THE EXPERIENCES OF CARERS WHO ARE IMPLEMENTING OR HAVE IMPLEMENTED KANGAROO MOTHER CARE (KMC) AT THE R. K. KHAN HOSPITAL.

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By

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DEDICATION

THIS THESIS IS DEDICATED TO ALL THE MOTHERS WHO HAD LOST THEIR BABIES DUE TO LOW BIRTH WEIGHT.

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ABSTRACT

Kangaroo Mother Care (KMC) is a fairly new concept to the patients and personnel at the R. K. Khan Hospital. Arising from one of the Governmental initiatives, KMC was introduced to KwaZulu Natal in 2001. The personnel at this hospital were briefly introduced to this alternate method of care for a low birth weight baby, by means of symposia and in-service. Soon after this in-service education, the personnel were requested to implement KMC. This study was undertaken to explore the perceptions of carers for the preparation and experience of KMC and to describe the experiences of the carers who have implemented KMC. Furthermore, this study determined whether carers received support during the implementation of KMC and in so doing to identify the sources of this support. The selection of this particular field of study arose out of the researcher's professional role in educating personnel in the theory and practice of midwifery. The lack of documented evidence to problems that they may have been encountered and management strategies to deal with these prompted this study. The intention was to obtain empirical findings so that personnel would be provided with appropriate and precise information on the subject. A phenomenological approach was used. The sample was obtained from the R. K. Khan Hospital neonatal unit. This is a regional hospital that is located in Chatsworth, Durban. The sample comprised of ten mothers who were practicing KMC in the post-natal ward, or mothers who were discharged and were still practicing KMC for the past two to four weeks. Data were collected by means of face-to-face interviews. Interviews were conducted using a semi-structured interview guide. These interviews provided the researcher with rich, personal and narrative experiences of the carers before and during KMC. The results of this study

indicated that KMC was indeed new to most of the mothers and this evoked apprehension, doubt and fear, but once the mothers had tried it and were successful, they felt a sense of joy. Nursing personnel formed part of the supportive environment for the mothers practicing KMC. The latter is a prerequisite for the success of KMC. Since KMC is associated with many benefits to the mother, the baby and the institution, for the future it could be incorporated into the midwifery curriculum for student midwives. Recommendations concerning nursing practice, nursing education and nursing research were made at the end of the study including the limitations affecting the study.

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CHAPTER ONE

INTRODUCTION

The past two decades have witnessed remarkable progress in developmental neurobiology. One of the important lessons from current brain research is that the outside world helps to organize the brain. This may be especially true during the early periods of life when brain development is rapid. The general organization of the central nervous system is determined genetically, but the genetic blueprint is not sufficient. The fine tuning, which includes apoptosis (programmed cell death) of neurons, wiring of the neuronal network, proliferation of axons and dendrites, formation of new synapses, as well as destruction of others, is to some extent shaped by sensory stimulation. Thus the genes appear to have delegated much of this work to interaction with the environment, i.e. social relations, experience, etc. This is a process that starts in utero and then accelerates with birth and extra uterine "independent" life. It may be more meaningful than we think to consider the best ways of promoting quality in the early relations between mother and baby (Kjellmer and Winberg, 1994).

The term Kangaroo Mother Care was first coined by Doctors Edgar Rey and Hector Martinez in 1978 in Bogota, Columbia. The term "kangaroo" is derived from practices similar to marsupial care, in which the infant is kept warm in the maternal pouch and close to the breasts for unlimited feeding. They defined Kangaroo care as skin-to-skin contact between a mother and her low birth weight infant in a hospital setting. The term Kangaroo Mother Care (KMC) was adopted by the First International Workshop on Kangaroo Care in Trieste (Kirsten, Bergman and Hann, 2001). Adding the M emphasizes

the importance of the mother's milk, with breast-feeding being the second key component of KMC. The relationship between skin-to-skin contact and breast-feeding is fundamental. Alberts (1994) described how rat pups exhibit a behavior pattern, or a niche specific and appropriate to the habitat. The correct habitat results in vagally mediated behavior that enhances growth. Any other habitat, that is, separation from the mother, results in the newborn animal displaying a stress response. This protest-despair response is observed in all mammals and when prolonged, has been shown to be harmful in newborn animals and humans.

The evolution of encephalization and bipedalism has resulted in Homo-sapiens being born immature and gestation is completed outside of the womb. Other primates also give birth to immature young, and they all exhibit the carry pattern of infant care (as opposed to cache, nest or follow). Homo-sapiens evolved as a hunter-gatherer species and contemporary hunter-gatherer societies still show the carry pattern of infant care with breast-feeding almost continuously and on demand. Maternal-infant skin-to-skin contact is the habitat in which the human infant expresses a neuro-behaviorally programmed niche, which is to breast-feed. In evolutionary terms, the neonates survival depends on this factor.

In the past fifty years, regionalization of perinatal care, neonatal medicine, pediatric surgery, and diagnostic and therapeutic advances in obstetrics have increasingly contributed to the improved survival rates of low birth weight and very low birth weight infants. This improved survival has been at the price of separating the infant from the

mother. KMC reinstates the alienated mother to her rightful place in the management of her infant and re-establishes human milk as the nutrition of choice (Kirsten et al., 2001).

BACKGROUND AND RATIONALE

The term Kangaroo Mother Care (KMC) is used to describe an infant being nursed in an upright position in skin–to- skin contact with the mother's breast. In the absence of the mother another carer viz. mother's partner, mother's friend, mother's sister or the baby's grandmother can substitute for the mother (Whitelaw and Sleath, 1985).

Infants nursed in this way are of low birth weight (LBW). The birth weight usually ranges between 1500 grams to 1999 grams. The babies are clad only with a little cap on the head and a napkin. The LBW infants are stabilized i.e. vital signs are within normal limits, they are not dependent on oxygen and/or intravenous fluids and no visible malformation/abnormality exists. The baby is secured to the mother's breast by a cloth. The mother can then put on her blouse over this. KMC is implemented until these babies reach a weight of 2000 grams. KMC may be intermittent or on a continuous basis for 24 hours.

KMC was first introduced in 1983 by Dr Edgar Rey, Dr Hector Martinez and others from Bogota (Columbia) as an alternate way to care for an infant with LBW. This method of care was devised in response to the shortage of staff and equipment in their hospital (Sloan, Camacho, Rojas and Stern, 1994).

Low birth weight is a problem experienced all over the world. Of 25 million births per year, 17% are babies of low weight (Cattaneo, Davanzo, Worku, Surjono, Echeverria, Bedri, Haksari, Osorno, Gudetta, Setyowireni, Quintero and Tamburlini ,1998). Charpak, Ruiz-Pelaez and Charpak (1994) reported that LBW deliveries are highly prevalent among women from the lower socio-economic classes. In the United States of America, of a total of 3.6 million live births in 1983, 6.8% weighed less than 2500 grams and 2.4% weighed less than 2000 grams. In contrast, Cattaneo et al. (1998) reported that 98% of 5 million neonatal deaths estimated by the World Health Organization (WHO) for 1995 occurred in low-income countries. LBW was the underlying cause of most of these deaths. LBW babies are more prone to medical problems such as respiratory distress, hypothermia and feeding problems. LBW often has an adverse effect on the survival rate and the physical development of the child.

Studies (Whitelaw, Heisterkamp, Sleath, Acolet and Richards, 1988; Acolet, Sleath and Whitelaw, 1989; Sloan et al., 1994; Bergman and Jurisoo, 1994; Charpak et al., 1994; Charpak, Ruiz-Pelaez, Figueroa de Calume and Charpak,1997 and Cattaneo et al., 1998) have been carried out to explore the effectiveness of KMC as compared to the conventional method of care (CMC). CMC requires incubators, heated cribs, nurseries and professional carers. This proves to be expensive in developing countries.
Sloan et al. (1994) and Cattaneo et al. (1998) noted that a high standard of neonatal care i.e. neonatal intensive care for LBW infants could reduce the neonatal mortality rate, but neonatal intensive care of LBW infants is costly. In developing countries, resources for perinatal and neonatal care are scarce. Nurseries are overcrowded and there is a shortage

of staff. Furthermore, the risk of nosocomial infection is high, because it is often necessary for infants to share an incubator.

Some of the benefits of KMC have been elicited by previous studies. Amongst them are that KMC infants recorded lower incidences of severe illnesses especially lower respiratory tract infection (Sloan et al.,1994). Whitelaw et al. (1988) noted that KMC infants appeared more tranquil and cried less. Cattaneo et al. (1998) noted a prolonged period of breast feeding and better bonding with the mother. Bergman and Jurisoo (1994) noted a reduction in mortality rate by 37% in infants nursed in this manner.

Proven to be effective, KMC was soon implemented in countries such as Ethiopia, Indonesia, Mexico (Cattaneo et al., 1988), London (Whitelaw et al., 1988), Zimbabwe, Mozambique (Bergman and Jurisoo, 1994) and Brazil (Sloan et al., 1994).

South Africa, a developing country, experiences similar problems in the neonatal units as described in Sloan et al. (1994) and Cattaneo et al. (1998). In response to this problem the R.K. Khan Hospital decided to introduce KMC in January 2002.
KMC is a new concept in South Africa, only one other hospital, that is Groote Schuur Hospital, (Hann, Malan, Kronson, Bergman and Huskisson, 1999) has introduced this method of ambulatory care of the LBW infant. Whilst KMC has been shown to be an effective manner of caring for LBW babies, there appears to be a lack of information regarding the experiences of carers who have implemented KMC.

R. K. Khan Hospital is a provincial hospital, situated in Chatsworth, south of Durban, KwaZulu Natal. This 472 bedded hospital serves the local community and is a level 2 hospital (District, Secondary or Regional Hospital as cited in Department of Health, 2001). St Mary's Hospital utilizes this hospital for referrals. St Mary's Hospital is a level one health centre with an Obstetric unit (Department of Health, 2001). This hospital serves the 24 peripheral clinics situated in the Inner and Outer West areas of Durban. R. K. Khan Hospital is also an academic institution utilized for the training of nurses and for the practice and practical examinations for medical personnel.

The hospital provides a 24 hour maternity and casualty service. Approximately 369 deliveries are conducted per month in the delivery unit. From January 2001 to April 2002 an average of 26 babies were born every month with weights below 2000 grams. On a daily basis there are about 10 babies, whose birth weights are below 2000 grams, being nursed in incubators. The only reason that these babies are being nursed in incubators is for weight gain. The nursery at this hospital is a busy unit with major shortcomings, for example staff and equipment shortages. The average ratio of staff to babies is 1 : 8. Ideally the recommended should be a ratio of 1.25 : 1 (Roberton, 1991). With the introduction of KMC, babies requiring the incubator primarily for weight gain, are commenced on KMC. The mothers are given information on KMC, including the benefits. These mothers are assisted to practice intermittent KMC in the nursery by professional nurses, who received in-service training on KMC. The staff of the nursery continuously monitor and evaluate the mother's ability to cope with KMC and the baby's

progress. Once the mother is found to be competent, she is then transferred to the KMC ward.

To implement the KMC programme a small cubicle/ward which accommodates three mothers has been changed and adapted to a kangaroo ward as part of the post-partum ward. This kangaroo ward is furnished with three specialized beds (very low and smaller than usual hospital beds) for the convenience of the mothers, three lockers for patient's necessary possessions and three cribs for the babies. The cribs are used if the mother needs to take a shower. Because the ward was an ordinary ward with no central heating nor cooling, two mobile heaters had to be moved into this kangaroo ward. Attractive pictures decorate the walls of the room. The procedure and benefits of KMC are also displayed in posters on the walls.

PROBLEM STATEMENT

KMC is a new intervention for caring for LBW infants at R. K. Khan Hospital. The Department of Health, KwaZulu Natal, initiated this intervention. Nursing staff received in-service education on KMC from the Department of Health by means of symposia and workshops, in preparation for this new intervention. With the support of the pediatricians, KMC was introduced in January 2002. Limited information is available to staff - only that which appears in journal articles and research reports.

The only study on KMC in South Africa was conducted at Groote Schuur Hospital in Cape Town and was reported by Hann et al. (1999). This study by Hann et al. (1999)

focused on determining the effects of KMC on the growth of the baby, the length of the hospital stay of mother and baby and the success of breast feeding. No other studies have been conducted in South Africa to explore the experiences of the carer.

This study intends to explore and highlight the experiences of carers whilst implementing KMC. If problems are identified then management strategies can be worked out to assist staff in implementing this new intervention. Management strategies can also assist staff in the preparation of the mother and family to KMC. If no problems are experienced, then it would still be advantageous to take cognizance of the possible factors influencing success with KMC.

OBJECTIVES OF THE STUDY

The objectives of this study are to: -

- Determine and describe the perceptions of carers about the preparation for KMC.
- Describe the experiences of the carers who have implemented KMC.
- Determine whether carers received support during the period of KMC implementation, and
- Identify the sources of support for the carers in KMC.

RESEARCH QUESTION

The research was guided by this question.

- What are the experiences of the carers who have implemented KMC?

SIGNIFICANCE OF THE STUDY

Research studies on KMC have been carried out in other parts of the world viz. Columbia, Brazil, Mexico, Ethiopia, Indonesia, London, Zimbabwe and Mozambique. KMC was first introduced in South Africa (Cape Town) in 1996. Hann et al. (1999) reported on their study, which was conducted on 28 infants of very low birth weight (less than 1500 grams) at Groote Schuur Hospital in 1996. The study was done to determine the effects of KMC on growth, length of hospital stay and breast feeding. Stabilized infants were assigned to either the experimental or the control group. Infants in the study group received skin-to-skin care from the mother, whereas the control group did not practice skin-to-skin care. Results of this study found the weight gain in the experimental group was greater, the hospital stay of the infants in the experimental group was shorter than that for the control group and more mothers in the experimental group were breast feeding at discharge.

