

The Kangaroo Program at a Brazilian maternity hospital: the preterm/low-weight babies' health-care under examination

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Accepted for publication 25 June 2010

VÉRAS RM and TRAVERSO-YÉPEZ M. *Nursing Inquiry* 2011; 18: 84–91

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The Kangaroo Program, originally developed in Colombia, was adopted as a public policy by the Brazilian Unified Health System (SUS) in 2000, in an effort to improve maternal and infant health in the country. This article aims to examine the Kangaroo Program as it is practiced and carried out at a maternity hospital in the northeastern Brazilian region. Through an institutional ethnographic approach, research demonstrates that the Kangaroo Program has been effective in saving lives and improving some of the infants' health outcomes. However, research also demonstrates that: (i) the socioeconomic profile of mothers in the Kangaroo Program, (ii) conflicting relationships between healthcare workers and users, and (iii) lack of socioeconomic and emotional support are impairing the adequate implementation of the program. Due to the low literacy level of most of these mothers, institutional power is used as a form of social control to keep mothers uninformed about the possibility of leaving the maternity wards. In a two-tier health system, this controlling behavior is part of existing social inequities, as the Kangaroo Program is a choice in the private health system but tends to be mandatory at SUS maternity hospitals across Brazil.

Key words: Brazil, institutional ethnography, Kangaroo Program, social determinants of health.

'Preterm infants' refers to babies born anytime before 37 weeks of pregnancy. The less time of pregnancy, the more difficult for some of these infants to survive due to developmental complications, infections and lesions, and those who do survive may develop cerebral palsy, visual problems, deafness, mental disorders or other physical and neurological diseases (Arestégui 2002).

In order to decrease neonatal mortality rate and to improve the quality of life of preterm/low-weight babies in Brazil, the Kangaroo Program was officially implemented in July 2000 (Policy 693/GM 'Orientation Norms to implement the Kangaroo Method') under the Unified Health System (Sistema Único de Saúde – SUS). Sustained with a 'human-

ized' rhetoric of healthcare assistance, which is formally known as *Humanized National Policy* (Política Nacional de Humanização – Humaniza SUS), the program aims to improve the well-being of mothers and their newborns.

In 2002, the Brazilian Health Ministry, in partnership with the Banco Nacional de Desenvolvimento Econômico e Social (BNDES) and Fundação ORSA, developed an official document called *Kangaroo Mother Method: Humanized Health-Care for Premature and/or Low-Weight Newborn – Training Manual*. The Manual was promoted by the government to provide formal training and standardize the practices of the team of professionals who work at the Kangaroo Program; as such intervention was implemented at Maternity hospitals¹

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¹ As part of the Universal Health Care System (SUS) in Brazil, there are specific hospitals for reproductive health-care.

under the SUS public health-care. Thus, in a two-tier health system, the program is carried out only at public healthcare facilities across Brazil, where low-income mothers are the main users.

It is understood that standardized daily healthcare procedures such as the Kangaroo Program are embedded in a range of public policies, institutional influences and social relations that shape and limit the possibilities of the social actors involved. The goal of this study was to explore in depth the social and institutional factors permeating the implementation of this healthcare process at a public healthcare maternity hospital in northeastern Brazil, hoping to shed light on the complexities involved.

Therefore, for the purpose of this article, in addition to background information about the Kangaroo Program, we present data from an ethnography study developed between 2006 and 2008. We identify some of the barriers and challenges that the Kangaroo Program faces as it is implemented at a public maternity hospital in northeastern Brazil. It is not our intention to undermine the acknowledged benefits of the Kangaroo Program, but to contribute to the ongoing dialog to improve the public health system in Brazil.

PRETERM BABIES' VULNERABILITY AND THE KANGAROO PROGRAM

Preterm infants require special care in intensive care units, and may spend days or weeks in incubators, until their condition has clinically stabilized. Worldwide, preterm babies have been traditionally separated from their mothers, receiving the required care in incubator at intensive care units, but being usually deprived of maternal contact. Since the 1970s, researchers have demonstrated that this separation may interfere with the maternal–infant bond, which can lead to mistreatment of the infant or abandonment when he/she is eventually integrated into the family environment (Spitz 1987; Klaus and Kennel 1992; Klaus, Kennel, and Klaus 2000).

