

Mothers' Experiences with Premature Neonates about Kangaroo Care: Qualitative Approaches

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Abstract

Introduction:

Premature neonates admitted in NICU besides being separated from their mothers are prone to inevitably painful and stressful situations. Kangaroo care is the most effective method to get rid of this separation and its negative consequences. This study was performed to determine the experiences of mothers having premature neonates concerning Kangaroo care.

Material and Methods:

The present study is a qualitative research in which focus group discussion method is used for data collection. Research society consisted of mothers having premature neonates. Research group reread and categorized the qualitative findings. Contents of interviews were analyzed using the conventional interpretation approach introduced by Dicklman Method.

Results:

Through content analysis of information emerged two major categories including mothers' experiences about advantages of kangaroo care in interaction with neonate, and, feeling of physical-mental healthiness of neonate. Executive obstacles of kangaroo care from mothers' standpoint were also discussed, which will be subsequently presented.

Discussion:

According to the obtained results, it seems vital to highlight kangaroo care as a safe and effective clinical care-taking treatment in nursery of premature neonates in all hospitals. Nurses shall provide all mothers with the needed instructions for holding the premature and lower-weight neonate properly on their chests and shall promote their knowledge level concerning positive effects of kangaroo care including induction of tranquil sleep, optimization of physiological conditions of neonate, and removal of suckling obstacles.

Keywords:

Experiences, Mothers, Premature Neonates, Kangaroo Care

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Introduction

Further physical contact between mother and her neonate results in tranquility of the newborn and stabilization of its vital signs as well as enhancing motherly responsibility and responsiveness and sense of mother's eligibility to take care of her newborn. Touching is therefore highly significant in neonate period (1). Three types of physical contacts are generally proposed: 1- kangaroo care; 2-in-arms holding; and 3- soft baby carriers. In this respect, findings of Blois' research (2001) indicated that the kangaroo care has various advantages among the aforementioned methods, including: shortened duration of admission in the hospital, increase in duration and frequency of mother's lactation to the baby, and improvement of gaining weight especially for premature neonates (2). Premature neonates admitted in NICU besides being separated from their mothers are prone to inevitably painful and stressful situations. Kangaroo care is the most effective method to get rid of this separation and its negative consequences. Results of a study by Morelius et al. showed that scores of heart beat and pain of premature neonates admitted in NICU would decline during kangaroo care (3). Kangaroo care for premature neonates has led to their discharge from hospital averagely 4 days earlier than other neonates (4).

Kangaroo care was primarily performed by Ray and Martinez in 1970 in hospitals of Bogotá, Colombia due to admission of large number of premature neonates and deficiency of incubator in the first or second hours following the childbirth. It had positive effects on how the relation was established between the mother and neonate (5). Taken into account the remarkable prevalence of premature neonates and/or low-weight births, World Health Organization has reported that it is difficult to provide appropriate care for such babies due to occurrence of hypothermia and

likelihood of hospital infections. Furthermore, transferring these newborns into incubator causes separation from their mothers and deprives them from the necessary contact. Receiving long-term medical care is very important for most of premature neonates, and, kangaroo care is an effective way to meet the neonate's needs to warmth, exclusive feeding with mother's milk, protection against infection, tactual stimulation, and security and love (6). Premature neonates suffer from variety of difficulties; the pain caused by invasive clinical and medical procedures coupled with stress could negatively affect evolution of their brains and might even endanger them with additional risks of complications such as ventricular hemorrhage, exceeded oxygen intake, and hypertension. Ackan et al. (2009) reached to this conclusion in his research that kangaroo care is the most efficient non-pharmacological method to reduce pain and stress which also results in promotion of mother's interaction with premature neonate. They recommended encouraging all mothers having premature neonates to perform kangaroo care before, during, and following the invasive procedures (7).

