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Mothers' experiences and perceptions [of] Kangaroo Mother Care during hospitalization of their preterm babies in an academic hospital in Johannesburg

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MOTHERS' EXPERIENCES OF KANGAROO MOTHER CARE DURING HOSPITALIZATION OF THEIR PRETERM BABIES IN AN ACADEMIC HOSPITAL IN JOHANNESBURG

CHAPTER ONE

OVERVIEW OF THE STUDY

1.1 INTRODUCTION

This chapter is an overview of the study investigating mothers' experiences of kangaroo mother care during hospitalization of their preterm babies at Chris Hani Baragwanath (CHB) hospital in Johannesburg, South Africa. The purpose of this chapter is to orientate the reader to the entire process of the research. This includes the background of the study, problem statement, study objectives, researcher's assumptions, design and methods utilized to meet the study objectives. Ethical considerations and principles used to ensure trustworthiness are outlined.

*This research report has been written in the third person language. The use of third person language is an important part of retaining a formal tone in the professional and academic writing (*Lutz, Myers & Place, 2006).

1.2 BACKGROUND OF THE STUDY

Kangaroo mother care (KMC) is an innovative method that is used to promote closeness between a preterm baby and the mother. It involves placing a naked preterm baby covered

only with a nappy in an upright position between the mother's breasts for skin-to-skin contact. The name 'kangaroo' was obtained from the similarities it bears with marsupial care-giving, in which the baby marsupial born prematurely is guided into the maternal pouch where he is kept warm with easy access to the mother's breast for unlimited breastfeeding opportunities until maturation (Fraser & Cooper, 2003:792; WHO, 2003:29).

The researcher first came across KMC while working in a hospital in Johannesburg at the beginning of his clinical practice. This initial contact with KMC occurred when he was assigned to care for a number of preterm babies when one of them became unstable in the incubator, crying even after his basic needs like feeding, changing of nappies and being placed in a comfortable position in the incubator were met. A quick assessment of the baby, which included physical and systemic examination, and monitoring of the vital signs was conducted with normal results. While attempting to find a solution, the baby's mother arrived from home and asked if she could be allowed to perform her routine duty of KMC but since KMC was new to the researcher, he asked for help from the unit nurse manager. As a result of this, the baby fell asleep instantly upon being put on the mother's chest. A few minutes later other mothers arrived and proceeded to provide KMC to their babies. Babies were noted to be quiet and sleepy most of the time when on their mothers' chests compared to when they were in the incubators. Mothers at this hospital were at the time of study providing intermittent KMC to their preterm babies, living at home and commuting daily to visit their babies. It is this experience that led to the conceptualization of this study and a visit to the 24-hour KMC unit at CHB hospital where the researcher met the senior paediatrician and nurse unit manager. The idea of conducting the study was presented to them and they both agreed that it was the time to investigate mothers' experiences and

perceptions towards this form of care as no such study had yet been conducted in that hospital.

KMC was introduced at CHB hospital in 2001, prompted by overcrowding which was noted from bed occupancy of more than 150% at the hospital's preterm baby unit. It was initially introduced intermittently and later progressed to 24-hour KMC in 2002. After its introduction, a pilot study in 24-hour KMC was conducted which showed varied results between preterm babies enrolled in KMC and a control group with body weights between 1500 and 1649 grams. Those in the KMC group demonstrated higher positive results as compared with babies in the control group in terms of breastfeeding, weight gain, and shorter hospital stay. As a result of this, it was concluded that KMC was safe because of the reduced exposure to infections, normal growth, frequent breastfeeding, and reduction in hospital stay (Mokhachane, 2004).

However, this form of care did not originate at CHB Hospital. Edgar Rey Sanabria and Hector Martinez first introduced it at San Juan de Dios Hospital in Bogota, Columbia in 1979 for the following reasons (Whitelaw & Sleath, 1985):

- Shortage of staff and incubators,
- The negative impact of newborns' separation from their mothers in neonatal care unit,
- Lack of technological resources,
- Unacceptable high mortality and infection rates in the neonatal unit, and
- Burden of a large number of babies being abandoned by their mothers.

After introduction of KMC at San Juan de Dios Hospital, the results showed improved babies' survival rates, maternal confidence in the care of their infants, cost effectiveness, and enabled mothers to understand their babies better (Whitelaw & Sleath, 1985). These findings have led to several comparative studies between KMC and conventional method of care in both developed and developing countries aimed at establishing its effectiveness. This form of care has been scientifically tested in observational and experimental studies conducted in Colombia and in other countries. It offers additional advantages, regarding mother's empowerment and family bonding to the preterm babies. It also allows a better use of the human and technological resources available and decreases the overall costs for the hospital and the family (Charpak, Ruiz-Pelaez & Figueroa, 2005). The conventional method is care that involves artificial warming systems such as the use of a heated room, overhead lamp warmers or the use of incubators (Worku & Kassie, 2005:94). Some of the benefits that have been identified in other studies included stable babies' physiological changes such as body temperature, heart rates and respiratory rates, allowing for better sleeping, faster growth, less crying, and earlier hospital release (Bosque, Brady, Affonso, & Wahlberg, 1995:223; Legault & Goulet, 1995:504; Bergman, Linley & Fawcus, 2004:732; McCain, Ludington-Hoe, Swinth & Hadeed, 2005:692). Physiologically, mother's breasts respond to baby's thermal needs. Mother's temperature rises when the baby's temperature is low (Ludington-Hoe, Lewis, Morgan, Cong, Anderson & Reese, 2006: 225).

Additionally, other studies have indicated significant positive findings in weight gain, high survival rates, early initiation of breastfeeding, strong maternal-infant attachment, shorter hospital stay, and reduced parental stress in KMC as compared to other alternative forms of care (Kambarami, Chidede, & Kowo, 1998:84; Feldman, Eidelman, Sirota, & Weller,

2002:19; Bergman et al., 2004:732; Roller, 2005:213). In support of less maternal stress during KMC, a study of 488 premature infants done in Bogota, Columbia found out that mothers who cared for their babies in KMC showed not only a stronger bonding effect and a change in their perception of their child, but also a resilience effect (Tessier, Cristo, Velez, Giron, Calume, Juan, Ruiz-Pelaez, Charpak, Y. & Charpak, N.1998). In addition to improved maternal satisfaction, KMC has also been reported to play a role in reducing the incidence of severe illness and nosocomial infection and initiating early breastfeeding (Conde-Agudelo, Diaz-Rosello, & Beliza, 2003; Kirsten, Bergman, & Hann, 2001:443; Ramanathan, Paul, Deorari, Taneja, & George, 2001:1022; Feldman et al., 2002:19). Moreover, a randomized control study done between 24-hour KMC and conventional care involving babies without any congenital malformation ranging between birth weight of 1000 and 1,999 g and without administration of oxygen in three hospitals in Ethiopia, Indonesia and Mexico showed the following results:

- Babies cared through KMC experienced less nosocomial infection.
- Preterm babies submitted to KMC had a larger daily weight gain of a mean difference of 3.6 g/day as compared to those who were in conventional method.

(Venancio & Almeida, 2004).

In terms of breast milk production, Hurst, Valentine, Renfro, Burns, and Ferlic (1997:215) in their comparative study between stable, ventilated low-birth weight infants (mean 27.7 weeks gestation) and a non-KMC control group showed that mothers providing KMC had an increase in milk production than mothers who were not providing KMC. Breast milk is readily available and accessible during KMC, allowing longer and frequent breastfeeding (Charpak et al., 2005 & McCain et al., 2005).

