

Kangaroo Mother Care: Feelings and Perceptions of Mothers in Stage Three

ORIGINAL

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Abstract

Background: The Kangaroo Mother Care method allows for early hospital discharge and ensures outpatient follow-up care for newborns. This study aim to investigate mothers' feelings upon returning home and their perceptions of the care delivered by the professionals who conduct the follow-up examination on their newborn at a Kangaroo Mother Care stage three outpatient clinic.

Methods and Findings: An exploratory qualitative study was conducted in August 2015 with a sample of eleven mothers who visited the follow-up outpatient clinic of a public maternity hospital. Semi-structured interviews were performed, and the content analysis technique was used. The analysis resulted in the following thematic categories: "Mothers' feelings upon returning home" and "Mothers' perceptions of the care received". Despite feeling relieved upon returning home, the mothers also felt insecure about caring for their children. However, they were satisfied with the care received at the outpatient clinic. Its limitations are relative to the generalisation of its results.

Conclusion: Health education is essential to preparing mothers to return home because it promotes confidence and autonomy in the care of children.

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Keywords

Newborn Infant; Premature Infant; Kangaroo Mother Care.

Introduction

Worldwide, approximately 20 million premature and low birth weight (LBW) infants are born every year. One third of such infants die before age one, despite the technological, scientific and therapeutic development of neonatal intensive care units (NICU) and the formulation and implementation of public policies targeting child healthcare [1].

In Brazil, the neonatal mortality rate is alarming, with approximately 10 deaths per 1,000 live births in 2011, and represents 70% of all child deaths. Postnatal conditions associated with child mortality have decreased across the country as a result of improvements in primary care. However, the rate of newborn deaths within the first week of life increased from 50% in 2000 to 53% in 2010, and 26% of such deaths occur in the first day of life. These data agree with those reported in the international literature [2].

The main global causes of newborn deaths include prematurity, intrapartum infectious complications (including sepsis, meningitis and pneumonia) and LBW. The latter accounts for approximately 60-80% of all newborn deaths and is considered especially serious because LBW infants are particularly vulnerable to hypothermia and infection [3].

Prematurity is a factor associated with increased neonatal morbidity and mortality rates. With more than 15 million premature infants born every year worldwide, the World Health Organization (WHO) recommends the Kangaroo Mother Care (KMC) method of caring for preterm and/or low-weight infants during their hospital stay. This method promotes continuous skin-to-skin contact between mother and child and supports frequent and exclusive breastfeeding. KMC also allows for early hospital discharge and easy access to follow-up care, which should be provided until the infant reaches the gestational age of a full-term baby or a weight of 2,500 g [3].

Systematic reviews of evidence-based studies on KMC indicate that in low- and medium-income

countries, quality of care delivery is associated with the significant reduction of mortality risk at discharge [3]. The two first stages of KMC occur in the hospital. The third stage, which is the focus of the present study, begins after discharge, when infants and their families receive follow-up care as outpatients. This stage requires a biopsychosocial approach to ensure the continuity of care [5].

Healthcare services should deliver humane and high-quality care to newborn infants. Such care requires professionals to perform thorough clinical examinations; to conduct anthropometric evaluations to detect weight gain or loss and assess the infants' height and head circumference according to their corrected gestational age; to detect warning signs, such as gastroesophageal reflux, infection and apnoea; to revise the infant's health record; to observe the psycho-affective relationship between infants and their families; to provide education about high-risk situations, specialised treatments and vaccination schedules; and to encourage mothers to accept and maintain the support provided by healthcare networks [6].

In the third stage of KMC, i.e., when the mother returns home, she might develop feelings of fear and insecurity about caring for her infant and meeting other household demands. This situation makes the support provided by professionals and the community crucial for the successful continuity of KMC [3] and newborn infants' survival.

To investigate the feelings mothers have upon returning home and their perceptions of the care delivered by the professionals that provided follow-up care to their infants at a KMC stage three outpatient clinic, this study asked the following questions: "What are the feelings of mothers of premature and/or low-weight newborn infants during the third stage of KMC?" and "What are their perceptions of the care delivered by professionals at specialised outpatient clinics?"