The reason lies in the fact that the induced tactual stimulation contributes to secretion of oxytocin hormones, which in turn causes systematic and amazing changes such as tranquility, growth, and recovery in the neonate and the person performing the kangaroo care (8). The researcher observed during his own work experiences that the performance based on kangaroo care is not still available in a predefined and ideal form despite emphasis of nurses on "no-separation" paradigm. The nurses and parents should acquire sufficient information regarding implementation of kangaroo care to be capable of performing it successfully for the neonates (9). The nurses shall instruct the mothers and encourage them to perform kangaroo care or skin contact with the

premature neonate (10). According to the results of formerly conducted researches, there are ubiquitous evidences suggesting kangaroo care yields positive and fruitful consequences for the neonate as well as the mother; yet, this care-taking method and its advantages have not been yet analyzed from standpoint of parents.

Consequently, the current qualitative research was carried out in 2011 aimed at determining experiences of mothers having premature neonates concerning kangaroo care.

Material and Methods

The present study is a qualitative research in which concentrated collective discussion method is used for data collection. Objective of this research is to determine experiences of mothers having premature neonates about kangaroo care. It was conducted in NICU of a training hospital in Yazd City, Iran in 2011. Research society consisted of mothers having premature neonates (pregnancy period less than 37 weeks) 12 of whom participated in the study based on objective-based sampling. Qualification criterion for mothers' involvement in the research process was willingness to participate in the research and they were free to quit the process whenever they wished. Devotion of enough time and effort to select appropriate individuals helped the researcher to compose a homogenous group. In these groups, incorporation of acquaintance criterion and presence of a joint issue (having premature neonate admitted in NICU) resulted in attachment, sincerity, and ease in expression of opinions and feelings. Totally, three sessions of concentrated collective discussion were organized under management of researchers and each session was held for 45 minutes in NICU of the selected training hospital (the only hospital in which kangaroo care is performed).

Of concentrated collective discussion was held to return the encoded interviews to the

participants for confirming the accuracy of collected information. In this procedure, the research team took the written consent form of participants with regard to collaboration and participation in the study through explaining about fundamentals, objectives, and procedures of research as well as role of each participant in the session and the promise for confidentiality of their information. The major questions governing the collective discussion sessions were adjusted after consultation with nursing professors specialized in the field of pediatrics and neonates. The questions were classified in five general categories including: mother's attitude about kangaroo care, Mother's feeling in the first skin contact with premature neonate following the childbirth, description of changes in clinical condition of neonate after kangaroo care, description of experiences about skin contact, and finally, supports and services required for better implementation of kangaroo care. During the sessions, the researcher undertook role of coordinator and facilitator of the collective discussions, encouraging the mothers to actively take part in the debate and controlling the atmosphere governing the session so that the participants avoided expressing collective-oriented ideas besides exchanging their sentiments and opinions. Participation of members in the collective discussion was facilitated by brainstorming technique and accordingly maximum volume of information was involved in the discussions. In addition, a nursing student wrote down the idea expressions, general contents of discussion, and viewpoints of all participants separately and word by word; she finally completed the oral texts.

Contents of session discussions were immediately copied word by word and were matched with recorded information once again. In the current research, four criteria (acceptability, identicalness, specifying, and transferability) were used; these criteria were

first proposed by Lincoln and Guba for assessing qualitative research data (12). Acceptability is confirmed by the researchers through continuous involvement and rigorous investigation of the collected data and reading the handwritings repeatedly for correct recognition of analysis unit (13). Concentrated collective discussion provides the researcher with great deal of information which needs to be reduced for extraction of main points (14). Thus, researcher group reread and categorized the qualitative findings. Contents of interviews were analyzed using the conventional interpretation approach introduced by Dickleman et al. in the book "POLLET & BACK". This approach comprised seven stages: reading descriptions of participants and rereading the interview texts for gaining a general insight, recording interpretation summaries of each interviewee, collective analysis of interviews, registering negative or contradictory findings by referring to interview texts, extracting common or similar concepts and classifying them into one category, finding fundamental relations among themes, and returning the descriptions to participants and receiving their confirmation. Encoding was performed after several times of rereading and major categories were then identified following extraction of best codes and categorization of similar codes. Searching for contradictory evidences and analysis of negative data and ultimately confirmation of handwritings were done by the research participants.

Results

Through content analysis of information obtained from interviews conducted in the concentrated collective discussion about experiences of mothers having premature neonate related to kangaroo care in the current study, two major categories including mothers' experiences about advantages of kangaroo care in interaction with neonate, and, feeling of physical-

mental healthiness of neonate. Executive obstacles of kangaroo care from mothers' standpoint were also discussed, which will be subsequently presented.