KMC was not practiced in KwaZulu Natal (KZN) until January 2002. Since it is a fairly new concept in KZN, the experiences of carers, who are implementing KMC is not known. With more research-based evidence on the experiences of carers, nurses will be better equipped to plan a management protocol for mothers/carers assigned to practice KMC.

DEFINITION OF CONCEPTS

Low birth weight (LBW) - infants born with a birth weight of less than 2000 grams. (Cattaneo et al. (1998), Sloan et al. (1994) and Charpak et al. (1997).)

Carers - this refers to the mother of the infant. When the mother is not available it may be the mother's partner, mother's friend, mother's sister or grandparents who would substitute the mother.

Kangaroo mother care (KMC) - where the LBW infant is nursed in an upright position in skin- to- skin contact with the carer's chest. (Cattaneo et al. (1998), Sloan et al. (1994), Charpak et al. (1997), Whitelaw et al. (1988) and Acolet et al. (1989)).

Conventional method of care (CMC) - use of incubators and heated cribs to prevent hypothermia in LBW infants.

Stabilized - vital signs are within normal limits, not dependent on oxygen and/or intravenous fluids and no visible malformation/abnormality exists. (Cattaneo et al. (1998).

Experiences – knowledge or skill gained by personal observation or practical acquaintance with facts or events. (Thompson,1996).

Perception – act of faculty of perceiving. Intuitive recognition of a truth. (Thompson,1996).

CONCLUSION

In this chapter the problem statement has been described and the objectives for the study identified.

CHAPTER TWO

LITERATURE REVIEW

This chapter reviews the available literature, including previous research studies on KMC programmes, the procedure and the benefits to the mother, baby and the institution associated with KMC.

KMC was first described in the English medical literature by Whitelaw and Sleath (1985) following a visit to Bogota, Columbia. They state that The Instituto Materno Infantil at San Juan de Dios Hospital is a very large maternity hospital where eleven thousand babies are delivered annually, many of them are at high risk. The special care baby unit had always been overcrowded, under-equipped and understaffed. Cross infection was common and the survival of very LBW infants was poor. Very large numbers of LBW babies with few incubators resulted in high mortality rates from infection. Partly as a means of getting babies discharged early, doctors Edgar Rey and Hector Martinez introduced maternal-infant skin-to-skin contact if the infants survived the first week or two. They encouraged exclusive breast-feeding and discharged the babies early.

The Bogota Program had been supported by the United Nations Children's Fund (UNICEF). In 1983 UNICEF reported that (quoted in Whitelaw and Sleath, 1985) "Instead of being packed in an incubator, low birth weight babies are packed close to their mothers right next to the breast. The new technique needs no technology and its cost is zero. Before the new techniques were introduced all babies weighing less than a kilo died. Now three quarters of them are saved. For those weighing between 1000 and 1500

grams the death rates have dropped from 70 % to 10 %". Whitelaw et al. (1988) postulate that babies as small as 700 grams, who no longer require oxygen can be safely nursed with skin-to-skin contact. However, in most of the world, early discharge is not a primary component of KMC. Skin-to-skin care and breast-feeding are the essential components of KMC (Charpak et al, 1997).

FACILITIES REQUIRED FOR KMC

Kirsten et al. (2001) draw attention to the facilities required for KMC. They noted that a room can be set aside in the neonatal intensive care unit or there should be a step-down nursery. A recliner or rocker with a footstool should be provided for the mother alongside the incubator, (if KMC is intermittent), with a chair available for her partner. A screen should be available if a lack of privacy inhibits parents from practicing KMC.

Refrigeration facilities for expressed breast milk are essential. A dedicated KMC ward, where the mother may practice continuous KMC with her infant while striving for exclusive breast feeding is ideal as an intermediate step between hospital and home. The infant may be transferred to the KMC ward with the mother if he or she may be removed from the incubator, is growing satisfactorily, and is at least partially breastfed or cup-fed as necessary. The weight at which the infant is removed from the incubator depends on how well the mother is motivated to practice KMC and on the follow-up facilities in the community. Because the mother keeps the infant in the kangaroo position 24 hours a day, cots should not be allowed in the KMC ward. When the mother goes to the bathroom, the infant should be placed safely on the mother's bed and the attending nurse should be

informed. Ideally, the KMC ward should be adjacent to the step-down unit, but any rooms with beds and reasonable access to the unit will suffice. The KMC ward should be as comfortable as possible and have a homely rather than a hospital atmosphere. The temperature of the room should be kept at more than 20 degrees C at all times. Ablution and hand- washing facilities are essential. The KMC ward may be used as a venue for educating mothers of LBW infants on topics such as KMC, breast feeding, and infant and child health.

DRESS

The baby is dressed only in a small diaper and a woolen cap, then placed on the mother's naked chest. The baby can be secured in a number of ways. The simplest is to tie the baby on firmly with a non-stretching cotton cloth, for example a theatre towel. It should be knotted in the mother's axilla, to enable her to lie comfortably (Bergman and Jurisoo, 1994). For the newborn and unstable babies, the mother should lie at 30 to 40 degrees inclination. Once the baby is stable, the mother should be encouraged to be ambulant. For ambulatory KMC, some means of supporting the baby on the mother's chest is needed (Bergman, 1998).

FEEDING

According to Wahlberg (cited in Bergman, 1998) breast-feeding should be encouraged, though adequate volumes of milk should always be ensured, even if required by expressing the milk from the mother's breasts and feeding by cup or spoon or by a tube. Skin-to-skin care can facilitate the establishment of direct breast-feeding in babies of 28

to 30 weeks gestation. According to Anderson (cited in Bergman, 1998) babies can be fed in the KMC position. Tube feeding can otherwise be done with the baby on the mother's lap with due care for hypothermia. Skin-to-skin contact has a powerful effect on the volume of milk produced per day, and on the duration of breast-feeding (Bier et al. 1996, cited in Bergman, 1998).

According to Colonna et al. (cited in Bergman,1998) and Bergman and Jurisoo (1994) the mother should be regarded as the primary care giver and should be taught to tube feed and provide any other care as early as possible. This requires emotional and practical support from nursing staff. Bergman and Jurisoo (1994) emphasized that psychological support is essential. Education to the mother must be continuous, in all aspects of the care. The mother must understand that the child's well-being depends primarily and ultimately on her, though she will receive all the nursing care she needs. The help of other mothers in the ward is most valuable.

The Baby Friendly Hospital Initiative (BFHI) promotes breast-feeding. It provides a rigorous, structured program for ensuring a climate that is conducive to breast-feeding. Breast-feeding is an integral part of a BFHI. Under ideal circumstances KMC should be introduced following the same principles as the BFHI. Where the BFHI already exists, the implementation of KMC is greatly simplified (UNICEF 1993).

EFFECTIVENESS AND SAFETY OF KMC

Charpak et al. (1994) reported on a study, which compared the outcomes of two cohorts of LBW infants. In this study in Bogota (Colombia) the effectiveness and safety of KMC was assessed. One hundred and fifty babies were allocated to each group. The babies were allocated to a control group or to a Kangaroo group and were followed for one year. Growth patterns of weight, height and circumference of the head were monitored at intervals of one month, three months, six months, nine months and one year. Results of this study revealed that socio-economic and environmental factors greatly influenced the survival rate and development of the infants. It was found that Kangaroo infants grew less than control infants as Kangaroo infants came from a much lower socio-economic class and were more ill before eligibility for the study. Another reason for these findings was that Kangaroo infants had lower birth weights than did the control babies. In this study Charpak (1994) noted that there were major baseline differences between the two cohort study groups.

MORTALITY RATES

Colonna, Uxa, da Graca and de Vonderweld (1990), documented some of the advantages of implementing KMC in Maputo, Mozambique. This study showed a marked decrease in infant mortality rate and a decrease in the rate of infection among infants of less than 1000grams.

Charpak et al. (1997) compared the findings of the previous study done in 1994, with a later study done in 1997. They compared neonatal mortality rate between a control group

and a KMC group. In this later study, KMC had been modified i.e. guidelines and procedures of KMC were modified, placing emphasis on early weight gain monitoring and feeding supplementation. Mothers were evaluated on their readiness for discharge from hospital, to prevent readmission of infants. The study found that KMC is not associated with an additional risk of dying. In fact KMC reduced the mortality rate, although the difference was not statistically significant. Charpak et al. (1994) found no difference in mortality rates between the control and KMC groups. The earlier study found that KMC infants recorded a slower growth rate in terms of height, weight and circumference of the head, due to socio-economic and environmental factors, as compared to the later study which showed no difference in growth i.e. height, weight and circumference of the head. They further confirmed that KMC does not jeopardize the early growth of LBW infants.

According to Sloan et al. (1994) KMC did not reduce the neonatal mortality rate in a Maternity Hospital in Ecuador. This idea is supported by Catteneo et al. (1998) who stated that KMC did not reduce the neonatal mortality rate in the three tertiary and teaching hospitals in Ethiopia, Indonesia and Mexico. Bergman and Jurisoo (1994) studied KMC in Zimbabwe, which is a developing country. In contexts, in developing countries where there is inadequate or no access to incubators, KMC could be the standard method of managing LBW babies. A five-fold improvement in survival has been documented from this mission hospital in Zimbabwe where there were no incubators available. Bergman and Jurisoo (1994) highlighted the marked benefits of KMC, which were a reduction in the infant mortality rate and a survival rate of 95% for infants with a

weight of between1500 grams to 1999 grams. Bergman and Jurisoo (1994) do however draw attention to the poor survival rate of less than 57% for infants below 30 weeks gestational age who were cared for using KMC.

BENEFITS OF KMC

In the literature (Whitelaw and Sleath, 1985, Bergman and Jurisoo, 1994 and Colonna et al., 1990) it can be found that KMC offers benefits not only to the baby but also to the mother and the institution. One of the authors (Bergman, 1998) captured the benefits of KMC after reading and consolidating the studies conducted on KMC. He emphasized some of the benefits of KMC to the baby are improved cardio-respiratory stability, faster growth and development, to the mother are breast-feeding, better bonding, psychological healing and empowerment to the mother. The benefits to the institution are significant cost savings, improved morale, better survival and better quality care (Bergman, 1998).

- **TO THE BABY**

Studies have revealed KMC to be associated with positive physiological effects on the LBW infant. Acolet et al. (1989) examined the heart rate, skin temperature and oxygenation in very low birth weight infants being nursed either in a prone horizontal position in an incubator or being held prone at a tilt of approximately sixty degrees skin-to-skin with the mothers. The results of this study showed the heart rate increased significantly by over six beats per minute when held by the mother during skin-to-skin contact. The difference in temperatures of the babies nursed in incubators and those that were nursed close to their mothers, in skin-to-skin contact did not reach statistical

significance. Mondlane, de Graca and Ebrahim (1989), opposed this statement, when they added that skin-to-skin contact helps to maintain the infant's body temperature at a higher level than when nursed in the incubator.

On the contrary Bosque, Brady, Affonso and Wahlberg, (1995), argued that the temperature was 0.3 degrees C lower during Kangaroo care as compared to the temperature recorded in the incubator. This was statistically but not clinically significant. Acolet et al., (1989) noted that oxygen saturation levels did not change significantly for both groups of babies. However, the skin temperature and oxygen saturation was maintained during skin-to-skin contact. None of the infants had apnoea, serious bradycardia or a hypoxic episode during skin-to-skin contact. Bosque et al., (1995) studied the same physiological variables in California at San Francisco Children's Hospital as reported by Acolet et al., (1989).

Bosque et al., (1995) compared the incubator care with Kangaroo care. Kangaroo care was implemented for four hours a day, six days a week, for three weeks. During Kangaroo care and when the LBW infant was nursed in the incubator the physiologic variables i.e. temperature, heart rate, respiratory rate, sleep state behaviour and oxygen saturation were monitored. This study is similar to the studies carried out by Acolet et al., (1989) and Bauer et al., (1996) but the findings revealed similarities and differences, that Kangaroo care was not associated with differences in the infant's heart rate, respiratory rate, episodes of apnoea, bradycardia, or oxygen saturation. These variables were similar in both Kangaroo positions and in infants in the incubator. This study also found that sleep time was less and the temperature was lower in the Kangaroo position.

Interestingly, bradycardia was less common during breast feeding when compared to either gavage or bottle feeding in both KMC and incubator care infants (Bauer et al., 1996).

Bauer, Sontheimer, Fisher and Linderkamp (1996), reported on their study which was carried out in Germany, to examine and compare the effects of maternal and paternal Kangaroo care on oxygen consumption, carbon dioxide production, energy expenditure, skin and rectal temperatures, heart and respiratory rates, arterial saturation and behavioral states. In contrast they claimed that skin temperature increased significantly during maternal and paternal Kangaroo care. None of the other parameters studied i.e. oxygen consumption, heart and respiratory rates changed during Kangaroo care.

Ludington-Hoe et al. (cited in Bauer et al. 1996) studied paternal kangaroo care in Columbia and observed that core and skin temperatures, heart and respiratory rates were higher during paternal Kangaroo care than during maternal Kangaroo care. Bauer et al. (1996) suggests that the difference in findings in a previous study done by Ludington-Hoe could be due to different environmental conditions (Bauer et al., 1996).