However, in spite of these benefits some parents are 'uncomfortable with KMC' (Hockenberry, 2003:362). At CHB hospital, the experiences and perceptions of mothers involved with the care have not been established and no published research in South Africa has been found in relation to mothers' experiences with KMC.

Before proceeding with the study, it is necessary to define what a preterm baby means.

1.2.1 Preterm baby

A preterm baby is any viable baby that is delivered before the 37 completed weeks of pregnancy regardless of his or her birth weight (Sellers, 2005:1791). This preterm delivery usually causes some level of stress both to prepared and unprepared parents. Despite the fact that having a baby is generally a joyful and exciting event, having a preterm baby who must struggle for its survival and is immediately transferred to a Neonatal Intensive Care Unit (NICU) becomes a less positive experience for parents. The baby's fragility, irritability, and lack of responsiveness to its social environment may result in many mothers feeling emotionally distressed and this may affect their parenting behaviour (Legault & Goulet, 1995:504; Feldman at al., 2002:18).

This emotional distress may be associated with premature labour. Premature labour can be the result of several factors which may include: multiple pregnancy, placenta praevia, placenta abruption, untreated high blood pressure, severe maternal infections, emotional and physical trauma, or some other unknown cause. At the same time these babies are usually born with a body weight of less than 2500 grams (Fraser & Cooper, 2003:785). Any preterm baby is hospitalized for care and close monitoring as a result of potential complications associated with premature birth.

Preterm babies are admitted to hospital for a variety of reasons and their length of stay differs according to the condition and the treatment they require. An infant with very low birth weight or with severe complications may require invasive treatment and close monitoring. This may include oxygenation through mechanical ventilation, or insertion of naso-gastric tube for feeding (Bennett & Brown, 1996:567). During the period when the baby is undergoing treatments in NICU, mothers often battle with the following negative experience:

1.2.1.1 Broken expectations of birth experience

Giving birth to a preterm baby is a complex and traumatic emotional event for a mother with long-term consequences that require ongoing emotional support extending beyond the immediate post-natal period. Fears associated with development and chances of survival reported in the literature and concerns about nurturing preterm babies unsettles the mothers as they are unprepared, both psychologically and emotionally, to receive and care for a preterm baby (Kersting, Dorsch, Wesselmann, Ludorff, Witthaut, Ohrmann, Hornig-Franz, Klockenbusch, Harms & Arolt, 2004:474; Bruns-Neumann, 2006:146).

The behaviour and appearance of a preterm baby often does not match mothers' expectations and they may feel less maternal towards their babies. A high level of stress associated with the appearance of their babies is reported in the nursing literature and is aggravated by the presence of tubes in the body of their preterm babies and the frightening sounds in the NICU (Sim-Jones, 1986:395; Miles, Burchinal, Holditch-Davis, Brunssen, & Wilson, 2002). The very size of the baby is problematic to some as mothers are initially filled with shock and fear. Mothers are also worried even after discharge from NICU about

whether the preterm baby is able to suckle an adequate volume of milk through breastfeeding alone (Kavanaugh, Mead, Meier, & Mangurten, 1995).

Preterm babies are often separated from their mothers soon after birth as a result of their size and the need for close monitoring. Mothers exhibit varied levels of stress during this period of separation because they feel deprived of their maternal responsibilities of breast-feeding and caring for their babies. Symptoms of mothers' anxiety normally are feelings of despair, powerlessness, disappointment, and sleeplessness (Sim-Jones, 1986:395; Nystrom & Axelsson, 2002:277; Erlandsson & Fagerberg, 2005).

At CHB Hospital, newborn babies weighing less than 1200 grams are separated from their mothers soon after birth and these preterm babies are soon admitted to NICU for mechanical ventilation and other forms of specialized intensive care depending on their individual needs. From NICU, the infants are discharged to a KMC ward for KMC and further management. Prior to discharge, the concept of KMC is introduced to mothers in NICU. Mothers are fully informed about the benefits of KMC and those who choose to provide 24-hour KMC are then transferred to a KMC ward.

Once discharged from the NICU, mothers are received at the KMC ward where both the mother and the baby are monitored and assisted until mothers are confident to participate fully in KMC. Babies are monitored for weight gain until they are 1650 grams and are then discharged. The safety of discharging infants at 1650 grams was established through an earlier study conducted by Mokhachane, (2004), a senior paediatrician in the same ward. The ward records indicated that mothers on average spent between two and three weeks in the KMC ward before their babies were discharged. During discharge, an elderly woman

or any other supportive family member is invited to be present so as to receive instructions on the importance of continuing with KMC and the kind of support that the mother would need at home.

1.3 PROBLEM STATEMENT

Since the introduction of KMC at CHB Hospital, various benefits such as rapid weight gain, short hospital stay, and minimal cross infection have been reported and are well established in the literature (Mokhachane, 2004). Despite these benefits, not all mothers in this hospital choose to do KMC and no reasons have been established for refusal. At the KMC ward, mothers spend 24-hours in a day providing KMC to their hospitalized babies but since its introduction in 2001 no study has been conducted to establish their experiences and perceptions towards this kind of care. From this setting, no empirical evidence has been established as to how KMC is experienced and perceived by mothers of preterm babies during this period of hospitalization. Only anecdotal reports from individual mothers are known. Based on this problem the following research question emerged:

- *How do mothers of preterm babies experience and perceive 24-hour KMC during the hospitalization of their babies at CHB Hospital in Johannesburg?*

From this research question, the research purpose and objectives of the study were formulated.

1.4 THE PURPOSE OF STUDY

The main purpose of this study was to explore and describe the mothers' experiences and perceptions of 24-hour KMC during the hospitalization period of their babies in a preterm baby unit. In order to meet this purpose, the following objectives were set:

1.5 RESEARCH OBJECTIVES

The objectives of this study are to:

- Explore and describe mothers' experiences and perceptions of 24-hour KMC during the hospital setting.
- Provide recommendations for nursing practice and education.

1.6 SIGNIFICANCE OF THE STUDY

Since a study of this nature has never been conducted in this particular setting, the findings of this study seek to contribute to the body of knowledge on 24-hour KMC as experienced by mothers at CHB hospital. Nurses and doctors may use the findings of this study to formulate interventions relevant to the needs of the mothers providing KMC and perhaps use the knowledge as a baseline for further research.

1.7 PARADIGMATIC PERSPECTIVE

According to Creswell (1998:74) qualitative research is approached with certain paradigm or world view, basic beliefs or assumptions that guide research approaches towards a topic. These research paradigmatic perspectives are basic in any research (De Vos, Strydom, Fouche & Delport, 2002:265). In this study, the following assumptions were made:

1.7.1 Meta-theoretical assumptions

According to Botes (1993:11), *meta-theoretical assumptions* are non-testable beliefs that are accepted to be true by the researcher. These meta-theoretical assumptions reflect the researcher's view of a person, environment, nursing and health.

For the purpose of this study, the research was guided by the following meta -theoretical assumptions:

1.7.1.1 Person

The persons involved in this study are the mother, the preterm baby, the nurse and the doctor. It is believed that there is a close constant social therapeutic interaction between the different persons involved in the KMC ward and their environment. For example, the nurse assumes an important role in meeting the unique needs of the mother and the baby during this period of interaction. The uniqueness of each person implies that the thoughts and feelings of each individual may vary.