The Kangaroo Program, as an alternative healthcare intervention strategy for these newborns, was developed in 1979 in Bogotá, Colombia, by Drs. Edgar Sanabria Rey and Héctor Martínez Gomes. Due to the shortage of incubators at public hospitals which care for low-income mothers, the hospital staff were forced to put two or three preterm newborns in a single incubator, which increased the risk of the preterm babies contracting contagious diseases. The alternative suggested by these physicians was to use mothers in place of incubators (Ruiz-Pelaéz, Charpak, and Cuervo 2004).

The skin-to-skin mother–infant contact is a key feature in the Kangaroo Program, as mothers put their preterm babies

against their breast to keep them warm. After 3 decades of implementation and research, the Kangaroo posture has proved to have a variety of benefits for both maternal and infant health. For example, the mother's body provides a natural and effective source of heat to meet the newborn's need for warmth as well as thermal control. The skin-to-skin contact promotes breastfeeding, which is known to offer protection to infants from infections and other diseases. Also, the Program encourages the development of the mother–infant bond. Thus, the implementation and practice of the Kangaroo Program provide the ideal conditions for stable, low birth-weight infants to survive and thrive, strengthening parental participation in infant development and contributing to the healing process of the preterm infant (Cattaneo et al. 1998; Charpak 2001; Ruiz-Pelaéz, Charpak, and Cuervo 2004; Charpak and Ruiz-Pelaéz 2006).

This idea that mother–infant contact was important for the baby's development was spread in hospitals throughout the world, encouraging many countries to adopt this kind of intervention. When implemented at healthcare facilities, it also contributes to the development of feelings of solidarity between mothers, promoting faster baby recuperation (Klaus and Kennel 1992; Cattaneo et al. 1998). Previous studies in Brazil have also shown that those hospitals allowing the parents in the intensive care unit, experienced fewer abandoned babies and increased parental participation in the infant's development (Colameo and Rea 2006; Toma, Venâncio, and Andretto 2007).

In 2003, the World Health Organization formulated guidelines for the practice of the Kangaroo Program and encouraged its implementation in developing countries. However, the way the program is implemented tends to vary from country to country. For example, in Colombia the intervention is initiated at the health facility. When the preterm infant has been stabilized, both mother and child can return home, but they continue coming to the hospital for close monitoring by healthcare professionals (Charpak 2001; Charpak and Ruiz-Pelaéz 2006). Other countries have adopted a similar type of intervention, whereby mothers return home after delivery and return to the maternity ward daily to practice the Kangaroo posture with their child (WHO – World Health Organization 2003).

In Brazil, most users of the Kangaroo Program are low-income mothers with a low degree of literacy, who come mainly from rural areas where intensive health-care does not exist. Therefore, mothers are encouraged to stay in the Kangaroo ward at the hospital until the baby has gained enough weight to go home (around 1800 g), which can take from a few days up to 3 months (Colameo and Rea 2006).

The Kangaroo Program is considered humanized health-care and hypothetically allows for active family participation. The official document (Kangaroo Mother Method: Humanized Health Care for Premature and/or Low-Weight Newborn Training Manual) emphasizes that the Program must meet the social, biological, and emotional needs of the participant mothers. However, discourse analysis of this document, developed in a previous stage of the research process (Veras and Traverso-Yépez 2010), provides evidence that (i) women are positioned as passive objects of intervention; (ii) an idealized version of the middle class nuclear family is deemed 'the healthy way' of mothering; (iii) conversely, the limited social and economic conditions of low-income mothers who are the main users of the Kangaroo Program are not considered.

In the document, mother's love is presented as a universal, innate feeling shared by all women. They are expected to stay at the hospital, and be fully committed to care for their preterm child. Common constraints that are usually related to the poor living conditions of mothers in the public health system, such as single motherhood, lack of family support, low levels of education, unplanned pregnancy, and previous abortion, are not contemplated (Veras and Traverso-Yépez 2010). Research at a maternity hospital in São Paulo (Brazil) showed that 60% of mothers chose not to participate in the Kangaroo Program because of other small children at home, lack of husband or social support, and lack of government support (Toma, Venâncio, and Andretto 2007).

