Could you tell me what are you going to do when you come to see your baby?" During the time of the interview, the researcher probed more deeply on specific issues of participants' activities such as "Could you tell me why you followed your baby to the operating room?", "What did you do during your baby's operation?." The interviews were tape-recorded and conducted in Thai language. Data from non-participant observation served as a second source of data to provide additional data and to check for their reliability and validity. All participants were observed four to six times a week while they provided care for the babies both in and out of the NICU such as when they soothed the baby to sleep, when they escorted the baby to operating room or when they went to make a vow to the guardian spirits of hospital. After each interview and observation, the researcher recorded details on field notes for further analysis.

Content analysis described by Miller and Crabtree (1992) was used to analyze the data. First, all data were divided into three files: general information file, participation file and interpretation file. Second, the data from the participation file were coded along with collecting of the data. Interview data were transcribed verbatim in Thai language. Then the coding process was conducted from the transcripts. The data from non-participant observation and field notes were also used to help in the coding process. Coding process consisted of identifying unit, developing themes and categories. The developed themes were kept in the interpretation file. As the data were coded, themes and categories were changed until it was clear and constant enough to answer the questions of the study. Sampling continued until the point of saturation and no new data emerged.

For trustworthiness, techniques described by Lincoln and Guba (Lincoln and Guba, 1985 as cited in Holloway and Wheeler, 1996) including credibility, transferability, dependability and confirmability were used. Credibility was established by using methodological triangulation—both data from in-depth interviews and observation, prolonged involvement for 6 months and member check by participants after the data were analyzed. Thick description reflects the participants' experiences in caring for the babies in an NICU to reach the potential transferability. Dependability was established by using tape recording, field notes and external check. All processes in this study were done systematically and each process can be audited. Therefore, confirmability was enhanced by the fact that

all of the processes and the results of this study were logical—every process can link together.

RESULTS

Research findings revealed that maternal participation was a continuous process composing of two phases; the initiation phase and the on-going phase, focusing on the actions for the best benefits of the baby. These two phases were not totally separated, as the actions/interactions found in phase 1 could be found in phase 2, particularly when the babies' condition became worse or he/she needed an operation. Similarly, the actions/interactions related to phase 2 could be found in phase 1 if the mothers knew the baby was going to die (Fig. 1).

Phase 1: The initiation of participation

The initiation phase usually occurs during the first 2 weeks of the treatments in the NICU when the babies were critically ill. Maternal participation process in phase 1 was described as "an arrival at an unfamiliar world," "facing difficulties and confusing feelings," and "the desire to act for the babies."

Arrival at an unfamiliar world

All mothers in this study had no previous experience of having a baby who was hospitalized in an NICU. Moreover, most of them were inexperienced in caring for a premature or abnormal baby. Therefore, everything mothers faced when their babies were admitted to an NICU was unfamiliar. Those things included the babies' physical conditions and illnesses, medical treatments and equipment needed for the babies and spending time in hospital.

The babies' physical conditions and illnesses terrified mothers. Some reported that they had bad experiences of seeing their babies stop breathing and they did not know what to do in such a situation. One stated, "It just happened, I was sitting there and talking to him, then his rate dropped so fast, both oxygen saturation and pulse rate. The oxygen saturation was reaching 30% and the pulse oximeter alarmed, and then his skin turned to blue. I was depressed. I mean, I lose hope every time they dropped. It was awful" (M03).

Moreover, severe illnesses caused the babies to depend on medical equipment such as ventilator and incubator. The sights of these instruments usually terrify mothers and make them misunderstand that they could not provide care to the babies. The majority of mothers admitted that medical equipment especially the ventilator scared them into touching or taking care of their babies because of the complicated handling required for the safety of the babies. Some also stated that they could not tolerate to be at the bedside. As well as an operation and a resuscitation which are the most frightening treatments that all mothers wished their babies did not experience as they believed them to be indicators of severity and loss of life. One said, "That day doctors told me his condition was badly off. They said he needed blood exchange and heart surgery and his lungs were bad. I dropped my breast-milk there and went outside. I did not dare to see him.

I thought I might lose him" (M07). These experiences are factors that prevent maternal participation. When mothers are unable to confront the truth, they fail to be fully informed of the babies' problems and conditions provided by professionals.