1.7.1.2 Environment

The environment is the total context of the person’s surroundings that have an influence on his or her physical, psychological, emotional and behavioural well-being. The environment can be internal or external, micro or macro, negative or positive in terms of all the conditions and circumstances that influence the surrounding, development and behaviour of a person. Any environmental change may require greater energy to adjust to the situation. In this study, the environment refers to the hospital setting, in particular the KMC ward, which can be considered as an unfamiliar environment compared to the mothers’ home environment.

1.7.1.3 Nursing

Nursing encompasses autonomous and collaborative care of well, ill or potentially ill persons of all ages, families, groups and communities in all settings. It comprises the promotion of health, prevention of diseases and the care of sick, disabled and dying persons. Nursing is dynamic and is constantly evolving to meet new needs and acquire new knowledge.

1.7.1.4 Health

Health is an optimal state of all the components that make up who and what a person is. It is a state of physical, psychological, emotional, socio-economic and biological well-being that is maintained when a person continually adapts.

1.7.2 Theoretical assumptions

Contrary to methodological assumptions, theoretical assumptions are testable and offer epistemic pronouncements about the research field (Botes, 1993:12). It was assumed that the research question in this study could be answered by going into the field without any preconceived judgments that might have been acquired through previous theories. To achieve this, the principle of bracketing was applied, commonly called epoche process by other researchers so as to view the mothers' experiences and perception of KMC in an unbiased manner. Epoche is a Greek word meaning to refrain from judgment, to abstain from or stay away from everyday ordinary ways of perceiving things and approach the interview with receptive presence (Moustakas, 1994:180).

1.7.2.1 Theories

The word theory has a number of distinct meanings in different fields of knowledge, depending on individual methodology and the context of discussion. They are a set of statements or principles generalized to explain a group of facts or phenomena, especially one that has been repeatedly tested or is widely accepted and can be used to make predictions about natural phenomena (Polit, Beck & Hungler, 2001:145). Some of the theoretical terms used in this study are defined below:

1.7.2.2 Theoretical definitions

- **Kangaroo Mother Care**

This is a form of care named after the marsupial animal, the kangaroo, who keeps its newborn young in her pouch until it reaches maturity level. In the case of humans, mothers hold their naked preterm babies, wearing only a diaper and head cap, on their chests, between their breasts, so as to ensure that there is skin-to-skin contact between the baby and the mother holding it (Fraser & Cooper, 2003: 792).

- **Experience**

Experience is an observation of or a practical acquaintance with facts or events which involves apprehension of an object, thought, or emotion through the senses or mind and involves a direct perception of an event (Merriam-Webster online dictionary, 2006).

- **Perception**

This is the insight, intuition, or knowledge gained by perceiving a phenomenon which in this case is KMC (Merriam-Webster online dictionary, 2006). It includes feelings and views.

Feeling(s) are an affective state of consciousness, such as those resulting from emotions, sentiments, or desires (Wehmeier, 2000: 429).

View(s) are individual and personal perceptions, judgments, interpretations or opinions about a particular phenomenon (Wehmeier, 2000:1331).

- **Concepts**

Polit and Beck (2004:29) define concepts as "abstractions of particular aspects of human behaviour based on observations or characteristics". In a theory, concepts are organized together into a coherent system to describe or explain some aspect of the world. For the reader to have a clear understanding of concepts, some of the terminologies used have been defined below:

- **Emotional Responses:**

These are the feelings that mothers show while nursing their babies during KMC in this study. Some of these feelings include, among others, joy, love, fear, and discouragement. Such emotional responses are the result of the way in which the mothers perceived and experienced the care.

Joy

Joy is an expression of emotion evoked by well-being, success, or good fortune or by the prospect of possessing what one desires (Merriam-Webster online dictionary, 2006-2007). A mother of a preterm baby may express the feelings of joy during their interaction and observation.

Love

Love is a basic component of human experience that can be conveyed in various ways such as a sense of tender affection, an intense attraction, the foundation of intimacy and willingness to sacrifice oneself on behalf of another person. It manifests itself in feelings, behaviour, thoughts, emotion, attitudes and perceptions. It underlies, defines and influences major patterns in interpersonal relationships and self-identification (Wehmeier, 2000:704).

Fear

Fear refers to an emotion of uncertainty about a possible or probable situation or event and it manifests itself through feelings of fright. (Wehmeier, 2000:427). Mother's fear may result from her baby's poor prognosis.

- **Behavioural Changes:**

Behavioural changes refer to observed alterations in the mother's behavioural patterns during KMC or during the interview that differ significantly from her usual behaviour.

More details about the way in which participants' emotional and behavioural changes were captured during data collection are discussed in the following chapter.

1.7.3 Methodological assumptions

In this study a naturalistic paradigm assumption was adopted which is also referred to as a phenomenological paradigm (Polit et al., 2001:12). These methodological assumptions are the expressions of a researcher's view(s) on the nature and structure of research study in his or her discipline (Botes, 1993:11). This paradigm was adopted because of the belief

that *reality* exists within a context. These assumptions as stated by Polit et al., (2001:12) are briefly explained below:

- The ontological view suggests that reality varies according to individual participants' experiences and perceptions of a given situation. This variation is thought to occur as a result of the way in which unique individuals mentally construct the nature of their perceived reality.
- The epistemological approach suggests that the researcher is closer to the study participants, encouraging free interactions between them. The findings in this study resulted from an interactive process between researcher and the participants.
- The researcher encourages the study participants to express their thoughts and feelings freely on phenomena under study without fear of their values being criticized. This assumption departs from the field of axiology in which the theory of value is studied. Participants' views and values were respected throughout the study and were made possible by the use of epoche process which as explained previously involves a clearing of the mind to allow for a receptive response.
- The researcher treats the participants of the study as co-researchers by interacting freely and going back to them for confirmation of interpretation. In this way, they participate in the methodological processes of the study. The study findings are contextually bound, meaning they can only be applied to that particular context where study took place.

1.8 METHODOLOGY

The purpose of this research was to explore and describe the lived experiences and perceptions of mothers towards 24-hour KMC during the hospitalisation of their preterm

babies at CHB Hospital. Methodological perspectives of this study relate to the purpose and objectives of the study and include research design, data collection, and data analysis.

1.8.1 Research design

A qualitative approach grounded on phenomenological, explorative, descriptive and contextual research design was used. According to Burns and Grove (2003:195) research design is a plan or a blueprint of how a researcher intends to conduct his or her research. The selection of the approach depends on what the researcher would like to investigate, as well as the type of method that the researcher finds appropriate for the research. A detailed discussion of each of these will be discussed in Chapter 2.

1.8.2 Research method

The research method includes the steps, procedures and strategies for collecting and analyzing the data in a research study (Polit et al., 2001:465). The steps used in this study involved the selection of participants, data collection, and its analysis. A brief explanation for each is provided below:

- *Selection of participants*

In this study, participants who were deemed knowledgeable about KMC were selected through purposive sampling. This involved participants who knew the most about the phenomenon and who were able to articulate and explain their nuances (Polit et al., 2001; Burns & Grove, 2003; Polit & Beck, 2004). Inclusion criteria for the selection of the participants are explained in section 2.3.3, page 27 of this study.

- *Data collection*

Data was collected through in-depth unstructured recorded interviews using audiotapes and supplemented with field notes as suggested by Morse and Field (2002:91). At the beginning of each interview, the researcher explained the purpose of the study to each prospective participant and sought their co-operation (Kvale, 1996:128). Data was collected and transcribed verbatim.