Clifford and Barnsteiner (2001), studied very LBW babies who were intubated and on a respirator. While most studies were done on stable preterm infants, this study was conducted on seven babies still requiring intubation to observe the physiological variables i.e. oxygen saturation, temperature, heart and respiratory rates before, during and after KMC. The study results revealed similar findings to that of Bauer et al., (1996)

which indicated that Kangaroo care does not increase energy expenditure, but may actually conserve energy.

Gale, Franck and Lund (1993) conducted a study in California, in the neonatal intensive care units. They described the effects of skin-to-skin contact with their premature intubated infant. In this study it is noted that parents found skin-to-skin contact rewarding with their intubated infants. This study supported the views of Whitelaw et al., (1988) and Colonna et al., (1990), where mothers were more interested in and successful in breast feeding when they practiced skin-to-skin contact. This study also found that skin-to-skin contact contributed to motivating mothers, who previously used cocaine, to increase their visitations to their baby.

Mothers and fathers described skin-to-skin holding as positive and personally beneficial. Parent statements reflected feelings of stronger identity with their infants. Parents expressed greater confidence in the infants' need for them and in their ability to meet these needs. Parents expressed delight at watching their infant's oxygen saturation improve during holding. This study also identified some problems that were experienced by the parents viz. lack of privacy, discomfort from sitting for long periods, perspiration and the baby sliding down the parents chest.

Christensson, Siles, Moreno, Belaustequi, De La Fuente, Lagercrantz, Puol and Winburg (1992) noted that the Kangaroo method of care for LBW infants provides further evidence that the maternal body is an efficient heat source for the baby. In an

evolutionary perspective, the mother's body must have been the only reliable heat source for newborns, and the body-to-body contact may be part of a genetic program for maternal behaviour, which may be worthwhile to protect.

Ludington-Hoe and Swinth (1996) assert that skin-to-skin contact causes intense vagal (parasympathetic) stimulation in the newborn. This reduces the levels of stress, facilitates and speeds the adjustment from intra-uterine to extra-uterine existence, and leads to early autonomic stability. This is easily demonstrated with routine monitoring devices, for example, oxygen saturation improves on average two percent, breathing is more regular, with fewer apnoeic episodes and less periodic breathing. Heart rate increases within the normal range, and stabilizes, in that beat to beat variation is markedly reduced (Ludington-Hoe and Swinth,1996).

Anderson noted (cited in Bergman,1998) that vagal stimulation enables the gut to function optimally, and is thought to stimulate the newborn's own production of surfactant in the lungs.

Ludington-Hoe and Swinth (1996) pointed out that mothers practicing KMC are able to maintain their babies' temperature within a very narrow range, usually higher than that average recorded in an incubator. When babies are overheated, the baby will be seen to push an arm out from the cover of the mother's shirt/gown. This thermal self-regulation is one example of advanced neuro-behavioural maturation, another positive result of KMC.

This can favorably be compared to the findings in Legault and Goulet (1995) which indicated lower levels of oxygen saturation, (this suggests no evidence of respiratory distress) especially during testing of the Kangaroo method. This suggests excitation of the sympathetic nervous system to help maintain skin temperature. When regulation of skin temperature is modified in a preterm infant, the sympathetic nervous system intervenes to release more nor-adrenaline, leading to lower oxygen saturation. Preterm babies suffer no hypothermia and heat production is almost the same as it is in the incubator. Thus, the Kangaroo method does not induce hypothermic reactions. Moreover, infants may be removed from the incubator for a longer period with the Kangaroo method than with the traditional method because oxygen saturation and heart rate remain more stable. The Kangaroo method is recommended because it results in better regulation of skin temperature in preterm infants.

Christensson, Bhat, Amadi, Eriksson and Hojer (1998), investigated healthy full-term neonates with an admission temperature of less than 36 degrees C in a Zambian University Teaching Hospital and concluded that skin-to-skin care prevents neonatal hypothermia but has not been investigated for the treatment of hypothermia. Skin-to-skin care also promotes stable cardiac and respiratory function, keeps unnecessary movements to a minimum, improves behavioral state, and facilitates mother infant interactions.

Colonna et al., (1990) claimed that the reason why such a simple method (KMC), is so effective is because it allows for the maintenance of a constant and physiologic

microclimate for a tiny baby, even less than 1500 grams. KMC does it much better than a poorly operating incubator.

Ludington-Hoe, Thompson, Swinth, Hadeed and Anderson (1994), conducted a study at the community hospital in Washington, United States of America. In this study there were two groups of subjects who were randomly selected to the open air crib group and the incubator care group. LBW infants from both groups received KMC. Physiologic variables i.e. temperature, heart rate and oxygen saturation were monitored during the time the infant was in the open-air crib and during KMC. A pretest had been done to determine if any change in variables occurred. This procedure was also repeated in the same way for infants being nursed in an incubator. The same physiologic variables were monitored. The results of this study, for the incubator group, revealed that heart rate increased during Kangaroo care, a similar finding as cited in Acolet et al., (1989). Abdominal skin temperature increased during Kangaroo care. This is not in keeping with Acolet et al., (1989) but a similar finding can be found in the study by Bauer et al., (1996). Respiratory rate was lower in Kangaroo infants, this suggests no respiratory distress (Ludington-Hoe et al., 1994).

The results of the open crib study group revealed that heart rate increased during KMC, skin temperature increased with Kangaroo care and the oxygen saturation dropped during Kangaroo care. The authors of this study were convinced that Kangaroo care is preferable as compared to nursing a LBW infant in an incubator or an open crib. Kangaroo care infants experienced more quiet regular sleep. This study also reported that the

predominant behavioural characteristic of Kangaroo care infants was the relaxation and contentment when being held. Mothers also expressed a sense of relaxation, decreased stress and pleasure when holding infants in the Kangaroo position (Ludington-Hoe et al., 1994).

Ludington-Hoe and Swinth (1996) draws attention to the relationship of Kangaroo care to the infant state. The predominant sleep state during Kangaroo care, as determined by the observational method, is deep, quiet, regular respiration sleep. Kangaroo care provides containment similar to in utero containment, thus evoking quiescence, decreased arousal, and a significant increase in the amount of quiet sleep. Alertness, although brief in most infants, had been seen during Kangaroo care, especially after many sessions conducted during a week or more. Kangaroo care also is accompanied by a clinically and statistically significant reduction in crying. Gale et al. (cited in Ludington-Hoe and Swinth,1996) noted that some infants had been observed, extending their heads to get into the en-face position with the parent providing Kangaroo care, gazing intently at the parent, and maintaining the gaze for exceptional lengths of time.

Roberts, Paynter and McEwan (2000) reported in their study, which compared the use of KMC with conventional cuddling care (CCC) in premature and small-for-gestational-age infants in Darwin, Australia, that there was no significant difference in weight gain at six weeks, three months and at six months, between the KMC babies and conventional cuddling care babies. Their second hypothesis was that they felt KMC infants would have equal or better temperature maintenance than CCC infants. Their study found no

significant difference in temperature gain for either group of infants. This study also revealed no significant difference in the hospital stay for KMC infants as compared to CCC infants (Roberts et al., 2000).

- **TO THE MOTHER**

Whitelaw et al. (1988) and Sloan et al. (1994) claimed that mothers became empowered and confident in caring for their infants, and this also allows for an earlier discharge. Ideally such discharge should be to some support network. This result is significant in terms of cost savings of hospital care.

Bergman and Jurisoo (1994) and Sloan et al. (1994) also looked at the bonding process and claimed that breast feeding, skin contact and warmth improved bonding between mother and child. Sloan et al. (1994) noted that better maternal-infant bonding establishes physically and emotionally closer ties that will affect the infant's health and growth even beyond the time when the mother continues skin-to-skin contact.

Whitelaw et al. (1988) examined the effects of skin-to-skin contact and the relationship between mothers and babies. They undertook a randomized control trial of infants less than 1500 grams. One group received skin-to-skin contact with the mother and the other group of infants was randomized to normal contact without skin-to-skin contact. Results of this study showed that babies with skin-to-skin contact were more tranquil and their mothers lactated for 9.2 weeks compared to "normal contact" mothers who lactated for 5.1 weeks. Charpak et al. (1994) also reported that breast feeding was more frequent and longer among Kangaroo infants. This represents a real benefit, given the overwhelming evidences of the important role of maternal milk.

Colonna et al. (1990), reported that almost all the mothers in their study experienced successful lactation and the team had documented with video-tapes, the astonishing maturation of tone, reactivity and spontaneous motor activity of these very tiny and premature babies after a few days of Kangaroo care.

This study (Colonna et al., 1990) also reported the effects of the prolonged and profound interaction between mother and child. This interaction is responsible for creating and strengthening the mother-child bonding process and it instills confidence in the mother, making her more competent in the care of her infant. This was also acknowledged by Ludington-Hoe and Swinth (1996), as true developmental care should encompass strategies to enhance the parent's attention and interaction contributions. Parents are partners in the nursery and the nursing personnel's task is to encourage the development of parenting skills, including caring for the infant. Parental confidence in care giving and sensitivity to the infant's cues are enhanced by Kangaroo care. Having the opportunity to hold their infant in the nursery gives parents a chance to learn about their infant's state, behavioral cues, positioning and how to provide care and to feel more confident. Maternal confidence and closeness to the infant are enhanced, as is the resolution of the grief process related to premature birth. Mondlane et al. (1989), stated that KMC promotes bonding with the infant and instills confidence in the mother.

- **TO THE INSTITUTION**

In another randomized control study, Cattaneo et al. (1998) described a study that was carried out in three teaching hospitals: Addis Ababa, Yogyakarta and Meridia for one

year to examine the adequacy of facilities in terms of crowding, food, water, bathing and toileting. The study also looked at the availability of staff to implement KMC and CMC. Mothers were interviewed to determine whether they were coping with the assignment of either KMC or CMC, or whether they would have preferred the other. Due to the geographical location, care was taken to make sure that no differences in the facilities, environmental and socio-economic conditions existed. The findings revealed that KMC did not contribute to a reduction in the infant mortality rate; CMC needed more physical space, staff, electricity and oxygen supply. The study confirmed that KMC was more cost-effective as compared to CMC. Mothers implementing KMC felt competent with the method and preferred KMC as opposed to CMC.

According to Collins (cited in Bergman,1998) KMC is also the ideal way of transporting small newborns to referral centres, and for warming hypothermic babies.

PERCEPTIONS AND EXPERIENCES OF CARERS

Most researchers of KMC have investigated the physiological stability and parental feelings concerning their LBW infant, who required minimal or no supplemental oxygen therapy. Previous studies (Ludington-Hoe et al., 1994) indicates that when parents of physiologically stable preterm infants discussed their skin-to-skin experience, they generally described positive feelings. Legault & Goulet (1995), who compared skin-to-skin care with traditional blanket holding, reported that mothers expressed a high level of satisfaction with both methods. However, mothers preferred the skin-to-skin method because their infants were close to them and they felt at ease, fulfilled and satisfied.

Anner (cited in Neu, 1999) also wrote positively about skin-to-skin care from a father's point of view. He stated that after participating in this method of holding his daughter, he experienced joy, love and a special closeness with her.
Ludington-Hoe et al. (cited in Neu, 1999) stated that in a Columbian study, fathers related feelings of connectedness with their newborns whom they held in skin-to-skin contact. They (cited in Neu, 1999) further stated that in addition to feeling closer to their infants after skin-to-skin contact, mothers in a study of healthy preterm infants indicated that they felt empowered by the skin-to-skin experience because it was their unique contribution to their infant's well being. This is similar to what the mothers stated in a study conducted in Zimbabwe (Kambarami, Mutambirwa and Maramba, 2002).

In a study conducted in an intensive care nursery in the city of San Francisco, Affonso, Bosque, Wahlberg and Brady (1993) reported that mothers of preterm infants were extensively interviewed to explore their reactions to the Kangaroo method of care. Eight mothers were interviewed who spent a minimum of four hours each day for six days per week during a period of three consecutive weeks holding their babies in skin-to-skin Kangaroo position. Some infants were on oxygen supplementation and some were not. The questions that were asked, explored the mothers thoughts about her pregnancy, hospitalization, labour and delivery. Findings from this study suggested an evolution in feelings of the mothers, which began as lack of control, guilt and pre-occupation with both the infants health and their own. In the first week mothers expressed the desire to be close to their babies, but did not feel "tuned in" to their infants, instead they focussed on the monitors, wires and alarms. In the second week, all mothers experienced a crisis and

wanted to be relieved from skin-to-skin contact. By the end of their second week, their increased sense of mastery in infant caregiving skills and knowledge of their baby was evident. During the third week, mothers were observed to be calmer. They verbalized more confidence in their ability to care for their infant. Mothers were very happy at that stage (Affonso et al.,1993). In that study, the loss that was reported by the mothers, which was exacerbated by delivery of a fragile premature infant, appeared to have softened by having one-to-one skin contact time. Mothers described the intimate physical and emotional closeness they felt with their baby in the Kangaroo position.

In another study, Neu (1999) reported that parents expressed ambivalence towards skin-to-skin contact in terms of yearning to hold their baby, as their babies were initially nursed in the intensive care nursery. Parents also expressed apprehension to do so. Although parents described how desperately they wanted to hold their infants, they also spoke of their fear of harming the infant. However, the intensity of the apprehension differed. All parents acknowledged being apprehensive, at least initially, when they held their infant in skin-to-skin contact. Parents also felt anxious about disconnecting tubing, as these infants were only discharged from the intensive care unit to a step-down nursery.