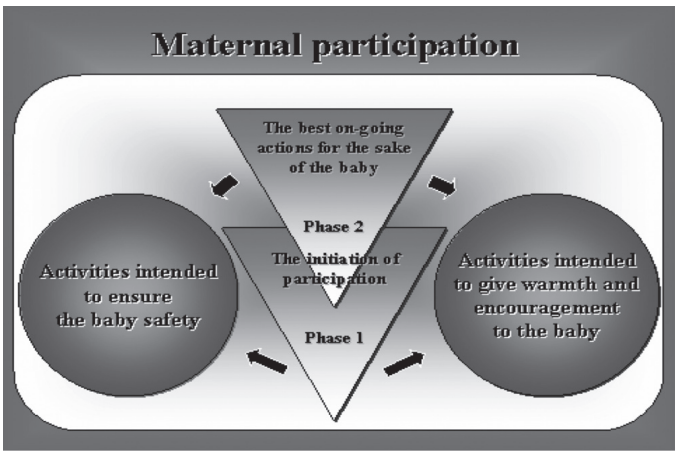

Figure 1. Maternal participation in caring for newborns in an NICU.

Finally, all mothers have to change their daily lives during the admission of their babies. Mothers who stay at the hospital face problems such as sleeplessness and the uncomforted of sharing a room with other mothers, as well as complying with the hospital regulations and policy such as vital sign monitoring and visiting hours for an unspecified periods of time. On the other hand, mothers who stay at home had problems dealing with the inconvenience and exhaustion as one said "It was exhausting because I went back and forth 2-3 times a day and I could not get some sleep during the day like mothers who lived at hospital" (M03).

Moreover, all mothers had to cope with the rules and regulations of the NICU determined by professionals such as doctors and nurses. In adjusting themselves to these contexts, sometimes mothers felt more stressed and frustrated, especially when they were not allowed to be with the babies as one said "…in the daytime there are lots of staff, crowded in the room, so I had to leave my baby. It made me frustrated because doctors said if the baby could not sleep well, his weight would not increase but they disturbed him with noise" (M04).

Facing difficulties and confusing feelings

Mothers are usually overwhelmed by difficulties and confusing feelings while the babies are hospitalized in an NICU because of the babies' illnesses and the specific requirements needed for the safety of the babies. Those feelings are "stress and anxiety," "pity and fear of losing the babies", and "confusion."

Maternal stress and anxiety came from the fact that the babies' illnesses and medical treatments were unknown to mothers. These feelings are intensified when the babies had to receive an operation or resuscitation which are believed

to be indicators of severity and the loss of life. Some confessed that the sight of the babies terrified them and scared them off. As one stated, "She looked so tired, grasped for breath. Her skin turned to blue. I started to cry right there. I could not bear it anymore, so I rushed out, I did not want my baby to be sad because of me. When I reached the elevator area, I punched it" (M05).

In addition, stress and anxiety of mother were increased by number of babies they got such as twins, triplets and quadruplets, as a result of double concern, responsibility and less time of caring for each baby. High level of stress caused them to provide inadequate breast-milk and also lost the opportunity to care for the babies as they could not communicate to people, both professionals and other mothers. They lost important information about the babies' conditions and could not stop thinking that worse things could happen to the babies.

Second, all mothers felt pity and distressful when they experienced that the babies' conditions got worse or the babies suffered from invasive procedures. They stated that they always cry and become subject of their fear of losing their babies—might not have a chance to see the babies alive again. Even a mother who was a nurse in PICU that had experiences in caring for a premature baby also reported that she had a similar fear like others: "the smallest I cared aged 24 weeks, weighed 800-900 grams. But she is my daughter, I was afraid; she was tiny and had low birth weight. I am afraid she may die" (M12). In addition, sometimes these feelings brought sadness and despair that led mothers to think they did not want the babies to be alive. One stated, "I told them to off the ET tube because I saw her in agony. She was tired, grasped for breath and her skin was blue. I did not want to see she suffer anymore" (M05).

Finally, mothers were filled with confusing feelings such as worry and guilt, especially when the babies received invasive procedures. Some stated that sometimes they felt the staff were not reliable or trustworthy and wondered what the staff did to their babies in the mother's absence. Therefore, they barely left the NICU although it was time to eat or rest. Moreover, the majority of mothers felt guilty that they could not stay there to hold or help, and to protect the babies from pain. Guilt sometimes led mothers who blamed themselves and felt responsible for the babies' illnesses—in case of criminal abortion and drug addicted mothers, to inflict pain by punishing themselves and thinking of committing suicide: "The first time I saw her, I wanted to jump from the roof. I was shocked and wanted to die if she dies" (M05).

