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"I'm going home. And now?" The difficult art of the Kangaroo Method at home*

“Vou para casa. E agora?” A difícil arte do Método Canguru no domicílio

Me voy a mi casa ¿Y ahora qué pasa? El difícil arte del Método Canguro en el domicilio

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Abstract: Objective: to get to know the parents' experience in applying the Kangaroo Mother Care at home. Method: qualitative research with data obtained between March and December 2016, by means of interviews with 12 mothers and three fathers of preterm and/or low-birth-weight newborns, participants in the third stage of the Kangaroo **Method.** The interviews were submitted to thematic content analysis technique. **Results:** the parents maintained the kangaroo position at home. Although each family developed it differently, they have not failed to implement it. They were also able to adapt to the new care routine with the arrival of the child at home and reported satisfaction with the medical appointments of the third stage and the follow-up carried out at the hospital. **Conclusion:** the parents, despite the daily challenges with home care, have a clear meaning about the importance of the Kangaroo Position for preterm and / or low-birth-weight newborns and its ability to affect the quality of care offered.

Descriptors: Low birth weight infant; Pre-term infant; Nursing; Kangaroo-mother care method; Parent-child relations

Resumo: Objetivo: conhecer a experiência dos pais na aplicação do Método Canguru no domicílio. **Método**: pesquisa qualitativa cujos dados foram obtidos entre março e dezembro de 2016, por meio de entrevistas com 12 mães e três pais de recém-nascidos pré-termos e/ou baixo peso, participantes da terceira etapa do Método Canguru, que foram submetidas à técnica de análise de conteúdo temática. **Resultados**: os pais mantiveram a posição canguru no domicílio. Apesar de cada família desenvolvê-la de forma diferente, não deixaram de realizá-la. Também conseguiram adaptar-se à nova rotina de cuidados com a chegada do filho em casa e relataram satisfação com as consultas da terceira etapa e de seguimento realizadas no hospital. **Conclusão**: os pais, mesmo diante dos desafios diários com os cuidados no domicílio,

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detêm uma significação clara sobre a importância da Posição Canguru para os recém-nascidos pré-termos e/ou baixo peso e sua capacidade de impactar na qualidade do cuidado oferecido.

Descritores: Recém-nascido de baixo peso; Recém-nascido prematuro; Enfermagem; Método Canguru; Relações pais-filho

Resumen: **Objetivo**: conocer la experiencia de los padres durante la puesta en práctica del Método Canguro en el domicilio. **Método**: investigación cualitativa cuyos datos se obtuvieron entre marzo y diciembre de 2016, por medio de entrevistas con 12 madres y tres padres de recién nacidos pretérminos y/o bajo peso, participantes de la tercera etapa del Método Canguro, que se sometieron a la técnica de análisis de contenido temático. **Resultados**: los padres mantuvieron la posición canguro en el domicilio. Aunque cada familia la haya desarrollado de forma diferente, no dejaron de realizarla. También lograron adaptarse a la nueva rutina de cuidados con la llegada del hijo a casa y relataron satisfacción con las consultas de la tercera etapa y de seguimiento realizadas en el hospital. **Conclusión**: los padres, aunque estén ante los desafíos diarios con los cuidados en el domicilio, detienen una preocupación clara sobre la importancia de la Posición Canguro para los recién nacidos pretérminos y/o bajo peso y su capacidad de afectar la calidad del cuidado ofrecido.

Descriptores: Recién nacido de bajo peso; Recién nacido prematuro; Enfermería; Método madre-canguro; Relaciones padres-hijo

Introduction

Despite efforts to implement humanized neonatal care, centered on the family and on the use of strategies, such as the Kangaroo Method (KM), studies show that families of preterm and/or low weight newborns (PTLWNB) are still facing difficulties, such as: lack of empowerment and emotional support, little involvement in decision making and parents' supporting role in care.1-2 Many families are not adequately prepared for hospital discharge and home care for the PTLWNB, which can result in increased family stress and anxiety, and higher rates of readmission.[3-4]

After the PTLWNB´s birth, the parents go through an important experience in the neonatal unit, before arriving at home. The complexity varies according to the degree of prematurity and the problems that each baby faces. The neonatal unit environment presents many stressors and the parents' preparatory education can help them feel ready for hospital discharge. However, at the same time, it can be a challenge for the multidisciplinary team.[5]

In order to facilitate this process and prepare parents for the care of the preterm baby at home, the Brazilian government has proposed strategies such as the KM. This method advocates early skin-to-skin contact between the mother and the PTLWNB, in an increasing way and for the time that they both consider to be pleasant and sufficient, allowing a greater participation of the parents in the care of their newborn (NB). The KM was instituted as a Public Policy in the year 2000, after the publication of the technical standard that gathers guidelines for the care of NBs hospitalized in neonatal units.[6]

