THE KANGAROO MOTHER METHOD IN THE CARE TO THE LOW WEIGHT NEWBORN INFANT: INTEGRATIVE LITERATURE REVIEW

O MÉTODO MãE CANGURU NO CUIDADO AO RECEM-NASCIDO DE BAIXO PESO: REVISÃO INTEGRATIVA DA LITERATURA

ABSTRACT

Objective: to analyze the scientific papers related to the kangaroo mother method in the care to the low weight newborn infant. Method: this is an integrative literature review which sought to provide an answer to this question: “How the humanization of the care to the low weight newborn infant through the kangaroo mother method has been approached in scientific investigations?”. Data collection was carried out in the databases Latin American and Caribbean Health Sciences Literature (LILACS) and Scientific Electronic Library Online (Scielo). The sample consists of seven scientific papers. Papers in Portuguese published in Brazil, between 2000 and 2011, were included. International papers, papers published before 2000, without abstracts in the database, as well as those found in other databases, were excluded. A synoptic chart was used as instrument for data collection and subsequent analysis, which comprised the aspects considered pertinent: paper’s title; authors’ name and profession; scientific study’s place of origin; results; and final remarks/conclusions. Results: the papers approached the effectiveness of this method within the period of interaction with the premature and/or low weight newborn infant in the neonatal intensive care unit. The analysis allowed the identification of a poor scientific production with regard to the kangaroo mother method. Conclusion: this study showed the need for a greater emphasis on the theme in the women’s and children’s health field in the graduate programs, aiming to achieve an increased sensitization with regard to the importance of the kangaroo mother method, to provide a humanized and comprehensive treatment to the premature and/or low weight newborn infant. Descriptors: infant; prematurity; kangaroo mother care method; humanization of assistance.

RESUMO

Objetivo: analisar as produções científicas relacionadas ao método canguru na assistência ao recém-nascido de baixo peso. Método: trata-se de estudo de revisão integradora da literatura que buscou responder a questão: “Como a humanização do cuidado ao recém-nascido de baixo peso pelo método mãe canguru está sendo abordada nas investigações científicas?”. A coleta de dados foi realizada nas bases de dados Literatura Latino-Americana e do Caribe em Ciências de Saúde (LILACS) e Scientific Electronic Library Online (Scielo). A amostra consistiu-se de sete artigos. Foram incluídos artigos em português publicados no Brasil, entre 2000 e 2011. Excluíram-se os estudos internacionais, artigos com ano de publicação anterior a 2000, sem resumo nas bases de dados e as duplicidades. Utilizou-se um quadro sinóptico como instrumento para coleta de dados e posterior análise, que contemplou os aspectos considerados pertinentes: título do artigo; nome e profissão dos autores; local de origem das produções científicas; resultados e considerações finais/conclusões. Resultados: os estudos abordaram a eficácia desse método no período de interação com o recém-nascido prematuro e/ou de baixo peso na unidade de tratamento intensivo neonatal. A análise possibilitou a identificação de uma escassa produção científica referente ao método mãe canguru. Conclusão: este estudo mostrou a necessidade de maior enfoque do tema na área da saúde da criança e da criança nos programas de pós-graduação, com vistas a obter uma maior sensibilização em relação à importância do método mãe canguru, para oferecer um atendimento humanizado e integral ao recém-nascido prematuro e/ou de baixo peso. Descritores: prematuridade; método mãe canguru; humanização da assistência.
INTRODUCTION

Pregnancy and childbirth are social events comprised by the reproductive life of men and women. It is a unique process, a special experience within the universe of a woman and her partner, which is among the most significant ones for all who participate in it. It’s within the prenatal period that a family idealizes pregnancy and the birth of its child. It hopes to experience a calm and uneventful pregnancy, but things not always happen this way. There may be a premature delivery, a high-risk pregnancy, and some disorders can determine an early arrival of the newborn infant.

In Brazil, neonatal mortality became the main constituent of infant mortality, due to the proportional decrease in post-neonatal deaths and maintenance of the early neonatal constituent. In this scenario, an intervention which has also showed to be relevant in recent decades is the implementation of neonatal beds able to assist the premature and low weight newborn infants. In this environment, the premature newborn infant ends up being separated from her/his mother and remains hospitalized for an extended time in the neonatal intensive care unit (NICU).

This situation brings up feelings of lack of confidence and fear in parents, as they face the weakness of their children and, sometimes, her/his inability to survive without specialized care. It’s within this environment of great complexity, excessive use of hard technologies, early separation between mother and baby, invasive procedures, constant noise, frequent handling, low prevalence of breastfeeding, and increased exposure to complications that the proposal of an intervention focused on mother’s contact and participation emerges, aiming a global development of the newborn infant.