- *Data analysis*

Data analysis is the systemic organization and synthesis of research data (Polit & Beck, 2004:718). Data analysis in this study was conducted through Colaizzi's (1978) method of phenomenological analysis as briefly stated below:

(i) The researcher reviews the collected data and become familiar with it so as to gain a feeling for the participant's own meaning.

(ii) Significant statements are then extracted from each transcript.

(iii) Meaning is formulated from each significant statement in the context of participant's own terms.

(iv) The formulated meanings from a number of interviews are then organized in a cluster of themes.

(v) A detailed, analytic description of the participant's feelings and ideas on each theme is compiled.

(vi) Researcher formulates participants' descriptions in an unequivocal statement in the form of conclusion.

(vii) The findings are taken back to the participants to check if the researcher has omitted anything.

As part of research rigour, all data collected during the research was kept on record under lock and key (Morse & Field, 2002:118). Research results were analysed and compared to the existing published scientific literature on KMC.

1.9 TRUSTWORTHINESS

Measures put in place so as to ensure trustworthiness included the four strategies advocated by Lincoln and Guba, (1985:328). These are credibility, dependability, transferability and confirmability.

- *Credibility*

This refers to the truthfulness, accuracy and believability of the study in terms of its research findings (Polit & Beck, 2004: 430). Credibility in this study was achieved through the use of prolonged engagement, use of different methods of data collection that included interviews, observation, and field notes, discussion with experts in the field of qualitative research and a clear written description of how the study was conducted.

- *Dependability*

Dependability essentially concerns itself with the question as to whether the same results would be obtained if the same study were to be conducted twice (Polit & Beck, 2004:434). A description of how data was collected and analyzed was clearly outlined and included in this study for scrutiny by an external reviewer.

- *Transferability*

Transferability determines the extent to which the findings can be transferred to other settings (Brink, 2002:125). A detailed description of the research context and the

assumptions that were central to the research in this study have been made available for the reader who wishes to transfer and judge the sensibility of that transference.

- *Confirmability*

Confirmability refers to the degree to which the results can be confirmed or corroborated by other researchers (Polit & Beck, 2004:435). The study procedures have been well documented in this study in order to allow easy confirmation of the study findings by other reviewers.

These strategies will be described in detail in chapter two.

1.10 ETHICAL CONSIDERATION

The study required an involvement of mothers and the rights of these participants were ensured by seeking their individual consent to participate in the study (Appendix A, B, & C). Permission to conduct the study was also sought from the following authorities:

- University of Witwatersrand's postgraduate committee (Appendix E).
- University of Witwatersrand's Human Research Ethics Committee [Medical] (Appendix F).
- Provincial Research Committee, Department of health, Gauteng Province (Appendix G).
- Chief Executive Officer of CHB Hospital (Appendix H).

Once the permission from the above stated authorities was received, strict adherence of the ethical principles such as the respect of human rights, privacy, and the participants' anonymity was done and confidentiality as well as protection from harm was strictly

observed. Chapter two provides a more detailed description of the ethical considerations applied in this study.

1.11 OUTLINE OF THE RESEARCH REPORT

This research report comprises four chapters, inclusive of this one, structured as follows:

Chapter One: Overview of the study.

Chapter Two: Research design and methodology.

Chapter Three: Presentation of findings and literature control.

Chapter Four: Review, limitations, recommendations, implications for nursing practice and conclusion.

1.12. SUMMARY

This chapter provided an overview of the study and sought to introduce the reader to the background of the study, a description of KMC and its historical context, the concept of a preterm baby, and hospitalization of the baby. The objective and purpose of the study, including the researcher's assumptions, study procedure, measures of trustworthiness and ethical considerations have been briefly outlined.

CHAPTER TWO

RESEARCH DESIGN AND METHODOLOGY

2.1 INTRODUCTION

Chapter one covered an overview of the study. In this chapter, the design and methodology chosen to meet the study objectives is discussed. The research methods are described with reference to the target population, sample, sampling, data collection, and data analysis. Ethical considerations and ways in which rigour and trustworthiness were achieved are also described in detail.

2.2 RESEARCH DESIGN

Qualitative approach, grounded in phenomenology was followed. The study is an explorative, descriptive, and contextual study that examines the lived experiences and perceptions of mothers providing 24-hour KMC at CHB Hospital.

2.2.1 Qualitative research

A qualitative research was chosen for this study because of the flexible approach that it offers, by means of an in-depth and holistic investigation. Its aim is to collect rich lived descriptions from the participants by allowing them to describe what they experience and feel in their own terms (Polit & Beck, 2004:245).

According to Burns and Grove (2003:357) qualitative research may be useful in understanding human experiences and perceptions from the participants' perspective. It involves a reasoning process that pieces together fragmented elements to make rational

wholes. It is assumed that there is no single reality and that reality is considered as subjective, based on perceptions that may differ from person to person and may be subject to change within a different time frame.

Creswell (2003:181) describes qualitative research as emergent, not fixed and can be redefined as the researcher goes along with each individual interview. This occurs because of the close, interactive relationship between the researcher and the participants and it involves the researcher's observation and recording of the participants' perceptions and lived experiences. To understand these lived experiences, phenomenological study was chosen.

2.2.2 Phenomenological study

A descriptive phenomenological study was deemed appropriate because it seeks a deeper and fuller understanding of the lived experiences of the participants providing 24-hour KMC. Phenomenological study as described by Polit and Beck (2004:253) is an approach rooted in a philosophical tradition that discovers the meaning of people's life experiences in its "wholeness". Phenomenological study, based on this argument, means it focuses on individual experiences and provides meaning to each person's perception of a particular phenomenon. This point was particularly important in this study as each participant was asked to express her perceptions and experiences of KMC during an unstructured in-depth interview. A descriptive phenomenological study usually involves the following steps:

2.2.2.1 Bracketing

Bracketing refers to the process of identifying and putting aside the preconceived beliefs, ideas, and opinions about the phenomenon under study. In this study, although KMC was a

new phenomenon to the researcher, thoughts and beliefs about 24-hour KMC that had developed during clinical practice before conducting the in-depth interviews had to be bracketed (Refer to page 33, section 2.4.1). By bracketing, the researcher aimed at minimizing his bias towards the process. This prevents any existing knowledge and beliefs from interfering with the research findings (Polit & Beck, 2004:253).

2.2.2.2 Intuition

Intuition is the second step in a descriptive phenomenological study. Intuition is an inborn talent directed towards producing solid and true judgments in all situations and contexts (Moustakas, 1994:32; Polit & Beck, 2004:254). Intuition was achieved in this study through the openness to the meanings attributed to the 24-hour KMC by the participants. This study assumed that all things become clear and evident through an intuitive-reflective process, which in turn transforms what is seen.

2.2.2.3 Analysis

This is the third phase in a qualitative descriptive phenomenological study (Polit & Beck, 2004:253). Data analysis involves extraction of significant statements, categorization and giving sense to the essential meaning of the phenomenon. Analysis in this study was achieved through the use of Colaizzi's (1978) method of data analysis as explained later in page 50, section 3.5.2 of this study.

Due to the fact that each person's views and concerns differ markedly, phenomenological study aims to understand each person in his or her context because the body, the world, and its concerns are unique to each of them (Burns & Grove, 2003:360).

2.2.3 Contextual study

The contextual study refers to research conducted in an environment that is as close as possible to that being studied. In this study, the site of the current research was not altered because it is believed that the nature of the setting may influence the way the participants behave or feel and this may result in distorted feelings and perceptions of a phenomenon (Polit & Beck, 2004:28).