Concerning the first category including mother's experience interacting with neonate, participants stated that premature birth of their neonate is the cause of their post-childbirth depression and a couple of them blamed themselves as responsible. Majority of interviewed mothers hugged their neonates for the first time at most 5 days after the childbirth and described their feeling in the first skin contact as reduction of cesarean pain, sense of satisfaction and tranquility, motherhood feeling, and alleviation of former fears with unknown and obscure causes. Some instances of mothers' statements are as follows:

"I cuddled and lactated him today for the first time. I got hopeful and I'm not depressed anymore."

"It's right that my baby's been born premature but I have a very good feeling that cannot be described when putting her on my chest and hearing her heart beat."

"I was very afraid and cried when I hugged him for the first time; but now, I am looking forward to hugging him again"

"I have the sense of motherhood when hugging her; I feel delighted and more confident"

"It was so fascinating for me; he behaved playfully and smiled at me a couple of minutes after I hugged him."

"After cesarean, I had a lot of pain and felt exhausted; it seemed impossible to me to remain in the hospital and take care of a premature baby under this condition. Yet, my body has been tranquilized since I cuddled my baby and I no longer feel tired. Currently, I am more dissatisfied of hospital's condition rather than my baby's status."

Some of mothers participating in the research also believed that it is highly vital

to perform kangaroo care since they expressed their deep feeling of attachment to their neonates afterwards. They themselves suggested further instruction and encouragement by hospital nurses to perform this type of care. It could be deduced from their remarks that they had realized the significance and necessity of skin contact as well as its benefits for mother and neonate and had gotten this profound perception merely based on their feelings and experiences.

Regarding the second category i.e. mothers' experience about feeling physical and mental healthiness of their neonates, they reported feeling changes such as decreased crying, adjustment of vital signs like temperature, baby's tranquility for breathing on mother's chest, and his/her properly suckling and sucking the nipples (some of neonates were also fed with syringe, and according to their mothers, amount of milk intake increased from 2 cc to 5 cc only 3-4 days after performing kangaroo care). They also stated that level of neonate activity has decreased during kangaroo care (skin contact) and the babies were seen to be more tranquil. They had slept for a longer time and with further tranquility. A couple of mothers remarked as below:

"He used to cry a lot; but he's been more tranquil since they instructed me kangaroo care and I performed; his body temperature risen".

"When I put her naked on my chest, her body warms up shortly and she breathes slowly"

"He cries less frequently; he sleeps more; by the way, I feel my milk amount has increased since starting kangaroo care."

The mothers mentioned the following items as the obstacles of effective implementation of kangaroo care: personnel's insufficient instruction and failure to express their supportive behaviors in order to reduce the pain and anxiety when hugging the premature and low-weight

neonate, inappropriate atmosphere of ward for providing privacy and maintaining mother and baby's tranquility, absence and non-participation of fathers in the instruction process and implementation of kangaroo care, lack of eye contact between neonate and mother due to the position the baby should rest during the kangaroo care (lying with stomach on mother's chest), presence of tracheal tube, intra-vascular and arterial line on neonate's body. Fear of neonate hypothermia after exiting from incubator was the most important and highly emphasized concern of mothers and nurses.

Discussion

Experience of skin contact is necessary for growth and evolution and also establishing attachment between neonate and parents. In the current research as well mothers having premature neonate stated that their skin contact with their babies results in improvement of sense of intimacy with the neonate besides promotion of their maternal eligibility. Tessier et al. (1998) also showed in their research that kangaroo care has positive impacts on mother's eligibility feeling and facilitation of attachment between mother and neonate (15). Generally, during the concentrated collective discussion sessions, mothers mentioned numerous perceived advantages of kangaroo care for them and also their babies. From their viewpoints, the major positive outcomes for premature neonates were physiological stability such as adjustment and equilibrium of body temperature (no one reported occurrence of hypothermia), induction of tranquility and comfortable sleep, improvement of the process of feeding by syringe orientated to hold mother's breast, slow breathing, and absence of physical and psychological distress in neonate. Results of a study by SALIMI et al (2009), revealed the fact that mother's skin contact causes reduction in respiration rate and changes in behavioral condition of