In Brazil, the KM is developed in three stages. The first starts with high-risk pregnancy, delivery and birth, and then, when the newborn is admitted to the Neonatal Intensive Care Unit (NICU) and/or the Conventional Neonatal Intermediate Care Unit. The second stage is performed at the Kangaroo Neonatal Intermediate Care Unit, where the newborn spends most time in skin-to-skin contact with their parents, in addition to receiving encouragement regarding breastfeeding (BF). In the third stage, after hospital discharge, the PTLWNB remains with shared follow-up by the hospital team and the Primary Health Care (PHC).[6]

The third stage of the KM used to be linked only to the hospital team until the baby reached 2,500 grams. However, it was extended and the PHC started to play specific roles to welcome and monitor, in partnership with specialized care, the PTLWNB in the Basic Health Units (BHU) with the teams of the Family Health Strategy (FHS), including home visits and matrix support from the Family Health Support Centers (NASF).[7] Thus, it is up to the health teams, both from the hospital and the PHC, to ensure a safe transition and provide adequate care to babies after discharge.[8-9]

Given the indications and benefits of the KM, in addition to the PTLWNB needs, it is essential that these babies be followed by the health team after discharge from the neonatal unit. However, hospital discharge and the transition of NB care are still critical stages, when the continuity and completeness of care are expected, as the activities developed are focused on the (re) establishment of the infants´ physiological conditions, not to speak of their and their families´ other needs.[7]

The choice to study the application of KM in the home environment is justified by the following factors: the relevance of this care for meeting the needs of the preterm and family after hospital discharge; the importance of knowing the method's home practice and the aspects that influence its performance; and the need to check whether hospitalization and the guidelines offered provide safe care for preterm babies at home.4 Furthermore, most studies on the method focus on the benefits of its application in the hospital setting, leaving without report the experience of families/parents in implementing it at home, together with outpatient follow-up, which corresponds to the third stage of the method in Brazil.[4,10]

Considering that the KM goes beyond the space of the neonatal unit and is carried out in the family environment, this study started from the following research question: What is the experience of parents in applying the KM at home? The objective, therefore, was to learn about the parents' experience in applying the KM at home.

Method

The study has a qualitative approach developed in a public hospital in Campo Grande, capital of Mato Grosso do Sul (MS). The hospital has 320 beds linked to the Unified Health System (SUS), with 10 beds in the Neonatal Intensive Care Unit (NICU), 20 in the Conventional Neonatal Intensive Care Unit and five in the Kangaroo Neonatal Intensive Care Unit. In addition, it is qualified as a state reference for the KM and accredited as a Baby Friendly Hospital Initiative (BFHI).

Fathers and mothers who experienced the experience of having their preterm and/or low weight children hospitalized at Kangaroo Neonatal ICU participated in the research and integrated all stages of the KM. The inclusion criteria were fathers and mothers, regardless of age, living in the capital or in the interior of the state, who participated in all KM stages. Mothers and fathers whose address the researcher did not find registered in the medical record to carry out the home visit were excluded from the study. This visit took place seven days after the baby's discharge from hospital to observe the practice of the Kangaroo Position (KP), exclusive breastfeeding (EBF) and the care provided to the baby based on the KM. The researchers made previous personal contact with the parents to invite them to participate in the research. There were no refusals during the capture of participants.

The research involved 12 mothers and three fathers, totaling 15 participants. The small number of fathers is justified because, in this unit, the father only accompanies the children in case of twinning and in the absence of the mother. The others have free access to the unit, but do not remain full time. The number of people interviewed was defined from the moment they provided data in sufficient quantity and quality to meet the study´s objective.[11]

Data collection took place from March to December 2016 by means of semi-structured interviews conducted at the families' homes, in a reserved place and with the presence of the interviewee alone, or at the outpatient clinic, when the parents were participating in the third stage of the method, at a time and day chosen by them. The interviews were conducted by the researcher responsible for the study, who was a nurse at the neonatal unit, using a script containing identification data and the following guiding question: "Tell me how the experience of applying the KM at home has been". The interviews were recorded with the consent of the participants, and later transcribed.