Originally developed in Colombia, the Kangaroo Program was adopted as a public policy by the Unified Health System (SUS) in 2000, as an effort to improve maternal and child health in Brazil. In 2002, a document from the Health Ministry entitled "Kangaroo Mother Method (KMM): humanized care to the low weight newborn infant" was released as a handbook for training and standardization of professional teams to implement the Kangaroo Program in maternity hospitals in the country.

KMM’s proposal is defined by the neonatal care which implies the skin to skin contact between mother and low weight newborn infant, in an increasing manner and for the time both of them understand to be pleasant and sufficient, thus allowing a greater participation of parents in the care to their baby. KMM consists in placing the newborn infant between the mother’s breasts, in a skin to skin contact, in the supine position, in order to strengthen the bond between the binomial, encourage breastfeeding, and promote confidence in the baby’s care.

To this end, the kangaroo method seeks to clarify the care measures which should be taken with the baby, evaluate a possible clinical treatment in the NICU, stimulate the entry of the family in the unit, support the skin to skin contact to the baby, check whether the mother is confident and informed with regard to rooming-in care, discuss hospital discharge, and plan post discharge follow-up.

It’s believed that the relevance of this research lies on the emphasis assigned to the humanization of care to low weight newborn infant: the kangaroo mother method, since it constitutes itself as a soft technology able to bring the family closer to the care to the newborn infant and decrease the neonatal mortality rates.

Knowing how the theme humanization of the care to low weight newborn infants has been addressed will enable the implementation of changes in the neonatal practices, contributing to strengthen the policies for birth humanization.

Given these aspects, this study aims to analyze the scientific studies related to the kangaroo method in the care to low weight newborn infants.

METHODOLOGY

It’s an integrative literature review, a research method which allows the incorporation of evidence into clinical practice, in order to gather and synthesize research findings on a given theme or issue, in a systematic and orderly way.
search sources: Latin American and Caribbean Health Sciences Literature (LILACS) and Scientific Electronic Library Online (SciELO), which are regarded as references in the health field, and the following descriptors were used: prematurity OR kangaroo method AND humanization in the SciELO database, and low birth weight OR kangaroo method AND humanization in the LILACS database.

Initially, for selecting the studies of this integrative review, we included only papers from studies carried out in Brazil, with publication year between 2000 and 2011, written in Portuguese, which contained information on the humanization of care to the low weight newborn infant: kangaroo method. Therefore, international studies, papers with publication year prior to 2000, without abstract in the databases, as well as those found in more than one database, were excluded. The survey of papers was carried out within the period between August and October 2011.

For the analysis and subsequent synthesis of selected papers, a synoptic box was constructed, comprising the aspects considered pertinent: paper’s title; authors’ name and profession; scientific study’s place of origin; results; and final remarks/conclusions.

The data used in this study were properly referenced, respecting and identifying their authors and research sources, with ethical and scientific rigor.

RESULTS AND DISCUSSION

We identified 8 papers in the SciELO database. Among them, after careful analysis, 4 were considered to meet the inclusion criteria. In the LILACS database 16 papers were found, among which 11 papers met the selection criteria, but 3 were also indexed in the SciELO database, and 5 were incomplete. Thus, only 3 papers were included. Hence, in this integrative review the sample consisted of 7 studies (Figure 1).

In terms of temporal evolution, the studies were carried out in 2005 (1) 2006 (2), 2007 (1), 2008 (1), and 2010 (2). Despite the expansion and articulation of public policies for children’s health and the adoption of the Clinical Guideline for Implementation of the Kangaroo Method, through Portaria MS/GM 693, in 2000, as well as the release of the handbook for instrumentation of professionals for the care to premature and low weight newborn infant by the Health Ministry in 2002, no increase in the number of papers was observed over the years.

Thus, a broad process for disseminating the method was started, encouraging the application to improve quality of the neonatal clinical care. Today, the program is in heterogeneous implementation stages. The discourse most often used as a common standard is humanization, encouraging the mother’s participation in the care to the baby, with the purpose of strengthening the mother-baby bond and assigning to the mother the main role in the newborn infant’s development.