2.2.4 Explorative research

Exploration is defined by Wehmeier (2000:408) as a careful examination of a phenomenon. Exploration allows the researcher to gain insight in a phenomenon of interest especially that which is new or unknown (Brink, 2002:11; Morse & Field, 2002; Polit & Beck, 2004:20). The researcher in explorative studies aims to investigate the full nature of the phenomenon, how it manifests and any other related factors. Within the context of this study, explorative research was useful because little was known about the mothers' experience and perception of 24-hour KMC at CHB Hospital prior to contact with the researcher, thus allowing him to explore the lived experiences of mothers.

2.2.5 Descriptive research

The researcher in descriptive study observes, describes, and documents aspects of a situation as it naturally occurs (Polit & Beck, 2004:192). Description of mothers' experiences and perception of 24-hour KMC at CHB hospital occurred after collection of data through informal in-depth individual interviews. Data was transcribed verbatim. Descriptive research in this study involves the description of each theme and their sub-themes. The research method used is described below.

2.3 RESEARCH METHOD

A research method refers to the methodological perspectives of the study which include methods of data collection, procedures, population, sample and sampling methods, and strategies for gathering and analyzing the data in the research investigation (Polit & Beck, 2004:723).

2.3.1 Study population

The target population of this study included all mothers who satisfied the inclusion criteria and whose preterm babies were hospitalized and received 24-hour KMC at CHB Hospital in Johannesburg.

2.3.2 Sampling and selection of the participants

Sampling is the process of selecting a group of people, events, behaviours or other elements in the study that is to be conducted (Polit et al., 2001:234). The qualitative researcher in this process focuses on the quality of the information from the participants rather than the size. The sample size cannot be predetermined in a qualitative study because participants ought to be selected and interviewed until saturation of information is obtained and no new information or themes emerge (Burns & Grove, 2003:257). Participants in this study were chosen through purposive sampling. Purposive sampling is based on the judgment of the researcher regarding the characteristics of the representative samples. The researcher selected the participants who knew the most about the phenomenon and who were able to articulate and explain their nuances (Polit et al., 2001; Burns & Grove, 2003; Polit & Beck, 2004). In this study mothers who were deemed knowledgeable about KMC were selected.

This method of sample selection was appropriate because it is perceived as the best method in qualitative research in contexts where an in-depth understanding of an experience is required (Burns & Grove, 2003:255).

Morse and Field (2002:65) state two principles that must be met in qualitative sampling, namely appropriateness and adequacy.

2.3.3 Appropriateness

Appropriateness is defined by Morse and Field, (2002:65) as the identification and utilization of participants who can best inform the researcher according to the requirements of the study.

Therefore, the appropriateness or the inclusion criteria for the participants in this study was determined as follows:

- **Age**. Each participant was 18 years and older. Burns and Grove (2003:166-169) emphasize the strict recruitment of participants who are capable of comprehending the information in the research study and possess sound judgment to make decisions regarding participation or withdrawal from the study.
- **Language**. Mothers who were able to understand and speak in English were also chosen because that was the only language in which the researcher could communicate with them. The researcher is not a South African and could not involve a translator as this could distort the flow of information and the trustworthiness of data may have been compromised. In addition to this, probing was likely to be difficult with the use of the translator (Kvale, 1996:125, 133).
- **Preterm babies who were free from illness or congenital abnormalities**. Parents of a sickly child can be overwhelmed by the powerful emotions and this may

threaten their ability to cope with requirements of the research. Parents of these babies more often experience anger, guilt, anxiety, helplessness and often project these feelings onto other members of the family or health care team (Hockenberry, 2003:958). Consequently, mothers whose preterm babies had illness or congenital abnormalities were excluded to avoid misinterpretation of the KMC experience.

- **Mothers whose preterm babies were seven days old or more in the kangaroo care ward with 24-hour KMC**. The researcher perceived the first seven days as a period of adjustment for the mothers and a time to learn and adapt to KMC.

2.3.4 Adequacy

Adequacy refers to the sufficiency and quality of data achieved. An adequate sample provides the researcher with richly textured and complete information (Polit & Beck, 2004:308). The sample size was not predetermined in this study because participants had to be selected and interviewed until saturation of data was attained.

2.3.4.1 Saturation

The number of participants in a qualitative study is adequate once the saturation of the information is achieved in the field of study. The saturation limit is a point where no new additional information emerges and further data collection only duplicates data that was previously attained (Morse & Field, 2002:65).

Morse in Burns and Grove (2003:258) and Polit and Beck (2004:308) describe factors that influence time period required before the saturation limit is attained in qualitative research. These are:

- **Scope of the study**. A wide scope of the study implies that more extensive data is required and this increases the time period before the saturation limit of the data is attained.
- **Quality of the data**. If high quality and richness of the data is to be achieved, then fewer articulate, well-informed and communicative participants are needed to achieve saturation of data in the field of study. For this reason, less than ten participants were obtained for this study, since those who were chosen were well-informed and could articulate their experiences well.
- **Study design**. This refers to the type of design that is selected. Some designs involve interviewing a participant more than once, namely, before and after the procedure. Such a design prolongs the study but it produces quality data. The interview was conducted only once in this study because it could have been inappropriate for the researcher to meet participants again after the change of setting during the follow-up visits. Change of setting may have an influence on the participants' way of perceiving things (Polit & Beck, 2004:28). Each participant in this hospital spent an average of two to three weeks before discharge.
- **Nature of the topic**. This depends on the topic of the study. Fewer participants in this study were needed to reach the saturation.

The quality of the data and nature of the topic were the two factors that had an influence on the saturation of data. The nature of the topic, KMC, was familiar to all the participants because they had been actively involved with the care of their babies for at least seven days at the time of the interview. Participants were well informed on the topic because of their active involvement in caring for their babies. Saturation of data was attained after interviewing seven participants. At this point all emerging information was redundant

because it merely repeated what had already been discovered. Two more participants were added to ensure that no new information was left out. The total sample size became nine participants. According to Polit and Beck (2004:309) sample size in phenomenological studies are ten or less because of the in-depth information required.

The sample size for this study included mothers (n = 9) ranging between 18 to 38 years old. The demographic representation of the sample included seven blacks and two 'colored' participants. Among these participants, one was engaged (to be married), two were married, four were living with their partners, and two were still living with their parents. A detailed description of the setting where these participants were identified is provided below.

2.3.5 The setting

The setting of this study was a private room in the KMC ward at CHB Hospital. CHB Hospital is one of the largest academic hospitals in Johannesburg, situated in South Western Township (SOWETO), South Africa. It serves the densely populated urban township and acts as a regional centre for the southern part of the Gauteng province. It is the only public sector hospital situated within Soweto and the largest hospital in the world occupying 173 acres with more than 3000 beds and approximately 7000 members of staff. Patients admitted in this KMC ward come from varied socio-economic and cultural groups. Majority of patients attended in CHB live within Soweto (Zwi, Pettifor, Soderlund & Meyers, 2000:227).

At the time of study, the KMC ward at CHB hospital was an open ward where space between mothers' beds was approximately one metre. There were twenty adult beds with

an equivalent number of baby cots next to each mother's bed. Each baby was to be placed in his or her cot whenever the mother wanted to go to the bathroom or to change nappies. Baby care, which includes breastfeeding and nappy changes, were done every three hours. Each mother had a chair and a small cabinet beside her bed where she could keep her personal belongings. The nurse's desk was in the same room, enabling nurses to observe all the mothers' activities in the ward and their babies. The warmth of the ward was maintained at a temperature between 22 and 26 degrees centigrade with the aid of the heaters so as to prevent the babies from developing hypothermia. For mothers' entertainment, a television set was available.