For the treatment of the collected material, the technique of thematic content analysis was used,[11] consisting of three interconnected stages. The first one was the pre-analysis, which consisted of choosing the documents to be evaluated and resuming the research objectives; then the exploration of the material transcribed with in-depth reading of the dialogues, which made it possible to capture the cores of meaning and classify the findings in empirical categories. The third stage was the treatment of the results obtained and interpretation of raw data, submitted to analysis. From that point on, interpretations were made, interrelating them with the theoretical framework of the National Policy for Humanized Care for the Newborn - Kangaroo Method and the national and international scientific literature on the subject.[5-7]

The research was approved by the Human Research Ethics Committee of the Federal University of Mato Grosso do Sul, with the CAAE protocol nº. 51279715.6.0000.0021, Opinion no.

1,371,216 approved on 12/16/2015, following all the ethical precepts provided for in Resolutions 466/2012 - 510/2016 - 580/2018, of the Ministry of Health. The study participants read and signed the Free and Informed Consent Form (ICF). Parents and guardians of adolescent mothers were informed about the research, and those who agreed to participate signed the informed consent form, and the adolescents signed the Informed Consent Form. This investigation did not involve any adolescent parent. To preserve the identity of the participants, the reports were identified as a mother or father and the number of the subsequent interview (Mother 1 and Father 1, for example).

Results

The participating mothers were between 16 and 43 years old, all living with their partners. As for education, one of them had incomplete elementary school; seven completed elementary school; two, high school; and two, higher education. With regard to work, six were employed — two charwomen, one history teacher, one receptionist at a law firm, one assembly operator at a shoe factory and one general services assistant at a Child Education Center (CEINF). The parents' age ranged from 20 to 53 years old and the level of their education was complete elementary school. At the time of the interviews, two of them were unemployed and one was self -employed.

Of the total participating mothers, eleven underwent cesarean section due to maternal complications that led to fetal distress, and one underwent vaginal delivery. Six mothers were primiparous and the others had had two or more births, one of whom had already given birth prematurely. As for the causes of premature births, one was due to the presence of oligodramnium; one because of Hellp Syndrome; two on account of Placental Abruption; five were due to Hypertensive Disorders of Pregnancy (HDP); two had Preterm Labor; and one had premature rupture of membranes.

As there were six twin births, this study involved 18 babies. The hospitalization time ranged from 15 to 115 days; of the 18 participating preterms, three were classified as extreme preterm (<28 weeks), five as preterm (28 weeks to <32 weeks), six as moderate preterm (32 weeks to <34 weeks) and four as late preterm infants (34 weeks to <37 weeks).[12]

From the data obtained in the interviews, the parents' experience in the third stage of the KM was grouped into four thematic cores: parents’ adaptation for preterm care at home, application of KP after hospital discharge, advantages of KP at home, and support for outpatient consultation in the KM third stage.

Parents' adaptation for preterm care at home

The movement the neonatal units, to which the parents were submitted during the long period of hospitalization of their children, follows them in to leave hospital and go home creates feelings of joy in the PTLWNB´s parents, but it also brings fear and doubts about the ability to take care of the child. The routine of the home setting, as shown in the statements below:

> *[...] I think that here [at home] I need to weigh the diaper. Then I say: Where's the scale? I'm even lost. (Mother 8)*
> *I do pretty much the same thing. So I go on breastfeeding at the same time I did at the ICU [Intensive Care Unit], changing diapers, because, like it or not, here I can stay more time with him, no need to put him in the crib. I also bathe him, every day, at the same time as in the hospital [...]. (Mother 3)*

Going home with the premature child requires changes and adaptations in the family's life, but the parents follow the guidelines received at the time of hospital discharge:

> *I thought: what will it be like at home? How am I going to tell people that they can't hold the child? The people who came to visit had already seen what it was like, we came and told them. Then, the hospital team reinforced too. Then people said: so, it is true, the mother is not being overdemanding, it is not the mother who is saying that we cannot hold her [...]. We do not leave the house for anything, we can´t go anywhere, we have this limitation, I said: how come I can´t go to the market? We need to go to the market so badly, however, I went to the market and he stayed in the car with my husband. I managed to do my own things, everything was working out, because at the hospital the doctors gave me a scolding [laughs]: do you want to come back here? No! [laughs]. So, we do everything right. (Mother 10)*
>
> *[...] At home, if the baby cries, you give the breast and he stops crying, but it's not like that, you have to give the breast on time. (Father 3)*

A father's concern, after discharge from the hospital, is to maintain the health of his premature daughters, which demands care in the home environment:

> *[...] it is difficult for you to keep them healthy. I get up at dawn, stay awake, like now, do you see? I did not sleep at night, but it is very good and it is easy. (Father 2)*

It is clear the mother's safety in the care provided to the daughters after discharge from the neonatal unit:

> *I have now ways to deal with them that I didn't have with others, since holding them, taking them in my arms, that they won't break; they taught me there [...] I was going to do everything wrong, I was going to bathe excessively, they were going to cry, to have colic, I was not going to know what to do, I was going to give medicine, but there is no need with the baby's massage, they are able to relieve themselves without having to give a medicine, which is the best for the child. (Mother 12)*

The participants of this study kept the established routines and the lessons learned during hospitalization about caring for their child at home.