Another theme that surfaced from this study, was the need of a supportive environment, but with this too, parents differed. Some parents appreciated a supportive environment, but felt they would have practiced skin-to-skin care anyway, even if the personnel of the nursery were not supportive. Some parents felt that there was a lack of support and therefore, it was difficult to participate in skin-to-skin care (Neu, 1999).

Most parents also describe a special interaction that occurred between the parent and infant during skin-to-skin care. Parents described this feeling as intense connectedness. In addition to the intense connectedness expressed by parents, the special quality of the skin-to-skin interaction included active parenting. Videotaped segments depicted parents actively responding to their infants' needs during skin-to-skin care and speaking softly to their infants and stroking the infants' head when the room became noisy or if the infant became agitated (Neu, 1999).

Another study explored the perceptions and experiences of caregivers. This study (Kambarami et al. 2002) was conducted in Zimbabwe at Harare Central Hospital. The majority of the participants were using the Kangaroo care method for the first time. All participants said that they learnt about kangaroo care following the delivery of their preterm infant.

Kambarami et al. (2002) reported, that caregivers understood that the method was useful for keeping the infant warm, enhancing mother-baby bonding, for closely monitoring the condition of the baby and early detection of changes e.g. colour, breathing, choking and vomiting. Caregivers believed that it helped their infants grow, shielded them from infection, and allowed infants to be fed on demand. Mothers stated that babies carried on their chests liked the warmth coming from the mothers' chest. Mothers perceived that their babies were comfortable. Mothers also stated that their infants slept longer on the chest and tended to cry more when they were put down. They also perceived this method to be helpful as it cut down on hospital bills because they did not have to stay in hospital

for as long as they would have, if the baby was in an incubator. Mothers saw this as a cheaper method of care.

Mothers were reported to be apprehensive about the neonatal unit. They feared that the incubators did not work properly and that their infants may become too hot or too cold. They said they found nurses to be uncaring and this left them feeling helpless. Mothers staying with their infants, at this hospital, were not given meals and therefore, this in turn posed a lactation problem for the mothers. Mothers also felt that infants were dying unnecessarily. They complained that nurses were not sure if the babies had a feed or not and that nurses took a long time to replace naso-gastric feeding tubes. Two mothers did mention that there were too many preterm babies with too few nurses. Mothers also perceived the facilities for preterm infants to be inadequate.

All mothers preferred Kangaroo care and were satisfied with it, mainly because they could monitor their infants' condition closely and feed on demand as compared to CMC (Kambarami et al., 2002).

Mothers also verbalized that they knew what to do, should infants collapse or aspirate. They also acknowledged that a lot of information had been given to them in the Kangaroo unit. However, some mothers stated that it was difficult to sleep with their infants on their chest. Feeding was sometimes a problem, as they fed their babies using a cup and a spoon (Kambarami et al., 2002).

Most mothers said that they had continued with Kangaroo care at home and that most fathers were very supportive of their partners implementing KMC. One mother reported that her husband discouraged her from practicing Kangaroo care because he felt that the infant was too fragile (Kambarami et al., 2002).

Kambarami et al. (2002) reported in their study that grandmothers were very sceptical about this new method of care, which they had never heard of before. Some of these grandmothers felt that the mothers would injure the infants because these infants were very fragile and 'bony'. It is reported that some thought mothers were making excuses for not doing the routine household chores. Some grandmothers felt that it was a new way to get mothers back to work early, while some grandmothers praised the method when they saw the positive effects of KMC (Kambarami et al., 2002).

In this same study, mothers reported that they had experienced very mixed reactions of Kangaroo care in their communities. They reported that they had heard the following about it from friends and neighbours e.g. the baby was deformed or had AIDS and the community suspected mothers wanted to dump or kill their children. Some community members thought that mothers were using the chest to hide stolen property.
Kambarami et al. (2002) reported that on three occasions the police officers thought that mothers were hiding these infants on their chests because they wanted to dump their babies. However, one woman reported that people were generally supportive in her area where she lived.

Kambarami et al. (2002) reported that mothers perceived the community to be unsupportive and accusative of them whilst implementing this method of care due to the community's lack of knowledge on KMC.

A SOUTH AFRICAN EXPERIENCE

There appears to be only one study done in South Africa at Groote Schuur Hospital, by Hann, Malan, Kronson, Bergman and Huskisson (1999). They reported on their first controlled clinical trial with twenty eight low birth weight babies. This study was done to determine the effects of KMC on the growth of the infant, length of hospital stay and the duration of breast feeding. The infants in the experimental group received 1.9 hours of skin-to-skin care per day. The results of this study supported the findings of other studies viz. Colonna et al. (1990) and Whitelaw et al. (1988), where it was found that mothers were successful with lactation. A shorter hospital stay for LBW infants was reported by Charpak et al. (1997). In Cattaneo et al. (1998), it is reported that infants in the KMC group had better growth and the mothers were more successful with lactation. There was a significant increase in weight for infants receiving KMC, which is contrary to the results of the study by Roberts et al. (2000). The hospital stay for KMC infants was shorter by 2.5 days, which revealed statistically significant reduction in terms of the hospital stay. Significantly more mothers in the experimental groups were breast-feeding at discharge (Hann et al., 1999). These results are contradictory to the results by Roberts et al. (2000) who found that skin-to-skin contact produced outcomes equivalent to infants of LBW who had contact with their mothers through clothing (conventional cuddling care).

CONCLUSION

In non-human mammals the attachment process starts immediately after birth and can be easily disturbed. This may be true also for our own species. Promotion of body-to-body contact, between mother and baby during the first one to two hours after delivery has many benefits to the mother and baby. As discussed in this chapter the Kangaroo method of care allows for this early contact between parents and their infants with low birth weight. Research has shown that this skin-to-skin contact created a strong bond between mother and infant, improved the mother's lactation and improved the infant mortality rate.

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter describes and justifies the research methods used to fulfill the objectives of the study. Phenomenology as a research method is rigorous, critical, systematic investigation of phenomena. The purpose of phenomenological inquiry is to explicate the structure or essence of the lived experience of a phenomenon in the search for the unity of meaning, which is the identification of the essence of a phenomenon, and its accurate description through the everyday lived experience (Streubert and Carpenter, 1999).

According to Blumensteil (in Streubert and Carpenter, 1999) phenomenological method is "the trick of making things whose meanings seem clear, meaningless and then discovering what they mean".

In the phenomenological method, the approach is inductive and descriptive in its design. The descriptive research design incorporated a qualitative method of investigation. This chapter describes the research design, the sampling strategy adopted in the study, the methods of data analysis, issues regarding trustworthiness of the qualitative data, ethical considerations and limitations of the study.

Lived experience of the world of everyday life is the central focus of phenomenological inquiry. Schutz (cited in Streubert and Carpenter, 1999) described the world of everyday life as the "total sphere of experiences of an individual which is circumscribed by the objects, persons and events encountered in the pursuit of the pragmatic objectives of living". In other words, it is the lived experience that presents to the individual what is

true or real in his or her life. Furthermore, it is this lived experience that gives meaning to each individual's perception of a particular phenomenon and is influenced by everything internal and external to the individual (Strubert and Carpenter, 1997).

RESEARCH DESIGN

This study described the experiences of the carers and thus a phenomenological approach was used. The focus of phenomenologic inquiry is what people experience in regard to some phenomenon and how they interpret those experiences (Polit & Hungler, 1995). According to Field & Morse (cited in Clifford, 1997) "phenomenology guides one back from theoretical abstraction to the reality of lived experience," leaving the phenomenologist free to ask the question
" What is it like to have a certain experience?" This research described the lived experiences and perceptions of those carers who had implemented KMC.

POPULATION AND SAMPLE

POPULATION

The population is the "total possible membership of the group being studied"(Polit & Hungler,1997). In this instance the population was all mothers who had babies below 2000 grams who delivered at the R. K. Khan Hospital.

SAMPLING

In this study the researcher used purposive/theoretical sampling, a sampling technique used in qualitative research in which the researcher chooses the sample on the basis of known characteristics or experiences (Clifford,1997). There are however limitations to the use of non-probability samples. Polit and Hungler (1995) state that sampling in this subjective manner provides no external, objective method for assessing the typicalness of the selected subjects. Non-probability samples are rarely representative of the researcher's target population.

In this case the eligibility criteria were:-

- The parent/s or carers who were implementing KMC.
- The carer must have had a recent memory of the experience and therefore only those who discontinued KMC two weeks previously were included in the study.
- The baby must have been stabilized (i.e. where the vital signs are within normal limits, is not dependent on oxygen and/or intravenous fluids and no visible malformation or abnormality exists) and where KMC had been adopted as the method of care for more than one week.

SAMPLE SIZE

Polit and Hungler (1995) state that for qualitative research a sample size should be determined on the basis of informational needs. With a fairly homogeneous sample, fewer than ten cases may suffice. Typically, phenomenological studies involve a small number of study participants often fewer than ten. The nursery at the R. K. Khan Hospital

admits on average 26 LBW babies per month. Prior to allocating infants to KMC, infants were assessed thoroughly for the following: -

- A stable heart rate.
- Regular breathing (no apnoeic attacks).
- Maintenance of body temperature.
- Maintenance of oxygen levels.
- Minimum birth weight of 1000 grams.

According to Morse (cited in Polit and Hungler, 1995) in a qualitative study, the sampling plan is evaluated in terms of adequacy and appropriateness. According to Polit and Hungler (1995) adequacy refers to the sufficiency and quality of the data the sample yields. The researcher intended to use a minimum sample size of five respondents. However new information was given and sampling continued until saturation of data were reached. (Clifford,1997). Therefore a total of ten respondents were interviewed.

DATA COLLECTION

Data were collected by means of face- to- face interviews over a five month period, between February 2003 to June 2003. Interviews were conducted using an unstructured interview guide (See Annexure F). In a focused or semi – structured interview, the interviewer used a list of areas or questions that were covered with each respondent. (Polit & Hungler, 1995).

A tape recorder was used to tape the interviews. For Zulu speaking respondents, a Zulu speaking assistant was used to pose the questions. The assistant had to be trained and taught to be consistent with the questions to every respondent. The tape recorded interviews were then transcribed verbatim. To verify the data obtained by the assistant, a second Zulu speaking person listened to the tape recording and checked the response on the transcription sheet.

In addition to the above the researcher ensured that the following occurred: -

- that a quiet room was prepared with no interruptions.
- started with pleasantries.
- introduced the assistant, explained the aim of the study and promised confidentiality.

The first interview was conducted in Zulu, by a Zulu speaking assistant. This interview did not elicit the in-depth information due to lack of probing, which was required by the researcher, despite having given prior training to the assistant. The other nine mothers were interviewed in English by the researcher. A total of ten interviews were conducted for this study.

THE INTERVIEW GUIDE

The interview guide consisted of two sections, Section A for demographic data and Section B had nine open ended questions (See Annexure G), dealing with the experiences and the perception of support of carers. The researcher's aim was to encourage participants to talk freely about all the topics on the list and to record the responses.

Probing questions were used to clarify the meaning of responses and to illicit more information. The researcher made field notes during and immediately after the interview.

According to Burns & Grove (1997), interviewing is a flexible technique that can allow the researcher to explore greater depth of meaning. There is a higher response rate to interviews than to questionnaires, leading to a more representative sample. Several advantages have been identified in relation to the interview. Interviews can be administered to people who cannot read or write. Misunderstanding and misinterpretation of words are minimized. Interviewers can ensure that all questions have been answered and when in doubt interviewers can reassure and encourage respondents to answer with verbal and non-verbal prompting.

DATA ANALYSIS

The interviews were transcribed verbatim. The researcher analyzed the transcriptions by reading and re-reading the scripts to seek meaning in the data. Data were grouped into themes/categories. An independent coder was used to ensure trustworthiness. Analysis of the data were done manually. The researcher coded the transcriptions as suggested by Morse (1994) by reading each line of the narrative and separating the text of each interview into sections. Each section was labelled with a code word or phrase that conveyed the meaning of the section. The codes with a common meaning were grouped into subthemes, and the subthemes were combined into main themes.

TRUSTWORTHINESS OF QUALITATIVE DATA

According to Lincoln & Guba (cited in De Vos, 1998) and Mouton (2001), Guba's approach to ensure trustworthiness addresses ways to ward off biases in the results of qualitative analysis. Four strategies are proposed to ensure trustworthiness:- credibility, transferability, dependability and confirmability.

Credibility

Although the participants were not known to the researcher, the researcher tried to establish a relationship of trust by frequently visiting them in the postnatal ward.

According to Mouton (2001), credibility is achieved through the following procedures:

- Prolonged Engagement – The researcher initially intended to conduct an in-depth interview with a minimum of five participants and until data saturation occurred. Whilst transcribing the interviews the researcher observed for saturation of data. So the researcher stayed in the field. Saturation of data were reached after the eighth interview. This was confirmed by interviewing two more mothers.
- Persistent Observation – The researcher consistently pursued interpretations in different ways, in conjunction with a process of constant and tentative analysis. The physical environment of the KMC ward was observed intermittently i.e. the posters, heaters and benches. As the researcher conducted the interviews the emotional condition of the mother was observed. This included her facial expression, her mood, her non-verbal communication, her attire and the manner in which she responded to her infant.

- <u>Triangulation</u> – Investigator Triangulation: The researcher analyzed the transcriptions of the participant's interviews. So did the independent, external coder who analyzed the same transcription and arrived at similar interpretations.
- <u>Referential Adequacy</u> – This was done by audio taping the interviews with respondents.