The manual does not acknowledge the limited resources of the SUS healthcare system to adequately implement this kind of intervention and its evaluation, and more importantly, to provide for the necessary follow-up health-care of the babies (Colameo and Rea 2006; Veras and Traverso-Yépez 2010). Also, health professionals are not trained to deal with the underlying socioeconomic issues that limit the effective implementation of the program (Toma 2003; Moura and Araújo 2005).

A brief internship of the first author at a Kangaroo ward in another SUS maternity hospital in the same region evidenced that many mothers appeared to be under lots of stress having to stay secluded at the Kangaroo ward with other children to take care of at home. Consequently, the research was developed at a Kangaroo ward in a different city as a template for understanding this complex institutional dynamic.

METHODS

The research approach adopted for the study was Institutional Ethnography (IE), which allows exploration of the

ways people's experiences of health-care and health interventions are shaped by broad social forces (Smith 2005). In other words, IE seeks to visualize how our daily experiences are connected with events and activities that occur outside the immediate context. The focus is on textually mediated ways of 'ruling' in the forms of norms, reports, and procedures which ultimately shape the quality of services and practices. Thus, the organizational process executes control through regulations, which inform and dictate current practices through various levels of governing, management, administration, discursive relations, and professional organization (Mykhalovskiy and McCoy 2002; Campbell and Gregor 2008).

The project design received approval from the UFRN's ethics committee. Our fieldwork was conducted between October 2006 and April 2008, and the research strategies included participant observation, field notes, interviews, and focus group with mothers, as well as with healthcare professionals.

We developed six focus groups with mothers and performed 11 in-depth individual interviews at the Kangaroo maternity ward. Ages of the participants ranged between 16 and 35 years old. Issues discussed in the interviews included pregnancy (family planning, prenatal care, delivery, family support); motherhood (breastfeeding, mother's role, mother love, mother-infant bonding, fear of baby's death); participants' experiences living at the maternity ward (professional care, clinical and physical infrastructure, and everyday life at the Kangaroo ward); and socioeconomic difficulties (other children at home, lack of financial assistance, unemployment, degree of husband support and family support).

In addition, we conducted three focus groups (four participants per group) and seven in depth individual interviews which included physicians, nurses, technical nurses, social workers, an occupational therapist, and a psychologist. We discussed issues surrounding the hospital as an institution (infrastructure, relationships in the Kangaroo ward); health workers' experience with the Kangaroo Program (how they dealt and interacted with mothers, coped with everyday work, and opted to work in the Kangaroo Program); their thoughts about the users of the program, mother-infant bond and motherhood, and about the official documents.

FINDINGS

In this section, we will discuss and relate the distinctive features identified in the documental analysis of the manual and in the everyday work at the Kangaroo ward as addressed by participants in the Kangaroo Program (healthcare work-

ers and mothers). Without dismissing the potential benefits of the program, we have identified obstacles and challenges in the implementation of the program, based on an exploration of the following issues: (i) the socioeconomic profile of the typical mother in the Kangaroo Program; (ii) conflicting relationships between healthcare workers and users; and (iii) lack of socioeconomic and emotional support. Based on these findings, we have developed a further reflection about the Kangaroo Program health-care at this maternity hospital.

The socioeconomic profile of a typical user of the Kangaroo Program

Most of the research participants were low-income mothers from rural areas. This is not strange, considering that as part of two-tier system in Brazil, people within the low-income sectors comprise the majority of users of the SUS healthcare system (around 70% of the population). Those in middle and upper classes are consumers of private health-care (Lobato 2000). As evidenced through interviews and informal conversations, these mothers are often single, and have other small children at home. Low literacy level, poor housing, and little or no social support are part of their everyday lives. Many of them do not have access to regular health-care and unplanned pregnancies are very common.

Embedded in the poor living conditions, there are other related issues that a nurse in a focus group highlighted:

We have seen mothers that have tried to abort their fetus but it failed and the baby was born prematurely ... Now, this mother does not want to breastfeed ... does not want to look after her baby.