Regarding the scientific study’s place of origin, the Southeast Region had 2 studies (28.6%) — A04, B03 —, carried out in Rio de Janeiro and Sao Paulo. Also, the South Region had 2 studies (28.6%) — B01, B02 —, from Parana. In turn, the Northeast Region had 1 record (14.2%) — A01 —, with no information on the city of origin. Study A03 (14.2%) was carried out at a national level, comprising Pernambuco, Porto Alegre, Sao Paulo, and Rio de Janeiro. Research A02 (14.2%) was developed through the databases Medline, LILACS, and SciELO at a national and international level, thus, it doesn’t present a study’ city of origin. The North and Central-West regions didn’t present any study (Table 1).
Table 1. Number of studies according to place of origin.

<table>
<thead>
<tr>
<th>Study's code</th>
<th>Region/place of origin</th>
<th>n</th>
<th>%</th>
</tr>
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<tr>
<td>A01</td>
<td>Northeast Region</td>
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<td>14.2</td>
</tr>
<tr>
<td>A02</td>
<td>National and International</td>
<td>1</td>
<td>14.2</td>
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<tr>
<td>A03</td>
<td>Porto Alegre, Sao Paulo, Rio de Janeiro, and Pernambuco</td>
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<td>14.2</td>
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<tr>
<td>A04</td>
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<td>1</td>
<td>14.2</td>
</tr>
<tr>
<td>B01</td>
<td>Parana</td>
<td>1</td>
<td>14.2</td>
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<tr>
<td>B02</td>
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<td>1</td>
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<tr>
<td>Total</td>
<td></td>
<td>7</td>
<td>100</td>
</tr>
</tbody>
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Source: Developed by the authors.

Study A01, carried out in the Northeast Region, doesn’t inform the city of origin and research A02 was carried out at a national and international level, through the databases Medline, LILACS, and SciELO. Also, study A03 was carried out at a national level, comprising the South, Southeast, and Northeast regions.

A total of six qualitative studies were found, corresponding to 85.7%, except for study A03, which is a cohort research.

Regarding the methodology for data collection, an interview was used in 5 studies (71.42%) — A01, A04, B01, B02, B03 —, and A01 (14.28%) combined participant observation to focus group to gather information. The use of medical record and the analysis of documents was found in 1 study (14.28%) — A02.

When interpreting data, 4 studies (57.1%) — A04, B01, B02, B03 — focused on content analysis, and there was 1 occurrence (14.2%) of discourse analysis — A01 —, documental analysis — A02 —, and multivariate analysis — A03.

One finds out that the papers under analysis present as the main author 13 physicians from the area of pediatrics — A02, A03, A04, B03 —, 7 nurses — B01, B02 —, 4 psychologists — A01, B03 —, and 1 speech therapist — A04. This high number of pediatricians and nurses involved in the studies having the Kangaroo Method as a theme shows their commitment and awareness with regard to the humanized care to the preterm and low weight newborn infant in the neonatal intensive care unit.

The initiative to implement KMM with the purpose of humanizing the care to newborn infants in special clinical conditions in the NICUs emerged from the clinical nurses — B01 —, to improve care, promote the newborn infant/family’s comfort, and improve the quality of hospitalization period. Nursing stands out due to the important role it plays in health education, therefore, it’s a must that the team is well equipped with theoretical and practical tools. The mothers who have experienced KMM expressed feelings of confidence — B01, B02 — when participating in the care to newborn infants during the method’s implementation, because intimate contact to their children after suffering, distress, and separation due to prematurity, leads mothers to feel successful as hospital discharge approaches.

The effectiveness of KMM is confirmed by the studies A01, A02, A03, B01, B02, and B03. The implementation of this practice in the care to the premature and low weight newborn infant reduces the time of mother-child separation, encourages breastfeeding, enables a higher competence, and increases the confidence of parents in the handling of their children, favors a better thermal control, provides a better relationship between the family and the health team, favors the reduction of hospital-acquired infection, and decreases hospital stay.

In addition to the advantages related to the preterm and low weight newborn infant’s health, KMM seeks to involve the mother and it works out the awareness with regard to her role in the program. Thus, KMM facilitates the development of maternal identity by providing that mothers know and commit themselves to the recovery of their children. This experience contributes to overcome faster the negative impact caused by premature birth, decreasing the number of cases of maternal depression and the perception of abnormality with regard to the newborn infant. In one study — A01 — it became evident that mothers identify KMM as if it was important only for the baby’s weight gain and for breastfeeding, failing to perceive its role as a protagonist in this event.

There are multiple variables influencing the population’s adhesion to this method. Despite the difficulties found, the more important thing for these women is being together and contributing to the recovery of their children. Study B02 corroborates this claim, where women identify the use of kangaroo position as uncomfortable and cumbersome, due to body exposure, but they report that it’s a method whose implementation is feasible when considering the results it offers.
Another important factor is the inadequate structure of neonatal units and KMM, respectively – A04, B01, A01. This structuring problem turns it more difficult to carry out a safe practice given the uniqueness of each family.  