Method

The present exploratory and qualitative study was conducted at the follow-up outpatient clinic of a public Baby-Friendly Maternity Hospital in João Pessoa, Paraíba, Brazil.

The study population comprised mothers of pre-term or low-weight newborn infants who met the following inclusion criteria: practitioners of KMC and participants in the stage-three KMC follow-up whose language comprehension and communication abilities were sufficient to participate in the interviews.

Data were collected in August 2015 using a scripted, semi-structured interview. The following statements guided the interview: "Describe your feelings upon returning home with your child after discharge" and "Talk about your perception of the care delivered by professionals at the outpatient clinic you and your child visit".

The interviews, which lasted 20 minutes on average, were conducted in a quiet private room at the outpatient clinic, free from external interference. The interviews were digitally recorded with the participants' consent and were later fully transcribed. To ensure the participants' anonymity, the interviews are identified by the letter "M" (mother), followed by a number representing the chronological order in which the interview was performed. The criterion used to end data collection was saturation, i.e., the point at which the content of the empirical material was sufficient to meet the study aims.

The empirical data were analysed using the theme modality of the content analysis technique, which includes three stages: pre-analysis, exploration of the material, and interpretation of the results [7]. In these stages, the data are organised and grouped into thematic categories.

The study complied with the ethical stipulations established by National Health Council Resolution no. 466.2012 and was approved by the ethics committee of the Centre of Health Sciences, Federal University of Paraíba (Universidade Federal da Pa-

raíba – UFPB), Brazil, ruling no. 0530/13. The participants signed an informed consent form.

Results and Discussion

Eleven mothers of infants aged 17 days to two months participated in the study. These mothers were receiving stage three KMC follow-up care for their infants. The mothers were between the ages of 17 and 36 years and had an average of two children. Most had received 10 years of formal schooling and had a low mean income (less than the equivalent of double the Brazilian minimum wage). The mother-child pairs had remained at the hospital for a minimum of 4 and a maximum of 57 days.

Analysis of the empirical data led to the identification of two thematic categories: "Mothers' feelings upon returning home" and "Mothers' perceptions of the care received".

Mothers' feelings upon returning home

The hospitalisation of a child is a difficult and painful experience for mothers, especially when it occurs at a highly emotional time, i.e., the baby's birth: the risk of death, stress and suffering may cause fear, sadness, guilt and despair [8]. In contrast, returning to a familiar and peaceful home environment is an anticipated moment for mothers and triggers feelings of relief and happiness for having overcome the ordeal of having a hospitalised preterm/LBW child.

Returning home was the best moment for me. Being home is the best!

M1.

Ah it was great... upon coming home we see that there's no more danger, coming back home is such a relief, because we're inside here all the time! Concerned with the girl. Those were days of struggle in here.

M4.

The calmness of being at home with her, quiet, without any stress, because she's with me all the time.

M8.

I felt very good! Relieved by getting out of the hospital. Relief! And very happy, because I'm at home and he's well!

M9.

I felt very happy for having left the hospital, because the hospital is no good, right?

M11.

In agreement with these findings, a study [9] conducted in Northeastern Brazil with mothers of preterm infants participating in home-based follow-up care found that hospital discharge was experienced as a victory and a reward for the difficulties the mothers had experienced during their child's hospital stay. However, because of the specificities of the care that preterm infants require in the home environment, mothers must be prepared to complete the three stages of KMC so that they can feel confident as they assume the care of their children upon returning home.

Importantly, the goal of KMC stage three is to promote the adequate growth and development of preterm infants by meeting their needs and the needs of their mothers and other involved relatives, which facilitates the achievement of short- and long-term benefits [10]. One study [11] identified the following benefits of KMC: reduction of the mother's stress and of the incidence of postpartum depression; improved breast milk production and better rates of exclusive breastfeeding success; stability in the infant's cardiorespiratory functions, sleep-wake cycle and thermoregulation; and a stable parent-child relationship.