2.3.6 Researcher's role

The role of the researcher included the preparation and gaining entry into the research setting. The researcher studied the relevant qualitative theoretical framework to avoid the loss of substantial information that can arise from poor approach during the interviews (Kvale, 1996:147). Information regarding the techniques for obtaining quality data through interviews was also acquired from the lessons and exercises provided by a senior qualitative researcher within the university's Nursing Department.

The tools necessary for data collection, such as ensuring the effectiveness of the audio tape recorder, were tested prior to each interview. This included the replacement of batteries and carrying of spare cassettes and batteries in case of prolonged interviews. Other requirements included pens and note books for the documentation.

2.3.6.1 Gaining Entry

As part of the preparation to gain entry to the research site, an application letter and an attachment of a 14-page copy of the research proposal detailing the purpose and procedure of the study was submitted to the chief executive officer of CHB Hospital. It also included clearance letters from the Postgraduate Committee of the Faculty of Health Sciences (appendix E), Human Research Ethics Committee of the Witwatersrand (appendix F), and the Gauteng Provincial Research Committee, (appendix G). Similar copies of the proposal were also given to the senior paediatrician and unit nurse manager of the KMC ward.

Access to the KMC ward was granted more speedily based on the fact that the senior paediatrician manning the unit and the unit nurse manager had prior knowledge of the study. The unit nurse manager provided orientation to the unit, including a brief history of the ward. Once the researcher had become familiarized with the setting and the staff, the potential participants were approached. Participants who met the selection criteria were individually approached and invited to participate in the study. The researcher reintroduced himself, issued them invitation letters containing the information of the study and provided them with a brief description of the study. The purpose of the tape recorder was also explained (appendix A).

Once each participant had agreed to participate, two informed consent forms were signed, whereby participants consented to being interviewed and recorded (appendices B & C). Participants were informed that it was not compulsory to complete the interview recording and that they were free to stop at any point, should they wish to do so.

2.4 DATA COLLECTION

Data was collected using in-depth, unstructured interviews, combined with field notes. Data collection was a reiterative process and consisted of two phases: The first phase involved bracketing the interview and analysis so as to enable the researcher to suspend his preconceived ideas and judgments on KMC and to be open to participants' descriptions (Moustakas, 1994:84). The second phase of data collection involved the actual interviews with the participants selected for the study.

2.4.1 Bracketing phase

During the bracketing phase the researcher had to examine his thoughts by means of a reflective process. Any beliefs, thoughts, and misconceptions that the researcher may have had about 24-hour KMC during his clinical experience were bracketed. To achieve this, he had to reflect on the nature and meaning of the epoche, a term similar to bracketing used mainly in phenomenological studies (Moustakas, 1994:180). Although this bracketing may not always be perfectly achieved, one reason for doing it in a phenomenological study is to enable the researcher to become aware and conscious of underlying thoughts and beliefs that may influence the research and consciously set them aside. The second reason for bracketing allows readers to determine for themselves whether or not the researcher was successful in suspending his or her own views and whether or not any inherent biases influenced the research (Moustakas, 1994:180). Thus, in this study, bracketing allowed the researcher to clear his mind and suspend his expectations of 24-hour KMC.

Two preconceived thoughts that the researcher had to bracket before data collection and analysis were:

- 24-hour KMC exposes preterm babies to cold stress because they have less subcutaneous fats than full term babies.

- Preterm babies require professional management and hence transferring them to mothers' chest while still requiring intensive care subjects them to danger because mothers have neither the knowledge nor experience of nursing care.

2.4.2 Interviewing phase

Unstructured in-depth interviews were chosen for this study, whereby participants had the opportunity to narrate their lived experience with little interruptions from the researcher. This kind of interview often begins with a broad question, sometimes called a grand tour question, relating to the research question (Polit & Beck, 2004:340). Based on Kvale's (1996:32) description, unstructured interviews were appropriate for this study because it gave the participants an opportunity to speak out their experiences and perceptions of 24-hour KMC in their own way, providing rich descriptions essential for understanding mothers' experiences and perceptions. The interviews were recorded onto audio cassette after obtaining permission from each participant (refer to appendix C). A more detailed description of this process is described in page 47, section 3.4 of the next chapter.

The type of questioning used in these interviews were consistent with the requirements suggested by Moustakas (1994:104), in which questions should be stated in clear and concrete terms by ensuring that key words are defined, discussed, and clarified so that the intent and purpose of the study is evident.

The length of each interview ranged from 45 to 60 minutes. This was determined by the amount of information provided by the participants during each interview. The recording was considered complete when no further clarification was required as suggested by Kvale (1996:128). Field notes, written down by the researcher himself as indicated below,

supplemented each interview. The researcher did not involve a different person in writing the field notes as this could have interfered with participants' privacy and confidentiality (Burns & Grove 2003:171).

2.4.3 Field Notes

In order to enrich and explain the gaps of silence in the taped interviews, the researcher made use of field notes. These included portraits of each participant and sought to describe their physical appearance, mannerisms, or style of talking. Field notes were collected through observations before, during, or after each interview (Morse & Field, 2002:91-93) and were written during or immediately after the interviews and inserted at the relevant points during transcription. Such observations included the objective description of time, location, events, behaviours, and conversations that took place. Participants' behavioural patterns during the interview period were observed and noted, including body language and other non-verbal behaviours such as facial or emotional responses (Morse & Field, 2002:92). A full description of the environment, weather, external distracters, and any other activities occurring at the time of the interview were also noted and utilized during data analysis.

2.5 DATA ANALYSIS

The audio-taped interviews were transcribed and inductively analyzed together with the field notes. According to Creswell (2003:182), data collection and analysis are "developed together in an iterative process". Careful description of the data after accurate transcription of the interviews and the development of categories in which to place behaviours or processes have been proven to be important steps in the process of analyzing the data. Colaizzi's (1978) steps of phenomenological data analysis were used in this study because

it provides a clear account of the procedural steps involved in phenomenological data analysis (Polit & Beck, 2004:584).The following are the seven steps of Colaizzi method of analysis applied:

(i) The researcher read the collected data to become familiar and develop a feeling of it,

(ii) Each transcript was reviewed and any significant statement extracted,

(iii) Meaning was formulated from each significant statement in the context of participant's own terms,

(iv) Formulated meanings were then organized into clusters of themes,

(v) Results were integrated into an exhaustive description of the phenomenon,

(vi) Researcher formulated participants' descriptions in an unequivocal statement in the form of conclusion and provided a visual reference to specific themes,

(vii) Finally the researcher in this stage usually takes back the findings to the participants for validation.

The tape recorded interviews of all nine participants were transcribed verbatim and field notes were inserted where appropriate. After transcription the researcher re-listened to the tape recorded interviews while reading the written transcribed interviews so as to check for completeness. Each transcript was then analyzed. Refer to page 49, section 3.5 of the next chapter for full descriptions of each step used in data analysis.

2.6 TRUSTWORTHINESS

Trustworthiness of this study was achieved through openness and thoroughness in the collection of data with scrupulous adherence to a philosophical perspective of the study. Four strategies for ensuring trustworthiness suggested by Lincoln and Guba (1985:294) were followed; namely, credibility, transferability, dependability, and confirmability.