Transferability

This refers to the extent to which findings can be applied in other contexts or with other respondents. In qualitative research, all observations are defined by the specific contexts in which they occur. In a qualitative study the obligation for demonstrating transferability rests on those who wish to apply it to the reader of the study (Mouton, 2001).

The findings of this study could be applied to other urban hospitals and community settings.

Dependability

Dependability refers to the stability over time and conditions (Mouton, 2001). According to Guba's approach as cited in De Vos (1998), dependability is the strategy in which the researcher attempts to account for changing conditions to the phenomenon chosen for research, as well as changes in the design created by increasingly refined understanding of the setting.

This current study depended on the stability of a consistent and motivated staff in the neonatal unit to promote KMC.

Confirmability

Confirmability, is focused on whether the results of the research could be confirmed by another and places the evaluation on the data themselves (De Vos, 1998). Previous research studies on KMC have confirmed some of the positive findings of KMC.

ETHICAL CONSIDERATIONS

Written permission was sought from the following individuals/authorities: -

- The University of Natal's Ethics Committee (See Annexure I).
- KwaZulu Natal, Department of Health (See Annexure A). Verbal consent was obtained.
- Carers – mother and/or father and/or grandparents and/or mother's sister and/or other (See Annexure B).
- R.K.Khan Hospital – Deputy Director of Nursing (See Annexure C and K).
  - Medical Superintendent (See Annexure D and J).
- Sister- in- charge of nursery (See Annexure E and L).

Subjects had a right to refuse to participate and were told that they may withdraw at any stage of the research if they wished to do so. Withdrawal would not in any way compromise their, or their babies' care. Subjects were assured of anonymity and confidentiality. The participants were never referred to by name during the interview.

Transcribed interviews were given a numerical number. Participants were fully informed about the study prior to obtaining consent. Subjects were not harmed physically or psychologically.

LIMITATIONS OF THE STUDY

All research has potential limitations and it is important that the researcher acknowledge these. Some of the limitations of this study were language barriers, researcher bias and respondent bias.

LANGUAGE

Language was sometimes a problem between the researcher and the participants. When the need arose the researcher used her limited command of Zulu while participants tried to communicate through the English medium. A Zulu speaking assistant was used once to conduct the interview. This must be recognized as a possible limitation in communication because the quality of questioning might have not been the same as that of the researcher. In this way valuable information may have been lost. On face value it appeared that the participants knew the English language, but when the interview got to a depth, the researcher realized that some participants did not understand the question. This was when the researcher used colloquial Zulu.

RESEARCHER BIAS

As human beings, researchers cannot be completely neutral because they carry with them political, religious and racial attributes. The researcher must be aware of researcher bias

and acknowledge that one cannot be value free. The researcher used bracketing to become aware of her own feelings regarding the subject.

RESPONDENT BIAS

Participants might have seen the researcher as an authority figure and might have felt obligated to cooperate. To avoid this the researcher explained the purpose of the study and the fact that their participation was voluntary.

The researcher also emphasized that they respond as honestly as possible. When participants feel threatened they tend to respond with what they think the researcher wants to hear.

This chapter provided an overview of the research methodology, including the research design, the sampling technique, the method of data collection, limitations of the study and finally the ethical considerations that were observed by the researcher.

CHAPTER FOUR

DATA ANALYSIS

INTRODUCTION

The purpose of this chapter is to present the analysis and findings of the study in respect of the study objectives. This chapter provides an analysis and discussion of data collected through the use of interviews. The unstructured interview guide was used as the primary source of data collection for the qualitative methodology which was collected over a period of five months. The demographic data was obtained from a self-administered questionnaire (Section A). When participants were unable to fill in Section A of the instrument, the researcher assisted them to do so. Statistical data cannot explain the experiences and perceptions of carers implementing KMC, therefore the interviews provide a narration of the lived experiences i.e. both positive and negative and the perceptions of the subjects implementing KMC. A total of ten mothers who were practicing KMC were interviewed for this study. After interviewing the eighth participant the researcher felt that saturation of data had been reached. This was confirmed by interviewing two more mothers. The demographic data and the interviews are discussed in this chapter. See Annexure H for a transcript of an interview.

FINDINGS

DEMOGRAPHIC DATA

Although the self-administered questionnaire made provision for other categories of caregivers e.g. father, grandparent and others to be interviewed, in this study all

participants interviewed were mothers. Therefore in this study caregivers will be referred to as mothers.

The ages of the mothers ranged from twenty years to thirty seven years. The parity of the mothers ranged from one to three. One participant had a history of preterm labours, hence preterm babies. The babies' ages ranged from five days to thirty six days whilst being "kangarooed" at the time of the interview. The mother's educational level ranged from grade one to grade twelve. Of these, nine participants had an educational level which ranged between grade eight to twelve and only one mother had an educational level which ranged between grade one to grade seven.

Table 1: Age of Mothers (N = 10)

	Number	**%**
20 –25 years	6	60
26 –31 years	3	30
32 – 37 years	1	10
Total	10	100

Table 2: Educational level of Mothers (N = 10)

	Number	**%**
Grade 1 – 7	1	10
Grade 8 – 12	9	90
Total	10	100

Ninety percent of the participants had received high school education and this may have an impact on their understanding or any new phenomena taught i.e. the procedure of KMC. Clark (1992) pointed out that there are internal predisposing factors in every client that enhance or deter motivation for healthy behavior. Examples of these predisposing factors are the client's knowledge about health and illness and the client's attitudes, values and his/her perceptions that influence behavior.

EXPERIENCES OF KMC BY MOTHERS

The following themes and sub-themes were identified: -

- Feelings
- Doubts and fears
- Management of the mothers
    - By others
    - By self
    - Advice to others
- Support
    - From health personnel
    - From other patients
    - From family members
- Mother's commitment to help her newborn
- Benefits of KMC as perceived by the mother
- Mother's response to the baby's behaviour after KMC
- Problems encountered

- Relative to the baby
- Relative to the mother
- Relative to culture

- **FEELINGS**

Participants voiced their feelings before starting the procedure of KMC as being afraid, anxious, confused and some felt this procedure was going to be tedious and a waste of time. Participants can be quoted as

> *"I was so afraid of KMC as it was the first time I was seeing it being done".*

This feeling is similar to a feeling of apprehension felt by parents who were practicing skin-to-skin care soon after their babies were ventilated (Neu, 1999).

Two participants viewed KMC as "a waste of time", before implementing the procedure. They were under the impression that this alternative method of caring for a low birth weight infant was just going to take up time and at the end the results were going to be unfavorable. Two participants stated:

> *"at first I was so confused, I was just wondering how is this going to help my baby".*

- **DOUBTS AND FEARS**

The main doubts and fears expressed related to whether KMC would work. The interviewer asked, " did you have any uncertainties or doubts about KMC" Mothers promptly responded

> *"yes, I did have a doubt, I doubted whether KMC would work".*

Seven out of ten mothers voiced this doubt. The other three subjects might have not used the same words, but they also felt worried and anxious as they did not know what to expect. One participant can be quoted as

> *"I was thinking how am I going to do this. I was so scared, because baby is so small. I was so scared".*

Three out of ten mothers doubted whether their babies would become hypothermic, as the babies were being nursed naked on their chest. One participant stated

> *" although the nurses were monitoring the baby's temperature on a regular basis, I was still afraid that the baby may get cold".*

Studies by Christensson et al. (1998), Kirsten et al. (2001) and Ludington-Hoe and Swinth (1996) agree that the infants' skin and core temperatures remain within the normal physiologic range during maternal skin-to-skin contact. They elaborate further that a mother who practices KMC is able to maintain her infant's temperature within a narrow range, usually slightly higher on average than that recorded in the incubator. Conversely, Acolet et al. (1989), argue the difference in body temperature of babies nursed in an incubator and those nursed with KMC in skin-to-skin contact did not reach statistical difference, however, the skin temperature was well maintained during skin-to-skin contact even in infants as small as 1000 grams, in a warm room, with a hat and

blanket. Therefore, Acolet et al. (1989) is of the opinion that an infant as small as 1000 grams with stable breathing can enjoy skin-to-skin contact with the mother with no evidence of cold stress.

Two mothers feared that their babies were too small and therefore, they perceived that there was a chance of the baby sliding down the mother's chest and falling. One mother described her fear as

> *" initially when I had baby on me, I felt she is going to fall. I kept my hand under her all the time".*

This mother expressed that she continually supported the baby by placing her hand over the Kangaroo pouch and under the baby's buttocks, to prevent the baby from falling. The mother can quoted as

> *"Although she was uncomfortable and I was uncomfortable I made sure that my hand was there supporting her".*

One mother was so afraid that her baby would suffocate that she continuously attended to the baby's face, just making sure that the head was turned to one side so that the nostrils were patent and he was free to breathe. This mother stated

> *"I was trying to push his head to one side and because of his nose I was afraid, I carried on putting his head onto one side".*

- ### MANAGEMENT OF THE MOTHERS

- ### BY OTHERS

Six out of ten mothers reported that the nursing staff of the nursery supported them through KMC by creating a supportive environment. One participant acknowledged

> *"I wouldn't have gone through it if it wasn't for the Sisters".*

Another participant can be quoted as

> *"the Sister was very approachable".*

Neu (1999) and Kirsten et al. (2001) emphasize that a supportive environment is the cornerstone for successful KMC. Lack of appropriate support from the health care professionals may influence strongly some caregivers to discontinue KMC.

All the participants acknowledged receiving emotional and practical support on KMC before practicing it. Six mothers received information in the form of a talk and demonstration strategy. Other participants verbalized that the procedure was explained to them and this was enhanced by the use of charts and pictures of KMC. When participants were asked if they understood the procedure, all participants replied that they had understood and that the information was "helpful" to them. Rosenblum and Andrews (1994) postulate that environmental demands have a direct impact on maternal behavior. Particularly when confronted with an unpredictable environment, mothers are less able to maintain effective, stress-buffering, maternal-coping mechanisms, which can preserve a stable attachment relationship and permit normal infant development.

- **BY SELF**

Six participants expressed that they had coped with KMC. One participant had implemented KMC with one twin, but she was unsure if she would cope with both twins on her chest. However, she presented with a positive attitude to learn. Despite a conducive learning atmosphere instilled by staff of the nursery, one participant was still afraid of initially attaching the baby onto her chest. Two participants mentioned that they were assisted by the staff to attach the baby, whilst one mother noted that another mother/carer assisted her to attach the baby.

- **ADVICE TO OTHERS**

Only after mothers had practiced KMC and were feeling confident about their practice, did they feel they were able to give some advice to the other mothers who were beginning with the programme of KMC. Five out of ten participants stated

> *"the others must try it, it makes the baby grow faster".*

Other participants stated that if they had to advise mothers who were beginning to implement KMC, they would tell them

> *"don't be frightened just be positive, it is very good, you will find that it works".*

- **SUPPORT**

- **FROM HEALTH PERSONNEL**

Support was given to carers most often by the nursing staff prior to commencing KMC and during the procedure. Some carers also acknowledged that doctors and counsellors had given support in the form of encouragement, and their questions were answered

which made KMC more acceptable to the participants. Participants expressed that nursing personnel continuously reinforced KMC, whilst they were still in the nursery. Participants reported that nursing personnel stated

"don't forget to do KMC, are you doing it?" and "come on now do your KMC".

The above quotes can be compared to the words of the authors as cited in Colonna et al. (1990), where they describe KMC as a sort of intensive care which needs no sophisticated equipment but a great amount of dedicated and enthusiastic support from health personnel.

- **FROM OTHER PATIENTS**

Eight out of ten participants proclaimed that one common, positive and dominant factor was the genuine support received from other patients. All the participants claimed that either they were supported and assisted by other patients or that they supported and assisted others. Participants voiced that KMC mothers/carers would relate a story about the child's progress in weight, and as the story unfolded, those mothers that were listening would become more confident and hopeful that KMC would work. Four participants who were practicing KMC can be quoted as saying to another mother who had just begun KMC

"try it, it works".

KMC mothers were able to speak to each other freely and share their experiences. The KMC ward was designed in such a way that there were no curtains/walls that separated patients, so much so, that one mother was accessible to the other. It can be noted that during the interviews, some of the participants shared with the researcher the positive

effects of KMC which were experienced by other patients for e.g. one patient can be quoted as

> *"the other patient's baby didn't gain weight, but when she practiced KMC the baby's weight just started going up and up. I saw the mother was so excited and when she returned to the KMC ward she told all the other mothers that this KMC worked".*

One participant also expressed that other patients assisted to attach the baby to the chest, until the mother becomes proficient herself for example one patient can be quoted as

> *"Mildred (another patient) helped me to put the baby on".*

Another mother can be quoted as

> *"I untie myself and the other mother helps me. I also help the other mother".*

- **FROM FAMILY MEMBERS**

From the participants interviewed, all of them were supported by a member of their family. Some participants had two or more members in the family to support them. Five participants were supported by their husbands. Other participants received support from either a sister-in-law, a mother, a grandmother, parents or a daughter.

One participant stated

> *"my mother is not very happy, because she says that my baby must be carried at the back not on the chest".*

This statement can be compared to and is similar to a study done in Zimbabwe and reported by Kambarami et al (2002), where it was found that grand-mothers were very sceptical about this new method of care, which they had never heard of before.