Application of the Kangaroo Position after hospital discharge

In the statements, mothers report how they develop skin-to-skin contact at home:

> *Here at home I tried with a sheet, but it seems that it is not the same thing as there [hospital]., I keep him stuck with me like this, directly, I put his legs and even to watch TV, these things, he stays in the Kangaroo Position. (Mother 10)*
>
> *At home he stays very close to me. Although we do not tie anything, he is very close to me. [...] he [father] takes her like this, ties a cloth and keeps her. Or otherwise, he takes a coat, closes the coat like that and he holds it underneath. And so she stays. She sleeps with him like this. (Mother 8)*
>
> *At home it is more on the lap [...] I put them here close to my chest and support [...] then they sleep, I leave them for about two hours like this, lying on top of me. (Mother 6)*
>
> *I don't have the band, so we tie a cloth and I put them both. But you can make it at home, yes. You take a sheet and tie the girls and tighten them as if they were inside the belly. It can't be too loose or she starts kicking and gets out of the kangaroo. And then she can leak out from underneath. First of all, let the*

> *baby cringe first and then you tie her up. Or you lift her little foot, because if you leave her little foot, you can tighten it and the way you tighten the strap, you may even be hurting her little leg and leave only the neck. Check if you will not tighten her trunk too. (Father 2)*
>
> *[...] Just putting them on your chest. I have the kangaroo (band), but I never used it. (Mother 11)*

The mother's testimony portrays how the family adapts skin-to-skin contact in a pleasant way:

> *Here I do it, I lay her on my chest and my husband lays her on his, so we keep her with us a lot, as if it were in the hospital's kangaroo. She is on the my chest, but not tied, it is the Kangaroo Method [...]. Even in bed, she is lying down, when she complains, I lay her here, she calms down and falls asleep. [...] I don't do as the same way as in the hospital, just skin to skin, but I lay her on me. I tie the band, or else I put her on the way she was here now, lying down to sleep. I do this a lot [...]. (Mother 7)*

In turn, the mother reveals that she is afraid of making skin-to-skin contact at home, with the use of the band:

> *I'm afraid. I don't do it, I'm afraid she's going to fall, I don't know, to escape... the band can untie and she may fall to the floor. So, I get really scared. (Mother 7)*

The statements reveal that other family have the opportunity to perform KP at home:

> *He [father] and I do the Kangaroo Position; he loves doing it. He says: look how cute, it looks like they are inside my belly. I said: now, are you feeling yourself pregnant? He said: I am! Here at home the two of us do the Kangaroo Method with them. It is very important for us and for them too. (Mother 12)*
>
> *I am applying at least four to five hours a day. I feel well with her on my lap, me and my mother, mainly, we do it all the time. I tie her because I am afraid that she can fall like this. [...] With a sheet, with a sheet, that's what I have. (Mother 4)*
>
> *Just hold the neck, my daughter does it, my husband does it, everyone just takes them in that position, they like it, they don't like to lie down, they are no longer in the newborn stage. (Mother 9)*

The family made skin-to-skin contact with the PTLWNB after discharge from the hospital in a pleasant way for both them and the baby.

Advantages of the Kangaroo Position at home

In her report, the mother reveals the benefits of KP performed at home, which is, for her, the best position to keep the child:

> *It is the best position you have for the child. You are not going to leave the children lying down, they are not dolls, they are agitated, so the best position you have for them is this; it helps with colic to calm the belly as you put them to burp, they don't want to lie down; they are developing and this position helps a lot [...]. (Mother 9)*

In addition, one of the mothers highlights that the KP helps performing the chores at home:

> *Everyone who was going to visit me wanted to know what this Kangaroo was [laughs]. What do you mean, Kangaroo? And everyone thought it was really cool, until the day I stayed there to fold his clothes, I said: guys, this can even be used for washing dishes [laughs]. You just can't deal with hot stuff because otherwise it will warm the child, but it is a process that you don't have to run to see if the child has fallen, or what happened. No, 'he is there, with you all the time, you're watching TV, you can do a lot of things. (Mother 10)*

Another aid mentioned is that KP also facilitates the parents´ care for their twin children:

> *If I am with one child in the kangaroo, 'it's comfortable; I can even take care of the other. So I think that for the mother, the Kangaroo Method is much better, it calms down the baby, she can control the situation. (Father 2)*