Through observation, informal conversations, and during interviews, we witnessed extreme social and economic difficulties, which were common sources of stress and sadness among some of these mothers:

There was a mother here who left her two children with neighbors because she had no family or husband. She was there for almost one month when the neighbor phoned and told her that she was going to put these children in the streets, because she could not afford to feed them. The neighbor thought that the children's mother would stay in the maternity ward just for two or three days. (Occupational therapist in personal interview)

In different moments of the fieldwork, many mothers expressed their concerns about the other children left behind when they were not even sure about the preterm baby's ability to survive. Often, these concerns prevented them from feeling really engaged with the program.

The decision for healthcare professionals to allow mothers to go back home while leaving their babies at the mater-

nity ward is a complex one. The fear is that if the mothers are allowed to return home, their socioeconomic difficulties can impel them to abandon the preterm baby. The following is an account from a health professional on this situation:

At this moment I have five babies ready to leave intensive care, but their mothers are not coming to claim them ... One has a history of drug addiction. Another one has five children at home and told us that she cannot return for her newborn child. Yet another mother – her baby has a mental disease and she said that she doesn't want the baby. She says she already has two healthy babies at home and doesn't need this one. And the mother of the fourth infant said she is coming here... she is preparing her house, but she will come. The mother of the remaining child said that she has a lot of problems at home and will not come here to pick him up ... (Social worker in individual interview)

The Kangaroo Program positions the mothers as the main person responsible for the baby's healthy development, as well as for bringing prosperity and strength to the family. However, from the experiences outlined by mothers and health professionals at this hospital, we can see that this policy neglects to account for the social, cultural, and environmental aspects involved in motherhood.

The conflicting relationships between healthcare workers and users

The Kangaroo Program provides guidelines for health professionals to encourage the mother–infant affective bond, central to the program's goal (Brasil, Secretaria de Políticas de Saúde/Área de saúde da criança 2002). The manual brings this concept of idealized motherhood to professionals who must train mothers in the relevance of mother–infant bonding for the healthy progress of the child. Mothers and families are encouraged to be receptive to this practice, which is established as the ideal approach in the care of preterm newborns.

However, it is necessary to remember that when norms are prescribed each institution has its own way of developing practices. The health workers' commitment and communication skills vary significantly, and often the asymmetric relations of power generated in this institutional context may act as a powerful influence over the mother's compliance with the Kangaroo approach. As Colameo and Rea (2006) suggest, the success of the Kangaroo Program implementation depends on the professionals' skills and conditions of the maternity wards and resources to effectively promote the mother's well-being.

Considering that most mothers in this Kangaroo ward were from low-income rural areas, healthcare professionals strongly recommend that mothers should live in the mater-

nity ward. In order to avoid the risk of abandoned babies, professionals prefer not to tell mothers that they have the power to decide to go home, even when they are aware of the mothers' complicated family situations. Consequently, mothers are led to believe that they must stay at the hospital as long as the baby is hospitalized. This kind of social control is sometimes enacted by using different kinds of arguments about the ideological relevance of mother-love:

I work this affective bond with these mothers. I speak about the smell ... that the baby must recognize it specifically in the mother ... The baby feels it when she comes. Then I'll say: 'put your hands here and observe how he is being different. The nurse's touch is different from your touch ... I know, I am wrong in doing this ... but I work in this way ... because I want to keep them here, but it is for the baby's sake. (Social worker in focus group)

Healthcare workers usually justify this sort of practice with the argument that high-risk mothers would not come back to claim their babies. In a focus group, health workers commented that when mothers returned to their homes in rural areas without the baby, the babies often stayed in the intensive care unit for a long time until Child Protection had to take these babies into custody.

We observed that professionals rely on the skin-to-skin contact to encourage a mother-infant bond, even if the mother does not want the baby. These professionals emphasize and teach that mother-love (maternal instinct) is born when mother and newborn are in continual contact:

A mother here had taken Citotec (to provoke abortion). She did not even want to see the baby. However, we put them together in the ward ... she threatened to throw the baby through the window ... she did not care at all to look after her. However, when she observed that other mothers were leaving the hospital and she stayed because her baby was not gaining weight ... after a while, she started to create bonds ... she started to change. (Physician in individual interview)

Even if the bond became genuine and was not only a way to get out of Kangaroo ward, it is important to reflect on the social conditions that led the mother to try abortion. Especially, because once mother and baby went back home, the same conditions were probably there.