□ MOTHER'S COMMITMENT TO HELP HER NEWBORN

Five participants expressed an interesting perception to maternal care. They expressed that they were prepared to do anything for their baby in order to help the infant survive. Mothers can be quoted as saying

> *"I wanted to do what was good for my baby, I wanted my baby to gain weight, I was prepared to do anything for the sake of my baby's health".*

The majority i.e. eight participants wanted the baby to gain weight and they were prepared to help the baby. The mother understood that she was the primary caregiver, and she was willing to do whatever it takes to fulfill this role. This can be found in the studies by Colonna et al. (1990) and Bergman and Jurisoo (1994) when they make it clear that the mother should be provided with any information to empower her to care for her child. Arising from this caring for their infants, mothers become empowered and confident in caring for their infants.

Ludington-Hoe and Swinth (1996) acknowledge that parents are partners in the nursery and should take an active role in the care of their infant. With caring, maternal confidence and closeness to the infant are enhanced, as is the resolution of the grief process related to premature birth. Whitelaw et al. (1988) and Sloan et al. (1994) are also in agreement that mothers become empowered and confident in the care of their infants and this in turn allows for an earlier discharge.

❑ BENEFITS OF KMC AS PERCEIVED BY THE MOTHER

Eight out of ten participants stated that KMC promoted the bond between mother and child. In addition to this, these mothers mentioned that they felt the intense connectedness to their child. Neu (1999) noted that most parents described a special interaction where parents felt this same connectedness that occurred, between the parent and infant during skin-to-skin holding. One mother can be quoted as

"ah! the bond, the feeling, I can't explain how special it was".

Eight mothers felt that their babies had gained weight, soon after practicing KMC, and four participants stated that KMC worked. Although this was not one of the questions in the interview guide, i.e. the researcher did not ask whether KMC had worked for them, participants did not fail to mention this and surprisingly, they mentioned it in the same way i.e. "KMC worked". Mothers can be quoted as

"KMC worked for me" or "it really works".

Four participants perceived their babies to be feeding well. Although most infants had a problem initially at the commencement of KMC, they soon settled and adjusted to feeding. Colonna et al. (1990) cited, being frequently exposed to the stimulation coming from the breast greatly improves the suckling and swallowing ability of the tiny newborn. Four participants expressed that the babies were wanting to suck on their nipples whilst in the Kangaroo position.

Babies were initially transferred to incubators soon after the delivery, therefore all mothers initially nursed their babies in an incubator and KMC followed after approximately one week. During this phase, two mothers expressed how they yearned to

hold their babies. Neu (1999) also reported how mothers yearned to hold their infants while infants were still in intensive care units on ventilators. One mother can be quoted as

> *"he was ill, but I could feel he longed for me to touch him. He was crying and when I did that, he just kept quiet".*

Soon after KMC was implemented mothers reported having found a difference in the baby's behaviour as compared to the behaviour in the incubator. Some of the observations that mothers made on their babies and reported, which were explicitly stated to the researcher included the following: -

- Cried less during KMC.
- More relaxed during KMC.
- More active during KMC.
- Babies responded to mothers.

Four mothers perceived that their babies cried less in KMC, whilst three participants expressed that their babies were more relaxed during KMC. Whitelaw et al. (1998) reported that on average LBW infants, nursed in skin-to-skin contact at six months, cried for thirteen minutes per day less than the group with normal handling. Many parents would rate this a valuable advantage. Regular skin-to-skin contact may give the infant security and tranquility, which is reflected in less crying subsequently (Whitelaw et al. 1988). A similar finding is reported by Anderson (1989) in an article on all studies that were conducted in Western Europe. She wrote that she was amazed when she observed the way the infants were totally relaxed and the characteristic look of peace and bliss on the infants' faces. A study done in Sweden, reported that all neonates fell asleep and

stayed asleep. A tendency towards more sleeping and less crying was observed (Karlsson, 1996).

Ludington-Hoe et al. (1994) documented more sleeping and less crying as one of the observations made by the researchers. In their study the predominant behavioural characteristic of Kangaroo care was that the infants were relaxed and content when they were being held.

According to Anderson (cited in Ludington-Hoe and Swinth, 1996) crying, the highest behaviour state, is a detrimental state for any infant because it impairs lung functioning, jeopardizing closure of the foramen ovale, increases intracranial pressures and initiates a cascade of stress reactions in the infant. Throughout the infant's hospital stay, all distress cues should be minimized by vigilant observation and timely intervention to remove the source of discomfort.

Bauer et al. (1996) is in agreement that kangaroo care has a comforting effect on infants. Ludington-Hoe and Swinth (1996), elucidate that extra uterine containment is similar to in utero containment, this effectively reduces random motor activity. In maternal Kangaroo care, containment is provided by enclosure between the mother's breasts. This containment evokes quiescence and decreased arousal (Ludington-Hoe and Swinth, 1996). Relaxation is a condition in which muscles become less tonic, and visible signs of tension disappear. During relaxation, respiratory muscles become less rigid, allowing air

to circulate more freely throughout the lung and this allows the chest wall to become more accommodating (Ludington-Hoe and Swinth, 1996).

Two participants perceived their babies as being more active in the Kangaroo position as compared to being in an incubator. Colonna et al. (1990) emphasizes that the infants overall psychomotor performance is improved by this method of care. They have documented with videotapes the astonishing maturation of tone, reactivity and spontaneous motor activity of the tiny, premature babies a few days after KMC. Colonna et al. (1990) are of the opinion that it is these lively messages coming from the infant, which increases the mother's interest and involvement in the nursing of her child. The overall effect of these early, profound and prolonged interactions is a great strength in the mother-infant bonding process.

Two mothers perceived their infants as responding to them when spoken to. This is also stated by Gale, Frank and Lund (cited in Ludington-Hoe and Swinth, 1996). They state that no studies have examined the effects of Kangaroo care on the infant's attention and interactional capacities, but there are several reports of clinical observations that were made while Kangaroo care was being implemented. One of these reports noted that infants that were born whose gestational age was more than thirty weeks were found to make an active attempt to interact with the parent (Ludington-Hoe and Swinth, 1996). Some infants have been observed extending their heads to get into the en-face position with the parent providing Kangaroo care, gazing intently at the parent, and maintaining the gaze for exceptional lengths of time (Ludington-Hoe and Swinth, 1996).

In an earlier study, Bosque et al. (1988) noted that infants had a lower percent of total sleep in the Kangaroo position than in the incubator. Infants in that study experienced more quiet sleep than active sleep. Kangaroo care reduces the amount of time the infant spends in active sleep with a concomitant increase in the amount of time spent in quiet, regular sleep (Ludington-Hoe and Swinth, 1996). In this study four mothers perceived their babies to have slept better once they were nursed in Kangaroo positions. Mothers exclaimed

"she can sleep for hours on me".

Als (cited in Clifford and Barnsteiner, 2001) believed that infants communicate through behaviour that is directly affected by the environment. In addition to this, Als (in Clifford and Barnsteiner, 2001), claimed that individuals' behavioural development is divided into five sub-systems i.e. motor, state, attention/interaction, self-regulatory and autonomic. Preterm infants are unable to balance their subsystem. Caregivers are able to respond to the infant's cues and behaviour. Kangaroo care is one way of helping preterm infants achieve this self-regulation. Once this is achieved, developmental organization is exhibited when vital signs are stable i.e. there is reduced purposeless movement and flailing. Preterm infants spend the majority of their time in an active sleep state. During Kangaroo care the predominant sleep state is quiet sleep, thereby decreasing the amount of time an infant is in active sleep. (Clifford and Barnsteiner, 2001).

Two participants perceived that their infants felt good when they were touched and one participant perceived that her baby responded to her by smiling and opening the eyes.

One mother recalled

"with KMC I could touch him, I played with his hair and he felt good about it".

- **MOTHER'S RESPONSE TO THE BABY'S BEHAVIOUR AFTER KMC**

Before KMC, it was noted that the participants stated that there was a feeling of apprehension. Soon after KMC was implemented, the mothers were very comfortable with it. All mothers acknowledged feeling this deep sense of pleasure, elation and excitement. These feelings were perceived only after the mothers witnessed the benefits of KMC. For most mothers the dominant and positive factor was the weight gain in these infants. The mothers began to get very excited when they saw that the baby was gaining weight.

Mothers can be quoted as

"I was excited when I saw her gained weight",

Another mother exclaimed

"KMC was such a pleasure, the weight gain!".

Previous studies, Legault and Goulet (1995), Cattaneo et al. (1998), Clifford and Barnsteiner (2001) and Kambarami et al. (2002) also found KMC to be acceptable to mothers. Legault and Goulet (1995) reported that 73.8% of the mothers in their study preferred the Kangaroo method. A large proportion of the mothers indicated this

preference because their infants were closer to them and they could touch them more easily.

- **PROBLEMS ENCOUNTERED**

- **RELATIVE TO THE BABY**

Two participants complained that their babies initially did not suck well. Studies do comment on the success of lactation, and the increased duration of breast feeding (Colonna et al., 1990, Hann et al., 1999, Anderson, 1989 and Whitelaw et al., 1988). Two other studies briefly reported the following, Mondlane et al. (1989) reported that thirty seven percent of babies in their study had poor sucking. In this case the infants were fed by gavage. Colonna et al. (1990) reported that some mothers were not willing to feed their babies frequently if the baby's sucking was poor.

- **RELATIVE TO MOTHER**

One participant reported that initially during KMC, at the onset of implementing KMC she found it difficult to secure baby onto her chest. During this time she was assisted by nursing personnel and other patients who were implementing KMC. She reported that she needed to practice and with time she also became competent, like other mothers.
One participant complained that she was perspiring profusely when she entered the nursery and to attach baby onto her chest made the perspiration worse. She found this very uncomfortable. She went on to report, that when she was transferred to the KMC ward this problem became more bearable. She was reassured by a doctor and a nursing sister in the nursery that perspiration posed no threat to the baby.

Gale et al. (1993) draws attention to the difficulties that were experienced by the parents, one of the problem being perspiration. The authors did not elaborate further as the focus of their study was to explore the effects of skin-to-skin contact on the number of visits by parents, the attachment and the care given by substance-abusing mothers.

Two participants expressed concern about the health of the mother. One mother can be quoted as

"when does the mother get time to rest".

Another mother stated that she felt too exhausted to care for her baby as she felt she had no time to recover from the delivery. The participant explained that she had a Caesarean section and she could still feel the tenderness around the wound. This made KMC uncomfortable for her.

- **RELATIVE TO CULTURE**

One participant expressed that at the onset of the implementation of KMC she really did not feel happy to practice KMC because her mother had taught her something different. With this participant's culture the norm is that babies are usually carried on the back not on the mother's chest. Colonna et al. (1990) mentioned that the LBW babies were placed on the mother's chest and secured by a cotton cloth called a "capulana". This cloth is used by the Mozambican women for carrying their babies on the back. This study was undertaken in a Central Hospital of Maputo in Mozambique. This practice of carrying the baby on the mother's back may be found in other African countries as well as South Africa.

SUMMARY OF RESEARCHER'S FIELD NOTES

Before and during the interviews the researcher observed that, the babies were clad only in a diaper and a cap. His or her naked chest and flexed limbs were positioned against the mother's bare chest, between her breasts and inside of her clothing. The infant's neck was slightly extended, this was to prevent apnoea.

Nine out of ten mothers used hospital gowns to clad themselves and a "Kangaroo pouch" was used to secure the baby. The "kangaroo pouch" was a special tie made from ordinary thick cotton fabric which was thrown into a double layer and stitched together. These Kangaroo pouches were made by the hospital's laundry staff. It measured +-35 cm in length and +- 43 cm in width and it had two strongly made ribbons sewn on either side of it. The ribbons are used to form a strong knot at the back of the mother.

Subjects were very willing to participate in this research study. They felt free to volunteer information which was known to them and which was required by the researcher. Three interviews were conducted in the participants' homes and the other seven interviews were conducted in the postnatal ward. It was observed that the participants varied in socio-economic status.

Whilst the interviews were being conducted the researcher observed some mothers carrying their babies in the Kangaroo position, others were feeding their babies and some mothers held their babies wrapped in a blanket. Not all mothers practiced continuous KMC, some mothers practiced KMC intermittently which was still acceptable to the staff of the nursery. During the interviews it was noticed that some mothers were grooming

their babies and others were talking to their babies. The interviews were conducted in a room prepared by the researcher, unfortunately it was not possible to use the same room for all the interviews. The researcher had to use any room which was available at that time as patients' needs were a priority.

Kirsten et al. (2001) draw attention to the facilities required for KMC and it was noted that a recliner or rocker with a footstool should be provided for the mother. It must be pointed out that the participants sat on long, hospital benches which are hard and uncomfortable. Partners are not allowed to stay with the mother, however they are allowed during specific visiting hours.

CONCLUSION

Initially when mothers entered the KMC program, it is evident that much fear, anxiety and apprehension was experienced. Their main doubts related to whether KMC would work. Mothers felt this way because KMC was a new method of care, something they had never seen or experienced before. Small, naked babies being nursed on the mother's chest frightened the mothers. Despite these feelings, mothers adopted a positive attitude to learn, and did whatever they could to assist their babies back to health. The medical personnel stood as a pillar of strength in helping mothers to achieve this goal. Once the mothers were confident about practicing KMC, they supported and helped other mothers who were starting the program. The support and assistance given by other patients must be highlighted, as every participant mentioned this. In this study, the majority of mothers mentioned mostly positive feedback about KMC and they verbalized how pleasant their

experience was. The mothers also perceived that their babies' behaviour had also changed after implementing KMC. The participants felt that their babies enjoyed KMC as well.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

This chapter provides conclusions and recommendations from the findings drawn from the present study. The rationale for conducting this research arose out of a professional obligation to educate others i.e. students in training and registered midwives on this new initiative. KMC is fairly new in KwaZulu Natal and at the R K Khan Hospital. The objectives of this study as stated previously in chapter one, were to determine and describe the perceptions of the carers for the preparation of KMC, to determine and describe the experiences of these carers who have implemented KMC and to determine whether carers received support during KMC. In doing so the researcher identified the sources of the support.