The testimonies of the mothers also highlight the strengthening of the bond between mothers and children as one of the advantages of the KP:

> *At home I started doing the Kangaroo Position, they started to gain weight [...] I already learned to deal with both at the same time, to breastfeed both, which then they are also more united, because I can give love to both at breastfeeding. (Mother 12)*
>
> *[...] because of the child and we together, it creates this kind of love that is so stuck, thus I said: I'm going to have the baby, but I'm going to go back to work. But now, I have doubts about whether I'm going to go back to work. Because we have been so close... not that I was not like that with the others, but you are so close, so stuck, that I don't want to be separated from him. (Mother 10)*

Mothers also express how pleasurable it is for them and their children to undergo KP after hospital discharge:

> *[...] The Kangaroo Method brings the daughter closer to us and brought us closer because, when I hold the girls, it is different. When my mom holds them, they cry more. When I hold them, I don't know, it's different, they get quiet. (Mother 8)*
>
> *I liked. It is good to have had this experience; I still like it and she likes too. So, it's wonderful. (Mother 7)*

Parents report that they carry out skin-to-skin contact also with the aim of reassuring their children:

> *I place her... sometimes, she wants to cry, she gets uneasy, then I place her here, like this [shows], and I keep her lying down. She is quiet, she sleeps, she likes to be with me. (Mother 1)*
>
> *They are uneasy, it's kangaroo in them! (Father 2)*
>
> *Even in bed, she is lying down, she is complaining, complaining, then I put her here [on her chest], she calms down and sleeps [...]. (Mother 7)*

For the research participants, skin-to-skin contact favors weight gain for the PTLWNB, helps with breastfeeding and is good for both babies and parents:

> *[...] And stay with them skin to skin so they can gain weight, get strong; breastfeeding is also very important for them, for their growth. (Mother 5)*
>
> *The Kangaroo Position is very pleasant for both the mother and the baby and does pretty good (Mother 9)*

Parents adhered to the idea of continuing skin-to-skin contact at home and are able to see the benefits of their practice for babies and the family.

Support of the outpatient unit visit in the third stage of the KM

Third-stage and follow-up appointments help parents understand the care they need to take with their children at home:

> *You leave hospital and you learn how to do certain things, automatically, but with the monitoring you know if the baby is gaining weight, if not; what you are doing wrong, what you can do to improve. So, I thought it was very important [...]. (Mother 12)*

The parents who attended the nursing and medical appointments in the third stage of the KM enhanced the importance of these follow-ups, which can be seen in the following statements:

> *The monitoring of the third stage: she did not gain weight, but she did not lose weight either, she maintained it. For me she had gained weight, but she was not putting on weight. Then the nurse said: let´s weigh her again? I was worried. When the doctor and the speech therapist arrived, my first thought was: they will admit me in hospital again. I had already looked at my husband: go get the clothes [laughs]. Then she said: no, we are going to do like this, like that. So that security is important, we have security, I can't wait to go there and weigh them to see if everything is okay, to see if the two of them have put on weight. I could have this monitoring of the Kangaroo Method until they are two years old [laughs], not only up to 2,500 grams. It should be up to two years old, because then you already have peace of mind, you know that every week you will be there, that you will see the monitoring, their growth, everything. If there is something wrong there are a lot of professionals to help you, guide you. It could be up to two years, couldn't the Kangaroo Method be up to two years? [laughs]. (Mother 12)*
>
> *We came twice to the appointment with the nurse in the third stage, I liked it, because it is very thorough. (Father 1)*

On the other hand, at the same time that the mother expresses tranquility because of the accessibility of the hospital's outpatient clinic, she reports her insecurity regarding the care provided by the PHC in case the baby becomes ill:

> *[...] he's doing so well! He's chubby. And as the doctors pass by every day in the morning, we clear up doubts. I left there, but they said: anything you need, you can come here. We have this security, think: how can I go to the health center with this little piece of people? And when we get there, will they know? We are insecure and then we go out with their support. And so, we are treated very fondly! I liked it very much. (Mother 10)*
>
> *Yesterday, I was talking to my mom. I said: if I there weren´t a follow-up, I wouldn't have known that Lorena [fictitious name] wasn't getting my breast properly. Because, for me, she was nursing and gaining weight, in my view. But, because of the follow-up, I saw that she was not. I said: wait, there's something wrong! If there was no follow-up, if you had to go to the clinic every 15 days or once a month, my Gosh! [...] a month from now what would happen? I wouldn't know how she was, that she lost grams and with the naked eye we don't see. We can´t see it, when I went to see it, she would have lost a lot more [...]. (Mother 12)*