One study – B02 – investigated the different ways through which low-income families cope with the birth of a preterm baby, in order to improve the implementation of KMM. It was found that the main barriers which influenced on the effective participation of mothers in the care to the low weight baby, including the existence of other children, lack of effective help for household tasks, shortage of resources for transport, and lack of a family support network, corroborate results from other studies – A01, A03, B01, B03. In contrast, younger kangaroo mothers, more educated, with no other children, who received more help with household tasks, spent more time with their children in the neonatal unit and reported fewer difficulties with regard to the adaptation and organization within this period of their children’s hospitalization.  

Governmental measures or those provided by family members and health services, which facilitated transport, were essential for mothers to remain together with their children. In turn, the analysis relating to help with domestic tasks and children’s care sets the current context of the population in the outskirts of the metropolis, where the family support network is hardly present. In this context, the behavior of poor families seeks to anchor in the traditional values of survival, characterized by a weakened and close family network. The nuclear family model may hinder women’s participation in the program. Therefore, to know the drawbacks and possibilities of each family can contribute to the improvement of KMM.  

The same study – B02 – analyzed the practice of breastfeeding in 19 women who had their children admitted to the neonatal unit before the implementation of KMM and 22 after its implementation (kangaroo mothers). It was found that, before the implementation of KMM, women had more difficulty in keeping milk production and exclusive breastfeeding after hospital discharge than kangaroo mothers. Whereas most kangaroo babies remained on exclusive breastfeeding, the others were fed with formula milk. Low milk production has been the main factor for early weaning of low weight babies. With this observation, it’s essential to raise awareness of the health staff and managers to stress the importance of breastfeeding in the healthcare institutions, as well as their need to appropriate KMM, as it presents itself as an effective and problem-solving technology.  

A study quoted in B02 aimed to compare the suction of preterm newborn infants which adopted KMM to those submitted to traditional care, showed that preterm newborn infants undergoing KMM had a better suction and less time of hospitalization, “[…] as the physiological stability, the effectiveness of sucking […] were better with maternal closeness”.  

This finding confirms the effectiveness of KMM, as the approach between the mother-baby binomial facilitates breastfeeding and strengthens feelings of love and affection, contributes to the effectiveness of breastfeeding, and reduce the time of hospital stay. Breast milk, besides having indisputable nutritional properties for the baby’s growth and development, also contributes to the bonding between them.  

In Brazil, one of the criteria for hospital discharge is the full establishment of breastfeeding. To do this, there’s a need for trained professionals and mothers informed and supported to overcome difficulties. The successful implementation of KMM depends on strategies involving the manager’s decision, the professional’s adhesion and training, technical supervision, and practice monitoring.  

The humanized care to low weight newborn infants must go beyond standards, handbooks, and courses to indicate people a more dialogic attitude, transferring to the mother the true importance of the care which KMM proposes.  

Although scientific evidence prove the method’s effectiveness and finds out the presence of attributes required for the incorporation of this technology to the healthcare field, the proposal is still regarded with caution by some healthcare professionals – A02, A04, B01, B03. Further studies are needed, especially on cost-effectiveness and limitations of application in different locations.  

**FINAL REMARKS**

This study allowed us to present the scientific papers addressing KMM in the care to low weight newborn infants. It became evident that the papers started from 2005, with the South and the Southeast Regions being the largest producers of research on the theme. Physicians and nurses stood out for their interest in research, as they were the most frequent in these studies. This element shows the importance that these professionals attribute to KMM, since they know the needs
of premature babies and identify the method’s effectiveness when implemented among this population.

The study enabled the conclusion that MMC is effective when implemented among preterm newborn infants, especially those with low birth weight. The skin to skin contact between a mother and her baby contributes to bond, strengthen affective ties, and facilitates breastfeeding.

Healthcare professionals have an important role to play in the implementation of KMM within the newborn infant’s hospitalization period and, especially, in outpatient and home care.

One suggests that this theme needs to be addressed in graduate programs in nursing in the field of women’s and children’s health, in order to sensitize healthcare professionals with regard to the importance of the Kangaroo Mother Method and the humanization of care to the preterm and low weight newborn infant.

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Corresponding Address
Márcia Rejane Strapasson
Rua Santo Antônio, 306 – Bairro Floresta
CEP: 90220-010 – Porto Alegre (RS), Brazil