2.6.1 Credibility

Credibility refers to the confidence in the truth, accuracy, or believability of findings that have been collected and analyzed by the researcher (Polit & Beck, 2004:430). To ensure credibility in this study, the six techniques pointed out by Lincoln and Guba, (1985:328) were followed.

2.6.1.1 *Prolonged engagement*

Data collection took one and a half months. During this time, the participants became acquainted with the researcher. The researcher also had an opportunity to be with the participants, observing the interaction between mothers and their babies during breastfeeding, changing of nappies, sleeping and resting.

2.6.1.2 *Triangulation*

Triangulation is the use of various methods to examine the same phenomenon simultaneously or sequentially Morse & Field 2002:200). For example triangulation may involve interviewing multiple key informants about the same topic (person triangulation); multiple methods of data collection such as with the use of observations and interviews; or time triangulation where data are collected at different times of the day or at different times in the year (Polit & Beck, 2004:148). However, due to time constraint in this study as stated in page 85, section 4.3 of chapter four, triangulation was not fully exhausted. It was

partially employed with the use of interviews, observations, and field notes. Several participants were also interviewed on the same phenomenon, 24-hour KMC, at different periods. The study collection was done using audiotape recorded interviews which were then supplemented by field notes and observations. The aim of triangulation was to validate the conclusions through multiple perspectives.

2.6.1.3 *Peer Debriefing*

Peer debriefing is recommended by Polit and Beck (2004:432) as one of the processes that enhance the credibility of qualitative research because it exposes the researcher to deliberations posed by peers who are experienced in either the methodology or the phenomenon being studied, or both. The researcher can achieve this by presenting written or oral summaries of the data that has been gathered and analyzed. Though Babbie and Mouton, (2001:277) argued that peer debriefing should be done by a colleague holding a similar status, the researcher in this study chose to give his data analysis with the transcripts and audio tapes to the supervisor for scrutiny because of her experience in qualitative method as advocated by Polit and Beck (2004:432). This process promoted truthfulness and ensured that errors and biasness were minimized.

2.6.1.4 *Member checking*

Member checking enhances credibility. In member checking, researchers provide feedback to the participants of the study concerning the interpretation of the emerging data.

However, Polit and Beck (2004:433) caution that some participants may express agreement or fail to express disagreement with the researcher's interpretations either out of politeness or in belief that the researcher is more knowledgeable than themselves. Member checking was not used in this study because by the time preliminary results were ready, all the study

participants were discharged. Though member checking was not done, prolonged engagement, partial triangulation, and peer debriefing as explained in this text was utilized to enhance credibility of the study. Exploring other methods of data analysis minimized chances of biasness, which could result from lack of member checking. During this exploration period researcher identified two other methods frequently used in analysis. He found out that even though Colaizzi's method advocates going back to the participants, in literatuire this matter is being debated. For example, Giorgi's method relies solely on the researcher for validation of results arguing that going back to the participants with the analysed data is beyond their capabilities. The other method frequently used is Van Kaam's four-phase phenomenological method which involves extraction of descriptive expressions, identification of dimensions, intuitive categorization of expressions, and identification of common elements. Instead of member checking, Van Kaam's method requires inter subjective agreement with other experts (Polit & Beck, 2004:584). One of the limitations in this study was that member checking was not done. Validation of data was done through peer review and extensive literature review. Experienced researcher was also invited to through the different stages of data collection and using the journal notes to confirm and scrutinise data.

2.6.1.5 *Searching for Disconfirming Evidence*

Disconfirming of evidence is a systemic search for data that will challenge an emerging categorization or descriptive theory (Polit & Beck, 2004:433). In this study the researcher systematically searched for data that could challenge emerging themes by purposively selecting the participants that he thought could provide conflicting information. Two participants were chosen, one with a preterm baby that was not breastfeeding due to

medical reasons and the other was the mother of twins. The two participants chosen did not disconfirm the evidence already gathered.

2.6.1.6 *Researcher's credibility*

A researcher's credibility is based on his or her qualifications and experience in interview techniques which may be important in establishing confidence in the collection of data (Polit & Beck, 2004:434). In this study, interaction with mothers nursing their newborn babies was not a new experience to the researcher because he had obtained prior experience of more than two years working in a busy post-natal ward. Part of the interactions in this ward involved counselling which required mothers to express themselves more with minimal interruptions, similar to the interviews that he had conducted.

2.6.2 Transferability

Transferability refers to the extent to which findings can be generalized to other situations. Thick description is one of the techniques used to ensure transferability in qualitative studies (Brink, 2002:125; Polit & Beck, 2004:435). In this research report, thick description provided included rich and thorough description of the research context, participants' characteristics and the process observed during data collection so that readers can evaluate the applicability of the data to other contexts.

2.6.3 Dependability

Dependability refers to the stability of data over time and over conditions (Polit & Beck, 2004:434). Raw data and the description of how data was collected and analysed was kept for scrutiny by an external reviewer and the destruction of this data will only occur after

the publishing of this report. The audit trail has been written in thick descriptions to enable the reviewer to follow the trail of the researcher easily and confirm the findings of the study.

2.6.4 Confirmability

The confirmability ensures that the findings of the study are grounded in the data and can be confirmed by other reviewers (Polit & Beck, 2004:435). Confirmability has been ensured in this study by providing an audit trail containing the tracking of all the references used; audiocassettes made and interviews with accompanying field notes. All rough copies of data analysis were kept for peer review and member checks in order to validate how the findings were achieved.

2.7 ETHICAL CONSIDERATIONS

Before the study commenced, the researcher obtained approval from the relevant authorities stated previously in page 20, section 1.10 of chapter one. The researcher in this study was conscious of the ethical principles and strived to adhere to them. These include respect of individual human rights, namely rights to self determination, privacy, anonymity and confidentiality, fair treatment and protection from discomfort and harm (Burns & Grove, 2003:166).

2.7.1 Right to self determination

Burns and Grove (2003:166) describe the right to self determination as an ethical principle of respect for persons, indicating that human beings are capable of controlling their own destiny. The participants in this study were informed about the study by means of the information sheet that was issued to them before obtaining their informed consent. They

were also allowed to choose whether or not they wished to participate in the study. This included an availability of freedom to withdraw from the study at any stage of the study, even after signing the consent form, without being asked to give the reasons or being victimized (Refer appendix A).

2.7.2 Informed Consent

Written consent from the participants was only requested after disclosing the following essential information to the prospective participants as suggested by Department of Health and Human services and Levine in Burns and Grove (2003:177-181):

- Introduction of the researcher and research activities.
- Purpose of the research.
- Explanation that the participants' role only requested that they share their experiences and perceptions within their given time and date in the hospital.
- Assurance of anonymity and confidentiality.
- The study was voluntary and participants had the option to decline or withdraw at any point without prejudice.
- An opportunity was given to them to ask questions concerning the study before accepting to participate. The researcher's contact details were attached to each letter of information sheets. (Refer to appendix A)

2.7.3 Anonymity and confidentiality

Before each interview, participants were requested to give a pseudonym which was used during the course of the audio-recorded interview. These names were also to be used when quotes were mentioned in the research report. The use of these pseudonyms ensured participants' anonymity and confidentiality. Audio-cassettes and raw copies contain

confidential information and are stored in a safe location until the conclusion of this study, at which point, it will be destroyed.

2.7.4 Privacy

The interview process took place in a separate room where others could not hear the conversation for they had no right to such information. It would have been a serious violation of the dignity of the participants if other people were to be exposed to the interview process (Burns & Grove, 2003:171).