premature neonate leading to tranquility (16). Ferber and MAKHOUL (2004) accentuated on impact of kangaroo care on long and tranquil sleep of neonate in the early hours following the childbirth; they recommended the nurses to apply this method (17). In addition to study results suggesting positive outcomes of kangaroo care for neonate and mother, as mentioned in the introduction, other researches also present interesting and noteworthy findings that shall be taken into account by nurses, and of course, by all staff of medical team who interact and collaborate in the neonates care-taking process. As an instance, Hake-Brooks & Anderson inferred through conducting their clinical trial test that implementation of kangaroo care for premature neonates as well as improvement of lactation contributes to secretion of antibodies in the mother's milk and protects the neonate against hospital infections (18).

Having systematically reviewed 15 studies, Lawn et al. (2010) found out that kangaroo care could remarkably lower prevalence of infection and the mortality associated with premature birth (19). KAMBARAMI et al. confirmed that kangaroo care could be a safe and effective way for shortening duration of premature neonate's admission in the hospital (20). Furthermore, the premature neonates admitted in NICU are subject to painful invasive procedures which might disturb their tranquility and undermine the immunity system. In this respect, Cong et al (2009), concluded through conducting a study that kangaroo care balances physiological response to painful procedures (21). During the interviews, the interviewers reminded the mothers of nurses' worries about not hastening when taking the premature neonate out of incubator and starting the kangaroo care. Dimenna (2006) asserts that time criterion of kangaroo care initiation is dependent on severity of neonate's prematurity along

with consensus of medical team members on stability of its clinical condition, which might happen immediately after the birth or can be postponed to several weeks later. He offers results of different studies implying likelihood of hypothermia, agitation, and respiratory distress has been significantly lower in premature neonates receiving kangaroo care (22).

Ludington (2011), who has carried out extensive studies on kangaroo care in premature neonates, states that fear of physiological instability in premature neonate such as hypothermia, respiratory distress, and behavioral alterations like agitation are regarded as invalid obstacles for routine use of kangaroo care (8). Results obtained in the research by Sontheimer et al. (2004) showed fixation values of respiration rate, oxygen of arterial blood, and temperature of premature and mature neonates during kangaroo care (23). Altogether, the interviewed mothers in the current research were content with performing kangaroo care for their neonates and their worries mainly pertained to unawareness of father and necessity of his participation in this process. Research results emphasize on significance of parents' interaction (and not only the mother) and their involvement in the kangaroo care; this method is not restricted to the contact between mother and neonate but it is also effective for father, sister, brother, and other relatives as well (8).

Finally, crucial role of nurses as professional individuals continuously and closely interacting with mothers and neonates shall be accentuated. They can support and overcome the frights of the mothers having premature neonate besides attending instructional programs related to novel techniques of care-taking of premature neonates and upgrading their scientific knowledge for implementing in the clinical treatment. Accordingly, the mothers will be able to participate in the process of care-

taking and evolution of their neonates more efficiently. CHIA's research results (2006) showed that the nurses agree on performing kangaroo care for premature neonates and mentioned its positive effects for mother and the baby. However, considerable limitations also exist in this process making it impossible to implement the procedures successfully and perfectly; these limitations include large working traffic in the ward, insufficient training and absence of precise protocol of kangaroo care- particularly for premature neonates with low childbirth weights-, and last not the least, lack of organizational support. These obstacles must be specifically taken into considerations and alleviated by nursing managers in the training programs and the suitable context shall be provided for implementation of kangaroo care (24).

Conclusion

According to the obtained results, it seems vital to highlight kangaroo care as a safe and effective clinical care-taking treatment in nursery of premature neonates in all hospitals. Nurses shall provide all mothers with the needed instructions for holding the premature and lower-weight neonate properly on their chests and shall promote their knowledge level concerning positive effects of kangaroo care including induction of tranquil sleep, optimization of physiological conditions of neonate, and removal of suckling obstacles. The mothers must be recommended to resume kangaroo care after being discharged from the hospital without any fear and anxiety. It might lead to improvement of neonate-mother interaction and attachment and could accelerate the process of neonate's systematic growth and evolution.

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