The KMC also allows mothers of preterm and low-weight infants to acquire specific knowledge and develop the skills necessary to care for their

children at home in a pleasurable, safe and unique manner as they engage in a new experience of continued learning [11]:

It's been good, the experiences change from one day to the next!

M2.

This experience has been good... at home we can care for her well.

M3.

Very good! I learn something new every day, every time I'm with him.

M6.

To a mother, caring for an infant constitutes more than a simple performance of tasks. Rather, it involves recognising, accepting and bonding affectively with the child, activities that are a source of well-being for both [12]. One study [13] showed that the preparedness of mothers to care for their children after hospital discharge may reduce their anxiety and increase their self-confidence as primary caregivers, resulting in easier adjustment to the home environment.

However, there is a noteworthy duality in the feelings experienced by mothers after leaving the hospital. Though mothers feel positive about the infant's recovery and experience a release of emotional tension, assuming the responsibility of caring for the preterm child without the support provided by professionals triggers concern, fear and anxiety.

... concerning because he's premature! So I kept thinking, oh, God, how will it be day-to-day? So, so small, I've never had a premature baby before.

M2.

It was kind of complicated... I've never had a child before, but I'm managing, although with a little fear.

M7.

Anxious... these are the first steps, so one feels a bit scared.

M8.

These findings are a cause for concern because a mother's lack of self-confidence upon assuming the care of her child might impair the quality of care delivered, especially in the case of preterm infants, who have unique needs. The findings described above indicate possible gaps in the process of communication. In the first two stages of KMC, families are educated from the moment of hospital admission. This education is applied in stage three, in which families are able to care for the child at home by themselves.

One study [9] showed that preparedness for hospital discharge is most effective when healthcare professionals provide orientations to mothers about how to care for their children from the beginning of their hospital stay, i.e., from the time of admission and throughout the hospital stay. Such education prepares them to deliver skilled care to their children autonomously.

Another study [14] conducted with mothers of premature infants admitted to the NICU revealed weaknesses in the professional-patient relationship during the hospital stay. The results showed that professionals without a receptive attitude tended to use technical language, and the little orientation they provided on infant care was contradictory and inconsistent, causing frustration, doubt and insecurity about the care of the preterm infants.

Yet another study [15] found that the nursing professionals at a KMC stage three outpatient clinic paid special attention to the mother-child pair, communicated in a clear manner that allowed the mothers to express their fears and misgivings about the home care of their children and answered their questions in a way that minimised the problems associated with the hospital stay and intensive care.

Such studies indicate that it is important for professionals involved in KMC, especially nurses, to

empower mothers in their role as caregivers and relatives close to the child to enhance their ability to cope positively with their circumstances.

It is therefore imperative that multidisciplinary teams develop communication skills [9, 16] to meet the needs of mothers through gradual, concise and easily understandable orientations whose goal is hospital discharge, thus providing integral care to the mother-child pair. This goal can be achieved by emphasising a dialogical professional-mother-family relationship through which all the questions about infant care are answered and mothers and families feel able to deliver high-quality and safe care to infants at home.

The demands associated with the care of the new family member require adjustments to the household routine, the burden of which should not fall on the mother alone and should involve the contribution of other family members. However, though family members can help a mother care for the child, only one mother in the present study reported receiving this type of support.

... Because I can't manage all by myself. Someone has to help me, my husband is helping me a lot.

M7.

Mothers who do not have help at home can become anxious and tired due to the interference of household chores or other activities. They may also experience difficulty sleeping because the infant requires constant attention. For example, skin-to-skin contact must be maintained for long periods of time, in some cases 24 hours a day [17].

Corroborating these observations, a study [18] found that husbands (or partners) and grandmothers provide the most help in the daily care of the home, thus facilitating the safer and more tranquil adjustment of the mother-child pair to the home environment. Fathers and other relatives might be included in the infant's care as early as during the stay in the NICU. In such cases, both professionals

and parents/relatives can identify family members' learning and adaptation needs in preparation for the care of the premature infant at home as these family members practice KMC during the hospital stay, allowing the mothers time to rest.