These objectives were achieved by the use of the phenomenological approach. The researcher used non-probability samples by means of purposive/theoretical sampling technique. Data were collected by means of face-to-face interviews. Ten participants were interviewed. The communication between the researcher and the participants was sometimes hindered due to language barriers. This must be considered as a limitation.

The main findings of this study are as follows: -

DOUBTS AND FEARS

The doubts, fears and uncertainties must be continuously watched for and dealt with by health personnel. This can be done by reassuring the parents. In this study there was this

common feeling amongst mothers, i.e. of being afraid and anxious prior to the commencement of KMC. Some mothers felt this way because KMC was new to them and they had never seen it being practiced before. Most of the mothers doubted whether KMC would work, as they had never heard of KMC before.

MANAGEMENT BY SELF

This approach is in keeping with attempts to humanize care, which nurses advocate in high-technology departments. KMC can be practiced in all neonatal units, especially at Primary and Level Two (District, Secondary or Regional Hospital) institutions where incubators are scarce or absent. KMC may be seen as a low technological intervention, but it is in fact "intensive mother-infant care". It is a method which nurses and parents can use with confidence.

SUPPORT BY HEALTH PERSONNEL

From the information volunteered by the participants it became clearly evident that the health care team supported and managed the mothers to initiate and maintain KMC, so much so it must be emphasized that this needs to continue for this method of care to be a success. As the study revealed that family members especially the partners/husbands also supported the mothers during KMC. These significant members of the family must be more involved and integrated into the process of Kangaroo care.

MOTHER'S COMMITMENT TO HELP HER NEWBORN

There is no doubt that KMC is very acceptable to mothers, providing mothers with a satisfying role in the care of their small infants. All the mothers agreed that the procedure

of KMC was adequately explained to them by the health care personnel. KMC instilled confidence in the mothers once they were proficient. Most mothers wanted their babies to gain weight and they expressed this intense need of wanting to help their babies. It is believed that KMC does make a difference in terms of more active involvement of mothers with their preterm infants, the maternal-infant bonding and the faster growth of the infant. All the mothers felt that KMC helped their babies to grow faster.

THE SPECIAL BOND FELT BY THE MOTHERS

Kangaroo method of care allows for this early contact between parents and their infants and encourages further contact between them. This study found that mothers felt a special closeness to their LBW infants. The mothers voiced how they enjoyed the experience of holding their babies in skin-to-skin contact. The health care team instilled patience in mothers and encouraged them to practice KMC which must be sustained. The physical space in the nursery should stimulate the need for this type of closeness between parents and infants. The father as much as the mother should have the opportunity to hold their infant. After the mothers practiced KMC they perceived a positive change in the baby's behaviour. All the mothers preferred KMC and felt their babies were more comfortable being nursed in the Kangaroo position as well.

RECOMMENDATIONS

Based on the findings and conclusions derived from this study the following recommendations appear to be warranted: -

- **For Nursing Practice**

Midwives and other health personnel need to be more aware of the apprehension, doubts and fears that mothers may have prior to the commencement of KMC. Health personnel have supported mothers through this process but they need to continue doing so to alleviate these negative feelings that mothers may have. In doing so KMC would be successful to both, the mother and the institution. For mothers to practice KMC, they need to be comfortable, hence the KMC ward needs to be adapted to the comfort of the mother. In this study mothers were found to be sitting on long, hard benches which is uncomfortable when feeding. These benches can be replaced by comfortable padded chairs, with a backrest for support to the mother's back.

A discharge protocol strategy can be formulated. Parents must be taught that KMC needs to be continued at home. If mothers can cope with caring for a LBW infant at home and if they have access to health care, then the mother and infant can be discharged from hospital. However, if a mother or infant does not fulfill these criteria, the discharge must be delayed until the infant has gained a specific weight and is feeding adequately. Preparation of the family prior to discharge can also be incorporated into this protocol.

A follow-up after discharge at the nearest health care facility must be done within three days after discharge from a hospital and thereafter weekly or two weekly depending on the progress of the infant and the mother's ability to cope with the infant at home.

- **For Nursing Education**

KMC offers many advantages to the infant and it is therefore an important topic for practicing midwives and should be incorporated into the curriculum of student midwives.

The present registered nurses/midwives need to be updated on this practice of LBW babies. Therefore an in-service program needs to be organized to target this group of nurses so that they are aware of the management strategies to support mothers through the process of KMC.

- **For Nursing Research**

In view of the already stated scarcity of South African literature on KMC, a clear need exists for more research to be conducted on this topic.

In this study all the carers interviewed were mothers. It would be useful to obtain the experiences of caregivers other than mothers, e.g. fathers.

The community should be made more aware of Kangaroo care and the benefits associated with it. It would be useful to have an understanding of the influence which communities could have on KMC.

CONCLUSION

This study has highlighted the perceptions of the mothers who were practicing KMC. Mothers seemed to have enjoyed the experience of KMC. The health care team had adequately prepared the mother to practice KMC. The objectives of this study have been achieved, in that the perceptions and experiences of mothers have been described. Support was given to the mothers and the main support givers were identified.

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Annexure A

University of Natal

Dept of Nursing Science.

Telephone : (031) 260 2497

23 August 2002

The Chief Director : Health Services

Kwa Zulu Natal

Private Bag X9051

Pietermaritzburg.

3200

Dear Sir

RESEARCH PROJECT : THE EXPERIENCES OF CARERS IMPLEMENTING OR HAVE IMPLEMENTED KANGAROO MOTHER CARE AT THE R.K.KHAN HOSPITAL.

I am a part – time student at the university of Natal – Durban, presently working on a M. Cur. Degree in Mother and Child Nursing. As part of my degree I am required to conduct a research project. I wish to interview carers who have partaken in, and are busy implementing KMC.

I hereby request permission to use the R. K. Khan Hospital for my research.

Thanking you in anticipation.

Yours faithfully

MRS. J. REDDY	**DR. P. McINERNEY**
RESEARCHER	**SUPERVISOR**

Annexure B

Information Sheet

Mr./Mrs./Miss..

I, Mrs. J. Reddy am a tutor at the R.K.Khan Campus. I am presently studying towards a Masters Degree in Nursing (Mother & Child). I have a special interest in preterm babies and their care and am therefore researching Kangaroo Mother Care (KMC). If you are the mother/father/grandparent/other and implementing KMC or have implemented KMC in the last 2-4 weeks you are asked to participate in my research project.

- The interview will take approximately 30-45 minutes.
- You may stop/withdraw from the interview or study at any stage.
- All information volunteered will be considered confidential and will be used for this research project.
- Should you choose not to record the interview, please inform me.

I .... hereby consent to being interviewed for the research into KMC. I have had the procedure explained to me and I understand what this entails.

____

Signature

____

Witness

____

Date

Annexure C

28-30th Avenue

Umhlatuzana

Durban.

4092

12 February 2003

The Deputy Director

Matron B. Gounden

R.K. Khan Hospital

Private Bag X004

Chatsworth.

4030

Permission to interview post-natal mothers on Kangaroo Mother Care.

I, Mrs. J. Reddy, a tutor at R.K Khan Campus currently studying towards a M. Cur. Degree at the University of Natal, request permission to interview mothers from the post natal ward who are implementing kangaroo mother care. I am prepared to abide by the policies, protocols, and ethics of the institution. I will maintain confidentiality and ensure that no harm is caused to the patients.

The report of the completed study would be made available to the institution.

Yours faithfully

Mrs. J. Reddy

Annexure D

28-30th Avenue

Umhlatuzana

Durban.

4092

12 February 2003

The Deputy Director

Dr. P. Subban

R.K. Khan Hospital

Private Bag X004

Chatsworth.

4030

Permission to interview post-natal mothers on Kangaroo Mother Care.

I, Mrs. J. Reddy, a tutor at R.K Khan Campus currently studying towards a M. Cur. Degree at the University of Natal, request permission to interview mothers from the post natal ward who are implementing kangaroo mother care. I am prepared to abide by the policies, protocols, and ethics of the institution. I will maintain confidentiality and ensure that no harm is caused to the patients.

The report of the completed study would be made available to the institution.

Yours faithfully

Mrs. J. Reddy

Annexure E

28-30th Avenue

Umhlatuzana

Durban.

4092

12 February 2003

Sister-in Charge

Ward M2

R.K. Khan Hospital

Private Bag X004

Chatsworth.

4030

Permission to interview post-natal mothers on Kangaroo Mother Care.

I, Mrs. J. Reddy, a tutor at R.K Khan Campus currently studying towards a M. Cur. Degree at the University of Natal, request permission to interview mothers from the post natal ward who are implementing kangaroo mother care. I am prepared to abide by the policies, protocols, and ethics of the institution. I will maintain confidentiality and ensure that no harm is caused to the patients.

The report of the completed study would be made available to the institution.

Yours faithfully

Mrs. J. Reddy

Annexure F

UNSTRUCTURED INTERVIEW GUIDE

1. How did you feel when you were approached about this method of care for your baby?

Q. Who approached you?

Q. What were some of the feelings running through you?

Q. Mm! Go on?

Q. You say uncertain, did you feel anxious, happy, sad, confident?

2. What were you told?

Q. Did they explain the whole procedure to you?

Q. Tell me a little more about what was explained to you?

Q. How did that make you feel?

Q. Did you understand this procedure? Do you think they told you everything?

Q. When you were told, who supported you with the procedure?

Q. Was this helpful to you?

3. What were your doubts?

Q. Were there any uncertainties?

Q. O.K. Tell me about the baby?

Q. Did you think you would cope with the baby?

Q. Tell me more?

Q. Any other doubts?

Q. Did you ever doubt your ability, or wondered what would have happen if something went wrong with baby?

Q. Did anything like that happen?

4. How did you feel physically to implement KMC?

Q. Did you recover from labour?

Q. Before KMC were you well?

Q. Now, how do you feel physically?

5. How did you cope with KMC?

Q. Who supported you during this period?

Q. What did they say to you to make you feel confident?

6. What was the most pleasant part of this method of care?

7. Did you experience any problems during KMC?

Q. Were you able to latch baby on?

Q. How did you feel? Were there any discomforts?

Q. Did you talk to anyone about this?

Q. What happened?

Q. Emotionally, how did you feel? Were you frustrated/satisfied/dissatisfied/anxious/happy?

8. How did the baby behave during this period?

Q. Was the baby feeding and sleeping well?

Q. Did the baby get sick?

Q. What happened?

9. Having practiced KMC, what are your recommendations for the mother?

Annexure G

Section A

Self-administered questionnaire for demographic data

Tick appropriate block

Mother ☐ Father ☐ Grandparent ☐ other ☐

1. Age of the mother ☐
2. Age of infant ☐ months ☐ yrs
3. Number of children including this baby ☐
4. Number of miscarriages ☐

What is your highest standard of education (tick appropriate block)

☐ Did not attend school

☐ Attended primary school (grade 1 – 7)

☐ Attended secondary school (grade 8 – 12)

☐ Attended tertiary institution

Section B

1. How did you feel when you were approached about this method of care for your baby?
2. What were you told?
3. What were your doubts?
4. How did you feel physically to implement KMC?
5. How did you cope with KMC?
6. What was the most pleasant part of this method of care?

7. Did you experience any problems during KMC?

8. How did the baby behave during this period?

9. Having practiced KMC, what are your recommendations?

Annexure H

TRANSCRIPT OF AN INTERVIEW

Introduction: Good afternoon, thank you for allowing me to speak to you, I'd like to know a little about you and your baby.

Now, you practiced Kangaroo right that's right

Okay when you were told about this kangaroo who approached you, who told you first about this Kangaroo?

Eh. The sister in the ward, she approached me and she told me to do KMC, it will help baby gain weight and keep warm with tremendous effort I found that to be true.

You told me sister told you about this and all the advantages right, but this is something new eh. Nodding her head. **This is your third baby did you hear about this before?** Not at all. Not at all.

Before you started Kangaroo what were you feeling?

Firstly, I felt it was a waste of time, I felt it wasn't necessary and what is this now, this is a new system, I'm coming with 2 kids, previously I know how to approach a baby, but I didn't hear about this method to care for a baby so when I was approached about it. Firstly it was like something I know I had to do and then I had the opportunity to do it then it was a pleasure.

O.K. So you said it was a pleasure only after you had practiced it. But before you practiced it were you happy about it, sad about it or anxious about it?

I was anxious because it was something new now, that they have introduced to us. Now this was something new. I was feeling anxious although I didn't know what I was going in for. But the anxiety was within me.

Thank you. We can now go onto our next question. Now, you told me Sister told you about it. What did she tell you?

Firstly, she said now you have to do KMC. What is KMC, she explained the KMC. She told, because your baby is born premature it helps baby gain warmth, helps baby gain weight and that's the best form of baby growing up easily and for the long stay that we have here, it can be shortened if we continue doing it so when she approached me about it, she approached me giving me all the advantages and that's what made me anxious.

Did she explain the procedure of Kangaroo?

Yes, she did and she actually displayed it to us as well.

How did she display it – on a patient or....