The desire to act for the babies

All mothers love and worry about their babies' safety, therefore no matter what happens. they desire to act for the babies which can be described as follows.

Being there with the babies in any situation

All mothers in this study had an intensive desire to be with their babies in an NICU all the time—to be nearby, to console, to care for and to help their baby to sleep; because they strongly believed that their love and encouragement are necessary for their babies as much as medical treatments. However, they also

realized that what they wanted was not possible and each visit brought them fear—that the babies' conditions may worsen and they may lose their baby. Therefore, every time they came to visit their baby, they had to control their emotions and cope with fear in order to have a chance to care for the babies, to continue their visit, to spend as much time as possible at the bedside, to deliver breast milk, to observe their babies from outside the NICU while their babies received nursing care or treatment, and to follow their babies everywhere such as escorting their babies to an operating room. As one participant said, "I have to make up my mind every single day, to force myself against my feeling. I tell myself every time I brought him my breast milk that I must go and see him and if this time I couldn't do it, I would try again and again. I kept doing this until I could see him without turning back" (M07).

Doing anything for the babies

All mothers tried to participate by doing anything to help the babies because they really believed the babies need them, although they could not cope with the unfamiliar environment they faced. Moreover, most activities they did are things that they had never done before. Some admitted that they kept telling themselves to practise until they could do it. The activities included visiting the babies everyday, delivering breast-milk, talking, touching, and caressing in order to give morale to the babies, encouraging the father to visit, maintaining breast-milk volume and seeking ways to save the babies by means of religious or supernatural beliefs such as making a vow to *Joa Thee* (the guardian spirit of hospital) and *Phii Pu Ya* (ancestor spirit). One said "My baby got ill because of karma (results of what one did in the past life). I do merit to help him, to relieve his sin by paying good merit to the one who he owes. So that bad things will end and he will recover" (M06).

Phase 2: The on-going phase focusing on the actions for the best benefits of the baby

This phase focuses on the best on-going actions for the sake of the babies. It usually comes after around 2 weeks of the initiation phase, depending on the babies' physical conditions. In this phase, the majority of mothers felt relieved and had more actions for the babies as they tried to continue the actions started in phase 1. The participation can be described as facing reality, developing will-power with the babies and devotion to the babies.

Facing reality

During phase 2, mothers usually felt relieved and they realized that opening their mind was the only way to start their participation in caring for the babies. Therefore, mothers made themselves face reality by doing the following things.

Seeking the babies' information

Mothers sought the babies' information by asking and carefully listening to doctors and nurses although the information made them feel scared. Sometimes they also appreciated an opportunity to exchange their information about the babies to doctors and nurses because they believed that it would help their babies

to receive the best care and treatment. One stated, "I had to listen to whatever the doctors told me, I forced myself against my fear. Because I knew they would not call me if it was not important" (M05). Moreover, mothers often shared what they knew to each other such as the babies' conditions and treatments, weight gain, activities they did to care for their babies and the means to maintain breast-milk volume because the information from mothers who have the babies with the same illnesses was a first-hand experience and this helped mothers to have a better understanding of the babies problems and treatments.

Trying to familiarize with the babies' conditions

Mothers observed and memorized the babies' symptoms such as grasping for breath and holding breath attentively, in order to familiarize themselves with the babies' conditions. They believed that it would help them make the right decision whenever their babies needed help. Thus, they kept observing and memorizing until they were able to decide when they could provide the initial care for the babies and when to call for help. Then, they carefully observed nursing care such as how to change a diaper and how to hold the baby; to make sure that they could do it if necessary, because they wanted their babies to be safe. As one stated, "Such as when he holds his breath I watched him, If his belly moves but his chest doesn't, it means he is holding his breath, or sometimes his chest still moves but the oxygen saturation continues to drop, that might be secretion obstruction and his skin will turn blue. In that case, I called a nurse" (M03).

Providing care for the babies

When mothers had confidence in themselves, they started to assist nurses and later give care by themselves under nurses' approval as one stated "I came to care for her and helped the nurse when she passed urine or stool, or when tubes and wires slipped. I thought as a mother, at least, we should know about the tubes and wires our baby has to carry. Because whenever it slips, we can help our baby and inform the nurse, in case the nurse was not there" (M02). Moreover, they sought ways to provide physical comfort, to console their babies and help them to sleep such as holding hands, touching their head and singing.