A study [4] conducted in Germany found that mothers and fathers react differently to the hospital stay and training. While the men have more optimistic perspectives of the future, they participate little, tend to be more absent, and return to work, offering support from a distance. In contrast, the women more overtly express their anguish and anxiety and try to learn how to care for their children on a daily basis. Importantly, the interaction between the healthcare team and families is necessary to encourage fathers and other relatives to provide support to mothers, thus contributing to the integral care of the preterm infant.

Nurses play a highly significant role in this process. They are advantageously situated to detect the true needs of mothers. Moreover, the nursing care plan is a relevant tool for the formulation of strategies to promote the provision of support to mothers as they prepare to care for their children at home. These strategies include assessing the mothers' understanding of the care process, providing relevant education about the infants' responses, strengthening the mother-child bond and enhancing the mothers' self-confidence by encouraging them to be in contact with their children and to care for them autonomously [13].

Mothers' perceptions of the care received

After preterm and low-weight newborn infants are discharged from the hospital, they must receive follow-up care from professionals in an outpatient setting until they weigh 2,500 grams. Follow-up begins with a minimum of one visit per week, in which a multi-professional team systematically evaluates the infant's growth and development. Parents begin to appreciate the follow-up process as they perceive their child's progress [19].

To me it's great, I have no complaints. I have nothing to complain about from the very first day I came here to deliver him to the day I left. Here they weigh him, measure him, measure his head, measure his little body, measure all of him, the doctor listens to him, asks questions

M9.

Good. I'm well received, both me and my daughter. They're very helpful towards her, towards myself, I liked it. The visits are meant to find out her weight, how many centimetres she is, if she's gaining weight, they examine her, all to a T.

M10.

All of them have been very kind. ...they check her weight to see if she's well and many other things too.

M4.

It's been good, they treat me very well, the care delivered is good, I'm liking it up to now. They see how they are, touch them, look at their bellies.

M7.

It's been good ... so the care delivered has been great. She examines him, looks at his belly, asks what tests I've already done.

M2.

The mothers' narratives indicate their satisfaction with the care the professionals deliver to their children, especially with the actions taken during visits, such as monitoring the infants' growth. They also appreciate when the professionals show zeal and a willingness to perform the physical examination and clinical interview in an attentive and humane manner.

Although monitoring the infants' growth is necessary to promote their health, it is notable that only one of the participants mentioned the assessment of her infant's neuro-psychomotor development.

[He] checks whether he's ok, his movement, if he meets all the expectations for a premature baby! How he's moving, his gaze, whether he cries too much.

M2.

This finding indicates that, despite the importance of this type of assessment for the early detection of abnormalities in the development of preterm infants, in actual practice, the professionals responsible for outpatient follow-up may neglect this aspect of infant development.

Monitoring child growth and development is essential to preventing possible problems and improving the child's quality of life [20]. This type of monitoring must be conducted with greater care and is particularly relevant in the case of preterm infants because of their higher risk for illnesses and hospital admission [15]. Therefore, professionals should deliver high-quality care, and the involved caregivers should be adequately trained [21].

One study [9] observed a high number of hospital readmissions of preterm infants discharged from the NICU and associated this trend with the significant proportion of mothers and infants who dropped out of outpatient follow-up. To prevent this outcome, the hospital staff should contact the primary care service in which mothers and infants are enrolled while the pair is still at the hospital so that follow-up by primary care teams can begin with home visits and continue in regular well-child care visits in a primary care setting [19].

However, another study [18] found that KMC stage three follow-up facilities are frequently unavailable at clinics that deliver post-hospital discharge care. This may result in fragmented care, despite the family's need for support if they are to provide integral care at home.