The mother complains that PHC should prepare pregnant women at risk for premature birth since prenatal care:

> *Today, I know what the Kangaroo Method is and that it starts before the baby is born... the pregnant mother in trouble, everything, I should have had this part and I didn't have it, I didn't have all that care, I don't know if the health center professionals are prepared to refer these pregnant women at risk to more humanized care, but I didn't have that. (Mother 4)*

The father reports with enthusiasm and joy the daughter's achievements observed in the follow-up appointments, carried out by the physiotherapist and occupational therapist, in the hospital:

> *And she said she was fine, it's like she was born a month ago. She has already made headway, thank God, she is responding to all the things they do for her: massage, ear test, eye test [...]. We went to the hospital these days, the doctor put an object for her to look at, she was paying full attention. (Father 3)*

However, one of the mothers revealed that she had difficulties in taking her daughter to the outpatient follow-up of the third stage of the KM:

> *We didn't go to the appointment, because I couldn't find money to pay for the bus. (Mother 7)*

There was also a report that evidenced the difficulties that families face in meeting their children's health care needs after discharge from the hospital:

> *It was at night, the clinic was closed, so I took him to the pharmacy to do inhalation, because of his nose that was wheezing, I went on my own, so I had to keep doing it every day. (Mother 2)*

Difficulties were also observed in carrying out outpatient follow-up, after hospital discharge, of the three mothers who lived in the inner part of the state, due to the centralization of care for preterm infants in the capital and large cities. Of these, two mothers returned with difficulties to appointments in the third stage and to outpatient follow-ups with specialists, one of whom remained in the capital until the discharge of the third stage of the KM, only then returning to her town of origin.

Discussion

This study showed that the parents kept KP at home. Although each family develops it differently, they did not fail to do it. They were also able to adapt to the new care routine with the child's arrival at home and reported satisfaction with the appointments of the third stage and follow-up carried out at the hospital. However, one family was unable to return to the appointments because of financial difficulties, demonstrating the importance of the appointments being shared with the PHC.

The bond created between mother and preterm child during hospitalization is fragile, possibly because of the maternal apprehension about the survival of the PTLWNB and also for the lack of opportunities for interaction between them.[13] A research carried out in Sweden, with 13 mothers of babies of two NICUs, showed that they want to be close to the NB during hospitalization and valued skin-to-skin contact.[14] An international study carried out in two central hospitals in Malawi showed that preterm mothers prefer KP to the care provided to them in the incubator.[15] In addition, when health professional uses welcoming and loving strategies in dealing with the woman, such attitudes can favor her to consider herself important in the recovery of preterm infants, since their first visit to the NICU. This way, she will feel competent and confident, managing to maintain her autonomy in care when she is at home.[16] This trust and autonomy in care were also observed in this investigation.

The continuity of KP at home helps the bond, which was impaired during hospitalization, between the parents and the preterm baby, improving the thermal control and the neurobehavioral and psycho-affective development of the PTLWNB, stimulating BF and enabling parents with greater safety for child care.[6] This aspect was also identified in this study, as some parents reported that, with the child's clinical evolution and improvement in their growth and development, the bond and confidence in giving child care were strengthened.

A study carried out with 10 mothers who had their preterm children hospitalized in a neonatal unit in the northeastern region of Brazil demonstrated that the maternal experience, during the KM in the home environment, is permeated by news related to the care of the PTLWNB, reinforcing the importance of offering clear and objective guidelines during the hospitalization, so that the method continues after discharge.[9] Research with 20 couples of PTLWNB parents, developed in two moments, before and after the discharge of babies from the neonatal unit, showed the following strategies to facilitate the experience of hospitalization and discharge: to improve communication between parents and the health team; to foster their contact with the multidisciplinary team; to identify the needs of the parents; and to facilitate their involvement in caring for the child according to the individual needs of each family.[5]

From this perspective, a study that analyzed the development of a discharge protocol for PTLWNB, with the participation of the mother during the baby's hospitalization, pointed out eight themes that should be considered during the preparation for the discharge: hygiene and comfort of the baby; breast-feeding; monitoring of growth; hand hygiene; specific care for the NB; care at home; clinical evolution; and care routines.[17] Another study emphasized that discharge guidance must be related to skin-to-skin contact, NB hygienic and skin care, and attention to warning signs, such as respiratory changes.[8] A discharge protocol was proposed in another study, containing guidelines on food, bathing, skin care and warning signs,[18] aspects reaffirmed as the main doubts of family members regarding the NB care.[19]