Developing will-power with the babies

The majority of mothers described participation at this stage as developing will-power with their babies. Mothers developed will-power and provided mutual support to the babies because they strongly believe that their love and encouragement were necessary for their babies as much as medical treatments. Mothers developed will-power from the belief that their babies always give them mutual support by keeping themselves alive. Most mothers stated that the babies' living is a promise from the babies that they are still fighting for their mother. By this belief, all mothers continued to provided mutual support with their babies even though they were filled with sadness and despair by talking and consoling the babies, helping the babies to sleep, being there with the babies, watching, following the babies everywhere they go, avoiding crying in front of the babies and giving amulets to the babies to protect them. However, mothers had their own ways of providing mutual support which vary from one to another, depending on

their belief and experiences.

Devotion to the babies

All mothers stated that the baby was the only reason for their enduring devotion such as maintaining volume of breast milk, adapting their daily life and continuing to provide care. They felt the babies needed and without the baby, they could not continue their participation till the babies are discharged as one said "… because of them, only them. If it was not for them, I believed I could not do all these things because I never did anything these much for anyone before. Everyday, I and my husband are so tired but when I thought my babies were waiting for me, I told myself to get up and be patient, even when I went to bed very late. I don't know how to explain it but I would do anything for them" (M03).

Maternal devotions were influenced by one powerful feeling called "feeling happy about being a mother" that gradually developed in all mothers through the NICU experiences. This feeling was composed of two elements: connection between mothers and babies and the pride of caring for the babies. All mothers expressed that they believed in the idea of mother-baby bonding even in an NICU context because their babies kept showing the signs of connection such as waking up to wait for them every feeding time, crying at the time they were apart and turning their head following their mother's voice. Thus, they tried their best to learn and train themselves to be able to provide a safe care with pride that they could give warmth along with encouragement by giving care by themselves as one stated "Although I was slow as a turtle, I took pride in doing it. I was so happy when I was able to do something by myself; I mean I could give warmth along with morale to her even when she was so sick. I helped nurses with most of things like taking a bath, changing the diaper and blowing wind with a handle-fan 3-4 hours straight. Only thing I did not do was hold her when nurse took her blood" (M05).

Activities of maternal participation

The results revealed that mothers did not want to replace the nurse in the NICU because they were aware of their limitations of knowledge and skills and concerned about the babies' safety. However, mothers also believed their babies benefited most when they received warmth and morale along with nursing care. Therefore, mothers were willing to participate with nurses in caring for their babies. This study identifies 17 maternal participation activities that occurred in both phase 1 and 2. The frequency of activities in both phases varied according to the characteristics of the activities, for example, mothers observed and memorized the babies' symptoms and nursing cares more often in phase 2 because these activities required mothers' concentration, unfortunately, in phase 1 mothers were too overwhelmed by stress and unexpected situations to concentrate. Activities of maternal participation that occurred in both phase 1 and 2 could be divided into two groups on the basis of mothers' intentions: activities intended to give warmth and encouragement to the babies and activities intended to assist nurses to ensure the babies safety.

Activities intended to give warmth and encouragement to the babies can be specified as the following:

1. Visiting the babies everyday
2. Being with the babies in any situation
3. Talking and caressing the babies
4. Helping the babies to sleep
5. Delivering breast-milk
6. Adapting their daily life
7. Avoiding crying in front of the babies
8. Encouraging father to visit the babies regularly

Activities intended to assist nurses to ensure the babies' safety can be analyzed as consisting of the following:

1. Asking doctors and nurses for information about the babies' conditions
2. Observing and memorizing the babies' symptoms and nursing care
3. Exchanging information about babies with doctors and nurses
4. Sharing information with other mothers
5. Consoling the babies
6. Providing initial help to the babies when the babies show warning signs
7. Providing care and physical comfort to the babies
8. Maintaining volume of breast milk
9. Using other treatments related to their religious and supernatural beliefs to help the babies

DISCUSSION

The data analysis revealed that maternal participation in caring for newborns in an NICU is a continuous process, composing of two phases: the initiation of participation and the best on-going actions for the sake of the baby. In addition, all mothers in this study wanted to participate in caring for their babies since they knew that their babies were sick and their participation could be categorized into 17 activities inclusively of both participation phases. However, less participation was found in phase 1 compared to phase 2 because in the first phase, all mothers had to cope with various emotional crisis such as pity, fear of losing their babies, confusion and stress as a result of arrival at an unfamiliar world. These findings were similar to the results from previous studies that mothers who have their babies in the NICU suffered and worried about their babies (Melnyk and Gillis, 1998; Hummel, 2003; Whitfield, 2003) because they could not cope with the babies' physical conditions, illnesses and medical treatments required.