Cooperation among the various levels of health care is crucial to ensure the integral care of premature and/or low-weight infants and their fa-

milies because it has a direct impact on reducing child mortality [21]. Adequate referral and counter-referral among the professionals at the various levels of the healthcare system promotes the integrality of care and improves the system's problem-solving capacity as it meets existing demands [22]. Lack of communication between the hospital network and primary care services hinders premature infants' access to outpatient care [18] and the efficacious monitoring of their growth and development.

Hospital-based healthcare professionals do not typically ask questions about the family's support network and are unlikely to encourage the development of resources to support them as they care for the newborn infant at home. Thus, the third stage of KMC represents an important source of support for families in which multi-professional teams provide education about the care of the infant at home [23].

The aforementioned considerations indicate the importance of the links between maternity hospitals in which KMC is implemented and primary care services. Such links allow information and the care delivered to families to be coordinated. It is highly important that all of the relevant professionals participate in periodic meetings and that they have free access to the patients at the hospital. In addition, training courses on the management of KMC and the monitoring and development of premature infants during the first years of life should be promoted. This type of support allows primary care professionals to perform high-quality monitoring of preterm infants within the family and community environment [19].

The mothers' satisfaction with the care received at the outpatient clinic is also associated with the health education delivered by the professionals during visits, which was tailored to the mothers' observations, questions and doubts.

Care delivery is great, I'm liking it. Like in the case of his navel, which I talked to her about, she said it was a hernia and that I shouldn't put anything [over it], indeed, I was already thinking of putting something [over it].

M2.

It's been great, thank God. They never deprive us of help. Any question I have they answer it, they guide me on how I have to care for her, bathe her, things like that.

M3.

Very good, because they're very kind and careful with the children. They examine [them], they ask about how the baby is

M11.

The mothers' narratives show that the actions of the professionals who deliver care to mother-child KMC pairs conform to the method's recommendations: they promote more humane care of preterm or low-weight infants through health education actions targeting mothers, fathers and other relatives [15]. Such educational actions are a crucial part of the care delivered to the mothers of such infants. Therefore, professionals should perform them during each visit and at the various levels of health care.

According to one study, educational activities are important means of health promotion and help prevent the exposure of newborn infants to inadequate practices and reduce the occurrence of errors in their care, which can affect their health [24].

In the case of preterm infants, health-promotion orientations are essential to reducing early childhood mortality. The orientations should be provided in easily understandable language [9], and parents and other relatives should actively participate in the health education process.

In addition to performing health education actions targeting mothers and other relatives of preterm and low-weight newborn infants, profes-

sionals should refine their listening skills so that they can dispel doubts, minimise difficulties and concerns and promote adequate comprehension of the health-disease process. Such skills allow health professionals to gain the mother's and family's confidence and improve the professional-patient relationship, prioritising the development of a bond with and the support of mothers and families and allowing them to achieve autonomy in the care of their infants [25].

Conclusion

The feelings of mothers of preterm and/or low-weight newborn infants involved in follow-up care at a KMC stage three outpatient clinic included joy at returning home but also anguish and concern because the women did not always feel they were prepared to care for an infant with special needs. However, the mothers were satisfied with the care delivered by the healthcare professionals with respect to emotional support. The education and explanations given minimised the anguish and insecurity the mothers felt about caring for their children. The mothers were also satisfied with the attention given to the biological care of the infants, which was characterised by careful and humane monitoring of their growth with consideration for their particularities.

The results emphasise the importance of health education actions, which, according to the mothers of the infants at the investigated KMC stage three outpatient clinic, are essential because they promote self-confidence and autonomy in the care of children and provide opportunities to have questions answered.

Though the present study contributes to the discussion of the third stage of KMC, it has limitations relative to the generalisation of its results because the study design targeted a specific context. In addition, the fact that the interviews were conducted at the outpatient clinic may have

biased the assessment of some of the data due to the participants' misgivings about the clinic's professionals.

Further studies analysing how mothers and families are prepared for KMC during each of its three stages should be performed to improve the effectiveness of follow-up care for preterm and low-weight newborn infants and to ensure high-quality care at home and rapid recovery of the infants' weight.

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