She did it on me. She demonstrated on me so we could get the feel of it. She didn't have to do it on someone else for me, just to get that feel.

So she did it on me I felt good and I wanted to continue doing it.

Tell me a little about the procedure. What was the procedure like?

Firstly, baby had to be naked. Baby had a napkin on, the mother's chest had to be bare without a gown or a bra, with not any of the above. Once that was done, baby was taken and put on her stomach in between the breast and this immediately gave warmth to the baby and baby naturally takes to it, feeling that warmth on her, so it means that she's adapted to it. Even when I sleep if she's on the breast she will be howling but when I put her into that position she gets immediate warmth and there is a bond between mother and baby.

Thank you for that. When you put baby for the first time on your chest how did you feel?

The feeling was great as much as everybody was saying such a long procedure, and I thought, hey what now?..... But it was that immediate bond, it was so special. It was absolutely special.

I understand what you trying to tell me. You enjoyed it.

Ah definitely. Even if she is 1 year, I think I will go ahead with it. That's how much of pleasure it is bringing me.

But you know they do it until the baby is 2 kg.

Did you understand all that she explained to you about the procedure?

Yes. She was very informative and she was a person, who you could ask questions and she could answer while we were doing it

So she was approachable.

She did not practice it, you practiced it. In your opinion did she tell you everything that you needed to know?

Whatever was the procedure she did tell me, but the feeling she couldn't tell me because she did not have that on her, only that was something that I could have grasped.

OK. When you started this whole KMC, who supported you through this whole KMC and I know it had been difficult for you, you were one of the patients that was here for a long time.

The patients around me. They used to say "hey come do your KMC now. When we paid a deaf ear, or we forgot the sisters were always there to remind us. "You know what, do the KMC". They were very nice. "Do it now, if you want to go home quickly". Sister Devi was very nice. There I can give Sister Devi credit.

Do you think all that they told you......I think this question is redundant because you've really credited the sisters. But lets just ask it.

Do you think all this was helpful to you?

Definitely and I wouldn't have gone through it, if it wasn't for the Sisters. To everyone I give credit. To everyone.

Even the staff nurse and you Jaya for coming and encouraging me when my baby was in ICU and telling me that I need to do KMC and all these things will be away from baby.

Thank you. Because KMC is new, did you have any uncertainties or doubts about it?

Yes I did at the beginning when I had baby on I used to feel she is going to fall. I used to keep my hand under her all the time. Although she was uncomfortable and I was uncomfortable. I used to have the naso-gastric tube in one hand, but I used to make sure that support was there. That was my problem, but later on I realized that it was the safest. I used to just feel, and because she was so small, she used to slip through and then I used to get excited and quickly call everybody around me because I did find it a bit difficult.

Thanks for sharing that with me. Now tell me, you said that you were uncomfortable and baby was uncomfortable, but if you had to compare KMC to the incubator.

Definitely I would go in for KMC, not the incubator. The incubator is just a machine there, but this gives me bond as well with baby. This is credited.

Now, once baby was on you, how did you cope with baby?

At first I found it a bit difficult, because I was a bit scared of what's going to happen. My body was wet with perspiration, is baby going to catch a cold with that and how am I going to cope with that. I've got a sweaty body so that gave me a bit of a problem at first but eventually when I spoke to doctors and all, they told me no that's the best thing you

can do, baby will not get a cold or anything from the mother's warmth and that gave me that strength what I can cope with. For the work even.

Now while baby was on you, did you ever doubt your ability to look after baby?
Never. She gave me the will power that I had to do it for her, so that was the will power even if I dropped it or anything I always had her in mind, she wants me to do it, she is gonna get the weight, she gonna get that warmth, she gonna get the comfort and we gonna go home. So that was my motivation and it gave me the ability to carry on.

You wanted to achieve that goal.
I wanted it not only for me, but for baby as well.

I know baby was sick and was in the incubator when I came to visit you, then. But, whilst you did KMC did baby get sick?
Not at all touch wood. Not at all. With my sweaty body I thought she will get a flu. But while she was in the incubator I used to find her having a sneeze, having a cough and she will be a bit groggy in her nose and grunting but since she is on me, I couldn't ask for anything better.

That's good to hear. As you can see she is proof enough in front of you. Can you see her nose. When she was in the incubator we had to put nose drops and since she is on me we don't even have nose drops to worry about. So it is a miracle. KMC is a miracle.

When you went to do KMC, after quite a few days after baby was born. Did you recover from your delivery? Yes

It was a normal vertex delivery. I didn't have a stitch for her. Baby was so little, she just slipped out. As soon as I came to this ward, I was gone to nursery. So it was like in an hours time I was fit enough, although I was sedated, but I couldn't be better than in R. K. Khan - Maternity, never.

How do you feel now?

As it has come now so close for me to leave, it gives me a sad, bad emotional feeling where the best things I have to leave and go. They were my mother, my father, my friends and they were the staff of R. K. Khan –Maternity. If ever I had to have another five I will still come to R. K. Khan.

Physically are you well? Physically I am well.

I remember you say all the staff at R K Khan gave you the support. When it came to family who supported you through KMC?

Yes, but I did get a lot of support from my husband, but the apple of my eye was my daughter. That 16 year old teenage daughter, she mothered me and she cared for me more than a mother would have. She was very willing to assist me, she was supportive to the care of baby, was giving me encouragement towards the baby. She said "don't worry mommy, everything's gonna be OK". So the support I got from her, she outshines the rest.

I'm so happy for you. I do remember you telling me about your 16 year old daughter used to bring you food. and my clothes. She is also taking care of her little brother. I left that responsibility with her.

With regards to KMC. What did she say to you…

Unfortunately she did not witness me practice KMC, because there was only a specific time to practice. Now that I am in the KMC room, she may watch. It will be odd to them, because. Normally a baby is carried in the hand.

Interruption – supper was being served.

So who, in your opinion gave you most of the support?

The staff of the nursery. Not forgetting Dr. Naidoo, Dr. Dawood and Dr. Maduray. They had given me the courage. Sr. Pregashnie not only with KMC and my baby morally with my family support, she's been sitting me down and giving me support and Sr. Raganie for getting my husband to come and visit me everyday and giving him that extra mile to support me.

What was the most pleasant part of this KMC?

The pleasant part was when she was gaining weight like Africa and when she was getting the body warmth, you could see her growing and the best part is when she has that "touch" on your chest it just bonds you immediately with the baby. It just gives you that extra touch with the baby, as much as you love and bond. Even if a baby is 2 kg and above I would expect every mother to do that for at least one week. Just to get that bond.

Thank you. Did you experience any problems whilst implementing KMC?

Not exactly. I just enjoyed it whilst I got used to it, only besides when.....because she was so small she used to slip in. That was the only problem.

Did she actually slip out at anytime?

Not at all, but I always had that thought that she could have fallen but because of the support, the support the sister gave us, it never gave baby a break to fall.

Were you able to latch baby onto the breast?

Yes. Baby has been latching for the past week now, she's doing tremendously well, as we sat in your presence, you watched her suck and you couldn't ask for better. She has adapted more to the breast than to the bottle.

You mentioned that you were perspiring, would you say this was a discomfort to you?

Yes. Yes. As I walk into the nursery I used to perspire so much and I used to want to wipe myself and then I got baby on me.

Did you talk to anyone about it? Yes you said you told doctor.

Doctor told me it is not a problem that is something baby and I will get used to.

I gathered this next question, but I want it for the record. How did you feel emotionally doing this KMC?

Emotionally, I felt fantastic. In fact emotionally I felt a bit upset, because I was giving baby all this attention during KMC, while my 2 (children) at home. My first baby, she was my first born I didn't give her much attention and bond like this. This has been special and emotionally she had got to me. She is now special to me because I shared my warmth with her. My babies at home I carried them and all but I didn't bond with them like this. Emotionally she is the apple of my eye. Although she is the naughty one, she is the apple of my eye.

So would you say that was a very happy experience?

It was fantastic. I would want that for any mother.

How did baby behave during this KMC?

In the incubator, she was a bit restless. She used to kick her arms and legs. She used to turn. I don't know if the discomfort was the bed or whatever, but I think she was very tired. When she came onto me she was very relaxed, she would just sleep on my chest. She felt like latching onto my breast. She used to latch on my skin and that's what taught her how to latch onto my breasts and believe me it was fantastic. It couldn't have been better. If I had the opportunity I would have kept her on my chest from the beginning.

But she was a little too small, unfortunately she was only 1.1 kg. Only when she was 1.2kg KMC was started.

Now tell me. You told me about her feeding, and how comfortable she was. Is there anything else that you noted and could put it down to this KMC?

Yes. She sleeps when she is relaxed. On me, she can sleep for quite a few hours when I have her on the bed you will find her looking for milk, or she wants a blanket over her and if I had to put my arm on her, then she feels relaxed with that warmth she gets, so that the warmth she gets from me makes her feel very relaxed.

Not to mention the weight gain.

Wow, in 1 week from 1.2 she came to 1.5. Believe me or not, this is the living proof of what KMC is about. KMC is fantastic. Even when I go home, I am still gonna do KMC. It is going to boost my baby's weight and give me much more bond with her.

Excellent. Having practiced KMC what would be some of your recommendations to other mothers to practice KMC?

Firstly, they must have that will – power and have that eh.... Strength to carry baby and not feel weak that they cannot do it or be frightened whether they gonna drop baby, that eventually comes away, baby will be well with their care.

I feel they shouldn't have a negative attitude and feel it is not going to work, because it is fantastic. I had that attitude and believe me it is fantastic. They should just look towards that goal, that baby must be well, baby must gain weight, baby must bond. Baby must get warmed and they will be fantastic.

Thank you so much for sharing your experience with us. I wish you all the luck with baby.

ANNEXURE I

UNIVERSITY OF NATAL
DURBAN CAMPUS

Faculty of Community & Development Disciplines

University of Natal Durban 4041 South Africa

Telephone: Faculty Officer +27 (0)31 260 3271
Student Records +27 (0)31 260 2685
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Facsimile: +27 (0)31 260 2458
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RESEARCH ETHICS COMMITTEE

Student: MRS J. REDDY

Research Title: THE EXPERIENCES OF CARERS WHO ARE IMPLEMENTING OR HAVE IMPLEMENTED KANGAROO MOTHER CARE AT THE R.K. KHAN HOSPITAL.

A. The proposal meets the professional code of ethics of the Researcher:

(YES) NO

B. The proposal also meets the following ethical requirements:

	YES	NO
1. Provision has been made to obtain informed consent of the participants.	X	
2. Potential psychological and physical risks have been considered and minimised.	X	
3. Provision has been made to avoid undue intrusion with regard to participants and community.	X	
4. Rights of participants will be safe-guarded in relation to: 4.1 Measures for the protection of anonymity and the maintenance of confidentiality.	X	
4.2 Access to research information and findings.	X	
4.3 Termination of involvement without compromise.	X	
4.4 Misleading promises regarding benefits of the research.	X	

Signature of Student: Reddy Date: 20/01/03.

Signature of Supervisor: [signature] Date: 24.1.03

Signature of Head of School: [signature] Date: 24.1.03

Signature of Chairperson of the Committee: [signature] Date: 28 JA '03

PROFESSOR F FRESCURA

ANNEXURE J

HOSPITAL MANAGER
PRIVATE BAG X004
CHATSWORTH
4030

4033223 EXT. : 2030 FAX: 031-4010505

E.MAIL: h001894@dohho.kzntl.gov.za.

OUR REFERENCE :

ENQUIRIES: MRS J I L LOUIS

DATE : 17 FEBRUARY 2003

MRS J REDDY
28-3OTH AVENUE
UMHLATUZANA TOWNSHIP
4092

RE – INTERVIEW ON KANGAROO MOTHER CARE

Your letter dated 12 February 2003 has reference.

Permission is hereby granted to you to interview mothers from the Post Natal Ward on Kangaroo Mother Care.

Kindly make the necessary arrangements with the Sister-in-Charge of the ward.

FOR ACTG NURSE MANAGER
FOR HOSPITAL MANAGER

JN/KP

ANNEXURE K

R.K. KHAN HOSPITAL

✉HOSPITAL MANAGER
PRIVATE BAG X004
CHATSWORTH
4030
☎ 031-4033223 FAX 031-4011247
EMAIL H971782@dohho.kzntl.gov.za
ENQUIRIES: DR P S SUBBAN
OUR REF :
DATE: 18 FEBRUARY 2003

MRS J REDDY
COLLEGE CAMPUS

Dear Madam

PERMISION TO INTERVIEW POST-NATAL MOTHERS ON KANGAROO MOTHER CARE

Your letter dated 12 February 2003 refers.

Permission is hereby granted for you to interview mothers from the post- natal ward at this Institution.

Kindly liaise with the Nursing Manager.

Yours faithfully

HOSPITAL MANAGER

Cc: Nursing Manager : R.K. Khan Hospital

28-30th Avenue

Umhlatuzana

Durban

4092

12 February 2003

Sister-in Charge

Ward M2

R.K. Khan Hospital

Private Bag X004

Chatsworth

4030

Permission to interview post-natal mothers on Kangaroo Mother Care.

I, Mrs. J. Reddy, a tutor at R.K Khan Campus currently studying towards a M. Cur. Degree at the University of Natal, request permission to interview mothers from the post natal ward who are implementing kangaroo mother care. I am prepared to abide by the policies, protocols, and ethics of the institution. I will maintain confidentiality and ensure that no harm is caused to the patients.

The report of the completed study would be made available to the institution.

Yours faithfully

Mrs. J. Reddy