In addition to the themes, it is essential to discuss how these guidelines are carried out, considering the procedural nature of the discharge. Thus, it is important that professionals use dialogical educational approaches in order to guarantee the exercise of family autonomy in learning home care. Another tactic is the use of booklets with guidance on the care of preterm babies in neonatal units, so that the family feels safer in the face of care at the hospital and at home.[20]

Still in relation to the preparation of parents for hospital discharge, researchers emphasize the importance of nurses, among the health team members, in assessing in which aspects of care the mother of the PTLWNB needs more support and guidance, as this reinforcement can improve their confidence and autonomy regarding care for their child at home.[21] The timid participation of parents in the care and discussions of the team is due to the supporting role in the care provided to the PTLWNB during hospitalization Thus, in order for them to know how to take care of their child at home, they need to be fully guided and supported.

All the parents participating in study reported the importance of skin-to-skin contact at home for the PTLWNB and maintained the practice after discharge, a situation different from that observed in an investigation conducted in João Pessoa, Paraíba, with 10 mothers who participated in the KM during the child's hospitalization. Of these, three did not continue with KP at home and, among the reasons claimed for not performing the position, is the little incentive given by professionals for skin-to-skin contact in the hospital environment.[9] In the same research, it was possible to check the strengthening of the mother-child bond among those who held the position and the importance of family support. No mother reported having received support from the PHC team, revealing failure to monitor the PTLWNB at home,[9] as observed in our piece of research.

As for the post-discharge follow-up of preterm infants, an investigation carried out at the outpatient clinic of a maternity hospital in João Pessoa, Paraíba, whose objective was to investigate the mothers' feelings of returning home and also their perceptions of the care provided by the professionals in the KM third stage, demonstrated her contentment with the care provided at the outpatient clinic. Thereby, no participant mentioned having received the home visit of the PHC team after the discharge of the preterm child. Thus, the study reinforced the importance of forming a bond between maternity health professionals and those of PHC, through the participation of the latter in regular meetings held at the maternity hospital and their free access to PTLWNB during hospitalization.[22] This situation was also observed in the interviews of the participants of the present research, evidencing the non-sharing of the third stage of the KM with the PHC, demonstrating that the care is still on an early stage.

The articulation between the neonatal unit and PHC should be initiated during hospitalization, in order to learn about the NB clinical conditions and ensure continuity of care after discharge from the neonatal unit.[23] This sharing can occur in several ways, as demonstrated by the qualitative study developed with 18 mothers of children discharged from a neonatal unit in Foz do Iguaçu, Paraná (PR). The results showed that the opportunities for guidance in home visits and by telephone support are relevant to promote the care of the PTLWNB and to detect impending conditions. In these contacts, doubts about home care were solved; in addition, it was possible to observe situations of vulnerability in specialized follow-ups and discontinuity in the follow-up of growth and development of the PTLWNB.[24]

Regarding the knowledge of parents about the KM, a study carried out with 113 mothers with children hospitalized at the Kangaroo Unit in the hospitals of Bwaila and in the central hospital of Zomba, Malawi, revealed a high level of knowledge about the benefits of KM, but that 84% did not know the services before the child's hospitalization in the unit.[15] This datum corroborates the findings of this research, since one of the mothers stated that she had not been informed about the KM during the high-risk prenatal care, as provided by the strategy.

A study that analyzed the profile of the NB attended at the nursing appointment at an outpatient clinic for follow-up of the NB at risk, in a KM referral hospital in Brasília, Distrito Federal, showed that this service improved both EBF and weight gain of the children.[25] In the present study, the parents, besides acknowledging the importance and benefits of the method, also praised the appointments of the KM third stage and the follow-up visits of the multidisciplinary team at the hospital.

The participation of PHC professionals in the post-discharge follow-up of PTLWNBs is still known to be timid, as shown by the research carried out with 31 health professionals who worked at PHC in the city of Joinville, Santa Catarina, showing that they considered the assistance to the PTLWNB a challenge for which they felt helpless and unprepared. Disclosure actions, training and awareness about the KM are suggested so that the third stage of the method takes place after the neonatal unit discharge, considering the principle of integrality in care.[26]

It is essential that the hospital teams, especially the programs for monitoring the PTLWNB and PHC, work together and provide adequate monitoring of the newborn after hospital discharge, through support for breastfeeding, observation of weight gain, treatment of complications and evaluation of readmissions. In addition, until these children reach the weight of 2,500 grams, the professionals of these services must support the families.[6]