However, all mothers strongly believed that their love and encouragement were very necessary for their babies as much as medical treatments in fighting with illness. Moreover, mothers stated that their babies fought for them by keeping alive. Therefore, they developed will-power and provided mutual support with their babies by trying their best to cope with difficulties and confusing feelings, and

participate by doing everything that, at that time, they could think was helpful for their babies such as visiting the babies everyday, delivering breast milk, avoiding crying in front of the babies and using other treatments related to their religious and supernatural beliefs to help their babies in phase 1. In phase 2, apart from continuing their activities, mothers got more involved in caring for their babies and endured their devotion until the babies could be discharged.

In addition, most mothers in this study kept helping each others such as giving mutual support and providing anything which was helpful for maintaining breast milk to each other, and then they formed an informal group-support to help new mothers by exchanging their knowledge about the babies' illness and medical treatments, their experience in caring for their babies, and the way they cope with problems. This finding indicates that nurses can gain advantage in supporting mothers to participate by using group-support to find out more about mothers' needs in order to respond to mothers more effectively.

Several activities found in this study such as visiting the babies everyday, exchanging babies' information with doctors and nurses and providing care and physical comfort were similar to parents' participation found in previous studies that divided participation into four aspects, namely, participation in routine care (Stull and Deatrick, 1986; Callery and Smith,1991; Schepp, 1995;), participation in nursing care (Stull and Deatrick, 1986; Schepp, 1995), participation in sharing information with professional (Stull and Deatrick, 1986; Schepp, 1995) and participation in decision making (Schepp, 1995; Neill, 1996).

However, other activities based on socio-cultural enlightening that Thai mothers used such as helping the babies to sleep, consoling the babies or using other treatment based on their religious and superstitious beliefs to help their babies, have not been mentioned in previous studies. For example, mothers intensively desired to do anything that could help their babies, therefore, they considered that using other treatments based on their religious and supernatural beliefs such as praying, making a vow to supernatural images like the guardian spirit of the hospital and ancestor ghost, doing merit, meditation, leaving an amulet at the babies bed and performing some ritual were needed too. These findings could prove that nurses have to be concerned about socio-cultural differences by continuing to assess mothers' needs in participation—mothers' beliefs, the way they want to participate and what they expect nurses to help with from time to time, in order to keep mothers participating in an appropriate way and avoid conflict between mothers and nurses. Nurses may block these activities which are important in the view of mothers by mistake—without knowing.

In addition, the beliefs that the babies' illnesses were also related to *Karma* and good merit or supernatural power could help the babies were the results of socio-cultural enlightening which is passed to mothers from generation to generation (Chaisompan, 2002). Thus, nurses should include the socio-cultural context to ensure that misunderstandings between mothers and nurses, which can interrupt the participation, would not happen when mothers tried to use the alternative means to save their babies.

IMPLICATIONS

The results of this study provided knowledge and understanding related to maternal participation of Thai mothers in the care of newborns in the NICU. This knowledge will be useful for promoting maternal participation in an NICU as the mothers need to rely on nurses for support and approval in terms of knowledge and practice for the best results for the babies' outcome. Most mothers had no experience in caring for newborns in NICU and listening for babies' information, observing nursing care and sharing information with other mothers were the ways they used to begin their participation. Moreover, after they learned how to participate and come to care for the babies, they had to do it with nurses. Therefore, nurses should assess and provide all mothers with the babies' information such as their physical conditions and illnesses, medical treatment and equipment they required and how mothers could participate appropriately to ensure that their participations were useful for the babies, in line with their wishes.

Moreover, nurses should assess and be concerned about maternal feelings as well as giving understanding and support to mothers during phase 1 because mothers are usually overwhelmed by stress and confused feelings, especially in the case of mothers who really felt guilty and tried to punish themselves, in order to help them to cope and to participate in an appropriate ways. Finally, nurses should be concerned about socio-cultural differences which have a connection to mothers' beliefs when dealing with mothers in the NICU, in order to avoid any conflict between mothers and nurses that may occur when mothers try to use the alternative treatments to help their babies. In addition, providing group support for mothers will help nurses to keep in touch with mothers and to give mothers a chance to strengthen their ability in taking care of their babies by sharing the first hand experience and providing mutual support to each other.

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