We observed that when mothers feel the pressure of exercising the skin-to-skin contact, they may exhibit negative feelings, such as sadness and crying, isolation, and even aggressive behavior. There is often a lack of trust between mothers and the health professionals. Some mothers, instead of adhering to medical advice, create their own knowledge about what is best for their newborn and share their commonsense knowledge with other mothers. This type of peer interaction may be more influential on the

mothers' practice than the professional knowledge, which is a source of complaint among some professionals. Thus, a physician expressed in an individual interview how mothers tend to share negative feelings against the Kangaroo principles:

If they breastfeed, the baby will lose weight; if they put the baby in the Kangaroo posture, the baby will develop apnea; if they give the supplement milk through cup-feeding² the baby will lose weight.

This physician insisted that whatever a mother says aloud, the other mothers will tend to follow. Generally, there is a tendency among healthcare professionals to address the mother's low-literacy status as a limiting factor in the success or the failure of the Kangaroo Program:

Perhaps just 5 mothers, out of maybe 100 with whom I have tried to implement the kangaroo posture, agreed to try this practice. Many mothers will not even try because they do not understand and they do not know about the importance of the kangaroo position. This is a larger cultural problem. The only mothers who are willing to practice the kangaroo posture are those who have an education. (Technical Nurse in focus group)

Again, while doing this, some healthcare workers fail to understand the social, economic, and cultural complexities of these mothers, and more importantly are not trained to create the necessary supportive environment to promote maternal and newborn health.

Lack of socioeconomic and emotional support

The Kangaroo Program was implemented as part of a humanized policy in Brazilian health-care. However, the difficulties evidenced in the daily practice of the Kangaroo Program illustrate the kinds of existing paradoxes. The Brazilian Constitution of 1988 extended health-care to a large segment of the population (through the Unified Health System – SUS), but it is a permanently under-budgeted system (Lobato 2000).

A worker's account shows the gap between the idealized Kangaroo Program illustrated in the manual and the implementation of the program in daily practice:

The manual brings an ideal situation, where a physician, a physiotherapist, and a social worker must be available 24 hours a day. However, the reality is very different. Also, our hospital should provide the professional support to perform the follow up of the baby after he/she leaves the Maternity ward, but this kind of service is not available either. (Physician in individual interview)

² When supplement milk is necessary, or babies cannot suck, they will be fed through cup-feeding in order not to impair the baby's suction instinct and to assist in the success of breastfeeding.

In addition to the poor delivery of healthcare services during the inpatient situation and after the mother leaves the Kangaroo ward, the social and emotional supports necessary for the well-being of the mother and the newborn are also overlooked in the program. Our research evidenced that many mothers are single parent, while in the Manual it is assumed that the husband is always there to support mother and baby (Brasil, Secretaria de Políticas de Saúde/Área de saúde da criança 2002).

Thus the manual encourages professionals to involve fathers in the practice of the Kangaroo posture, thereby enhancing their participation. However, as already mentioned, many mothers find themselves unable to relate to this ideal situation. A worker spoke about the fathers in these terms:

I have had all kinds of fathers here: dedicated fathers, fathers who do the kangaroo position, fathers who come in and upset the mother, nagging and threatening her: 'you have been here almost 2 months, if you do not come back home now, I will get another woman' ... he tortures the mother (Physician in individual interview).

From what we observed, it is also difficult for the professionals to deal with these conflicting situations, but they usually end up justifying the mothers' reclusion and lack of autonomy for the sake of the babies' health.

REFLECTING ABOUT THE KANGAROO PROGRAM HEALTH-CARE AT THIS MATERNITY HOSPITAL

The importance of the Kangaroo Program is highlighted by most professionals by arguing that it offers the best model of maternity to low-literacy mothers. Some of them even believe that it has the potential to change the mother's behavior. However, we have observed how the Kangaroo Program fails to consider the social conditions involved, which makes it difficult for some mothers to be fully engaged in the program. Unfortunately, some professionals abuse their authority and use institutional power as a means of social control, keeping mothers uninformed about the voluntary nature of their participation in the program, and about the possibility of leaving the hospital.