Scientific evidence shows that the lower the gestational age of the PTLWNBs and the lower their birth weight, the greater their physiological, metabolic and psychological vulnerabilities, which raises concerns about their prognosis.6 This observation was addressed in research that evaluated the profile of newborns at risk treated at a follow-up outpatient clinic, in which the babies who needed more nursing appointments in the third stage of the KM were those with the lowest weight gain and those with the lowest gestational age.[27]

Thus, it is important to strengthen the continuity of care after discharge, so that the baby can achieve adequate growth and development. A survey conducted with 18 professionals of the Municipal Health Secretary, of a city in the state of Paraná, showed disagreements when analyzing the referrals of preterm and/or low weight after discharge, as many of them were unattended, unable to receive care and, when they did, they received only basic care, weighing and vaccination.[27] The care provided to the PTLWNB by the PHC units was a concern expressed by mothers participating in this study, especially because the appointments at the PHC were held on a monthly basis rather than weekly, as occurs in the third stage of the KM.

Prematurity is a major cause of infant mortality and skin-to-skin contact after hospital discharge can reduce this risk. However, the monitoring of preterm infants and their families has to be effective, whether by means of appointments or home visits and health education, actions that have a positive impact on the offer of safe and efficient care to preterm infants.[22] Thus, for the effectiveness and continuity of care to the PTLWNB after discharge, there is a need for improvements in access to services and for greater support from health professionals.[28]

It is noticed that the PHC professionals are unaware of the benefits of the KM, as they usually just increase the number of consultations given to the RNPTBPs and their families in the third stage of the method, but generally do not advise parents about the continuity of KP at home.[4] As to health managers, a study carried out in Indonesia revealed that the advantages of this technique were known, including thermoregulation, weight gain, bonding between parents and child and reduction of human resources.[29]

In addition to showing the lack of articulation between the hospital and PHC in post-discharge care of the PTLWNB, the results of this study also showed that some families face difficulties to attend the appointments at the outpatient clinic of the home hospital, especially due to the lack of financial resources. This issue was also pointed out by a piece of research carried out in João Pessoa, PB, which showed that, among the difficulties felt by parents to take their children to outpatient appointments, were the distance between the home of the PTLWNB and the health services, in addition to the demand from the other children, lack of time and financial constraints.[9] The authors suggest that disclosure and training of health teams could be carried out, as well as an agreement between the different levels of health care, so that the third stage of the KM could be effective in PHC.[26]

A situation observed in the state of MS (which also occurs in other Brazilian states) is that the neonatal units are located, in the vast majority, in the capital, which makes the PTLWNB´s mothers wait in friends´ or family members' homes, or support houses until discharge from the third stage of the KM. Thus, this family would end up receiving care in the FHS close to these places and not in those adjacent to their residence. For this reason, the contact with community health agents and other health professionals at the FHS of their origin will only occur long after hospital discharge.[7] In addition to these difficulties, the realization of the third stage of the KM, in the hospital context, faces other challenges, namely, de-hospitalization and home care, and reference and counter-reference, which is fragile among services.10 Therefore, it is necessary to implement an interinstitutional communication model that includes all health services with support from health managers.[30]

As a limitation of the research, it is highlighted that the data on the mothers and fathers' perception regarding the development of KM at home refer to a single hospital. In addition, the small number of fathers of the PTLWNB interviewed in comparison to mothers may be a limiting factor in relation to the data obtained. However, the difficulties experienced by the parents of

PTLWNB after hospital discharge are important and may subsidize managers and health professionals in implementing changes in care for this population, since the study hospital is accredited by the KM and BFHI. Further pieces of research are suggested that involve other hospitals in the capital and in the inner part of the state, as well as greater participation of the father, in addition to health professionals, both from PHC and tertiary care, which can expand the understanding of the phenomenon investigated.

Conclusion

The parents' report showed that everyone applied the KP daily at home; even in the face of the routine challenges of care after hospital discharge, they revealed to have a clear understanding of the importance and benefits of the KP and its ability to impact the quality of care offered to preterm children. These results allow implying that the investigated hospital had extensive and qualified health actions in the preparation of the PTLWNB´s parents for hospital discharge.

The knowledge about how KM is experienced and seen by parents after hospital discharge revealed weaknesses in the articulation of the third stage of the method between the service investigated and the PHC, constituting a challenge to be faced by the institution, especially in relation to the families who live in the inner part of the state and those with social and economic issues. However, the results of this study can contribute to nursing in view of the importance of the professional nurse as a member of the multiprofessional team, since it is he who assesses which aspects of care for the PTLWNB the family members need in terms of support and guidance, both before hospital discharge from the neonatal unit and at home. In addition, it is at home visits and third-stage appointments of the KM shared between the hospital of origin and the PHC that the needs of the families can be detected.

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