Therefore, for low-income mothers – SUS users – the participation in the Kangaroo Program is more an imposition than a personal choice. We have seen that the socioeconomic conditions of these mothers are neglected, and their life conditions, subjectivity, and psychosocial backgrounds are not taken into consideration. Many mothers tend to submit to this imposition because of their feelings of powerless-

ness. Although some of them may only comply for short periods of time with the Kangaroo posture, not showing much interest in the program, they repeat what they hear from the healthcare workers when speaking about the benefits of the kangaroo posture.

Furthermore, the participant observation of the institutional practices at this Kangaroo ward allows us to reflect on interrelated issues:

- Mothers are not trained about the special health concerns related to preterm babies and the benefits of the Kangaroo posture. As a result, their experiential knowledge may prevail over the professionals' knowledge. This peer-to-peer sharing could be beneficial. During some of the focus groups, when a mother practicing the Kangaroo posture openly recognized that her baby was gaining weight, other mothers quickly would try to put their babies in this position. However, mothers were not encouraged by the professionals to share this kind of information and talk about their experiences and concerns. Therefore, most frequently, mothers were inclined to act in accordance with what they believed and not with what they were told by health professionals.
- This lack of fit between the sanctioned policy and everyday practice is also observed with regard to bottle feeding that is forbidden in the Kangaroo ward. The mother's main concern is for her baby to gain weight so that they can go home faster. Consequently, some mothers may ask their relatives to covertly bring bottles to feed their babies while the healthcare workers are not paying attention. However, this is an extra risk for these preterm babies due to the lack of sanitary measures.
- Many preterm deliveries are a reflection of poor maternal health services in rural Brazil. For example, 49.3% of women in the northeast have had less than five prenatal consultations (when the minimum recommended is seven prenatal consultations) (Comissão Nacional sobre Determinantes Sociais da Saúde – CNDSS 2008; Wehby et al. 2009). It is not only the quality of prenatal care that seems to be inadequate, but preventable disease, such as congenital syphilis is still an important cause of preterm delivery in this maternity hospital.
- Low literacy levels and lack of awareness about citizen's rights, added to the difficulties in gaining access to healthcare services in Brazil, may justify the user's passive position about the quality of the services (Lobato 2000; Lobato and Burlandy 2000). For example, some healthcare workers' practices were a source of concern for a number of the mothers. This passive position is exemplified through a mother's account in a focus group:

Some are lovely workers who take care of us and take care of our babies ... however, others are rude ... they pull the bandage from the baby's arm very aggressively, which causes bleeding. ... I do not complain, because I'm afraid that if I complain it will be worse.

- Many staff lack the standardized training and experience to deal with the Kangaroo Program. Poor working conditions prevailing in most of the SUS hospitals in the country influence the high rate of worker turnover and even lack of commitment among some of them.

CLOSING REMARKS

Respecting women's idiosyncrasies and socioeconomic issues, the Kangaroo Mother HealthCare approach has proved to bring benefits to mothers' and infants' well-being. Therefore, our aim is not to question the benefits of this intervention, but rather to reflect on the way the program is currently being implemented at a maternity hospital in northeastern Brazil. Considering that the SUS primary healthcare system in Brazil is chronically under budgeted, it is very likely that some of the difficulties mentioned above may be present at Kangaroo wards in other hospitals as well.

Another contribution of this study is the awareness brought about by the unfair use of institutional power exercised on these mothers. Low-income mothers at SUS maternity hospitals have to stay there until their newborn babies have gained the necessary weight, overlooking the social situation or other responsibilities they may have at home. This controlling behavior is part of the power relations involved, as research demonstrates that social inequities are pervading both the poor living conditions and the inadequate health-care available to these women.

ACKNOWLEDGEMENTS

We would like to thank CAPES (Coordenação de Aperfeiçoamento de Pessoal de Nível Superior – Brazil) for a graduate student grant supporting this research. We are also grateful to GSEP (Graduated Students Exchange Program – Canada) and to the Division of Community Health and Humanities, Faculty of Medicine at Memorial University of Newfoundland for the 6-month internship grant in Canada, which allowed the PhD candidate the time to develop this paper. We would like to thank Sandra Cooke for her reading and suggestions to a previous draft of this paper and to the Writing Center at Memorial University for the final edition. Finally, we are grateful to all the research participants at this Brazilian maternity hospital, both health workers and mothers for their collaboration.

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