2.7.5 Fair treatment

The rights of all the participants who accepted or declined to take part in the study were equally respected. For example, the decision of one participant who declined to participate was respected and was not made public to the nursing staff. In addition to this, the researcher did not ask for the potential participant to motivate her decision.

2.7.6 Discomfort and harm

Each participant's comfort was ensured before the commencement of each interview and throughout the study. The room where interview took place was warm and quiet. The researcher's seat was identical to that of the participants and comfortable cushions ensured the participants' comfort throughout the duration of the interview.

2.8 SUMMARY

In this chapter research design and the methodology used was described. The research process involving the study population, the setting, sampling techniques and data analysis was discussed. The steps taken before gaining entry to the research site have been

explained. Lincoln and Guba's (1985:294) four strategies used in this study for ensuring trustworthiness were discussed.

CHAPTER THREE

PRESENTATION OF FINDINGS AND LITERATURE CONTROL

3.1 INTRODUCTION

This chapter presents the data that was analyzed to identify themes and sub-themes from the nine interviews conducted. Colaizzi's (1978) steps of analysis will be discussed and the participants' profiles and setting will be outlined. The emerging themes and the sub-themes are described and situated within the body of literature on KMC and related literature.

3.2 INTERVIEW SETTING

Each interview was conducted separately in an extension room at the KMC ward. This room was chosen because it was quiet, familiar to the participants and warm for the preterm babies. The senior paediatrician and the nurse unit manager of the KMC ward were approached for assistance in obtaining hospital records in order to identify potential participants. The interview setting was arranged in a manner that allowed the researcher and each participant to communicate on equal level. There was no desk separating them. All the nurses were very helpful throughout the course of the study.

3.3 THE PARTICIPANTS

In order to meet the purpose of this study, participants who had experienced the KMC process and were willing to provide a full description of their lived experiences and perceptions of 24-hour KMC were purposely selected. Inclusion criteria were based on the age, language, state of wellness and duration of providing 24-hour KMC. The full criteria

detailing steps taken in selecting participants is provided in page 27, section 2.3.3 of the previous chapter. Moreover, in a phenomenological study, the researcher aims to be the instrument for the collection of data by gathering individual narratives from a purposively selected sample (Morse & Field, 2002:116).

Potential participants were individually approached, invited to participate in their own time and issued with an information sheet pertaining to the purpose and procedure of study (appendix A). Individual appointments for the interview were arranged with participants who were willing to participate. The language of the interview was English which was the second or third language for some of the participants. All the participants who consented were actively involved in 24-hour KMC under supervision of the nurses. Table 3.1 provides a profile of the nine participants.

Table 3.1 A profile of the participants

Names (Pseudonym)	Age (Years)	Race	Duration in KMC ward	Her total No. of children	Marital Status	Baby's mode of feeding
Amikai	28	Black	7 days	2	Married	Formula milk
Gloria	38	Black	7 days	5	Married	Breastfeeding
Lissi	26	'Coloured'	10 days	3	Engaged, lives with her partner	Breastfeeding
Maggie	34	Black	13 days	3	Single, lives with her partner	Breastfeeding
Maria	18	Black	8 days	1	Single, lives with her parents	Breastfeeding
Pearl	19	Black	11 days	1	Single, lives with her parents	Breastfeeding
Precious	22	Black	7 days	1	Single, lives with her parents	Breastfeeding
Rachael	30	'Coloured'	14 days	3	Single, lives with her partner	Breastfeeding
Rebecca	26	Black	13 days	2	Single, lives with her partner	Breastfeeding

3.4 INTERVIEW PROCESS

Participants were given the information about the purpose and objective of the study and two separate consent forms were signed; one for the study and the other for audio taping (appendices A, B & C). Participants' questions and queries were answered to their satisfaction. At the beginning of each interview, participants were assured of anonymity and confidentiality.

The interview process started in a relaxed and friendly manner so that a relaxed and acceptable environment could be created (Moustakas, 1994:114). This introductory phase

of the interview involved explaining to the participants their expected role, the purpose of the interview, use of the tape recorder and any expectations that the participant may wish to discuss.

Each participant was requested to provide a pseudo name to be used by the researcher whenever referring to her self during the course of the interview. This was done to ensure the anonymity of each participant. As explained in chapter two, each interview was conducted using in-depth, unstructured interviews designed to elicit a detailed description of the participant's experience. The researcher opened each interview with the following question:

> *"Can you please talk to me about kangaroo mother care? I would like to know what you know based on your experiences, views, feelings, and perceptions"*.

This question was developed with the intention of providing participants with the opportunity to describe their experiences and perceptions of KMC in their own words (Moustakas, 1994:104).

After the initial request was made, each participant was expected to proceed with the expression of her experience for some time without being interrupted by any probing questions although the dynamics of each interview was different. Some participants expressed their experiences and perceptions in summary form and therefore prompting was required on the part of the researcher. Probing questions were asked in the interview either to elicit more information from the participant or to re-establish communication where the

participant had indicated that she had exhausted her views, feelings and opinions of KMC. At times, the original request was repeated, or summary statements were made using the participant's own words or phrases to encourage further description or clarification. This style of questioning was adopted from Kvale (1996:133) and Moustakas (1994:114). Any observed information such as silence, emotional responses, body gestures, or style of talking during this interview process was noted and later written down under field notes.

At the end of each interview, once the tape recorder was switched off, each participant was allowed to add any additional information or express any feelings about the interview. This was in line with Kvale's (1996:128) statement that after each interview the participants may feel a sense of emptiness resulting in tension and the anxiety of having exposed herself to a stranger without getting anything in return. Any new information that emerged was written down under field notes and later transferred to the relevant section during transcription. The length of interviews ranged from 45 to 60 minutes.

3.5 THE DATA ANALYSIS PROCESS

Data analysis within phenomenological research involves uncovering the essential structures of the phenomenon in question (Morse & Field, 2002:103). The process of data analysis used in this study was informed by Colaizzi's (1978) phenomenological data analysis. This was chosen because it provides a clear account of the procedural steps involved in phenomenological data analysis (Polit & Beck, 2004:584).

Each interview was transcribed verbatim (appendix I), the process of which will now be discussed in greater detail.

3.5.1 Transcription of data

As explained earlier, transcription of data is a critical stage in preparing for data analysis because the researcher has to ensure that the transcriptions are accurate, reflecting the totality of the interview experience and organized in a manner that facilitates analysis (Morse & Field 2002:107; Polit & Beck, 2004:348). The transcription was done word by word and empty spaces filled with field notes. Pauses were either indicated by the word "pause" or represented by ellipsis as supported by Morse and Field (2002:108). Recorded voices such as laughter or sharp reactions were written in brackets within the context of the statement (refer to appendix I). On completion of each transcript, the researcher checked for accuracy by simultaneously reading and listening to the audio-taped interview and making necessary corrections.

3.5.2 Steps of data analysis

Once the transcriptions were completed, a systematic analysis sought to reveal themes common to each participant's experience and perception by using the steps recommended by Colaizzi (1978). The following discussion explains how each step was used in this research.

Step One: Reading all the transcripts to acquire a feeling of the data

All the participants' transcripts were read. The purpose of this initial reading was to check the flow of conversation and to acquire a feeling for participants' experience. This process allowed the researcher to understand what the participants were saying and how they were saying it. The tapes were replayed several times so that the researcher could familiarise himself with each participant's experience. The statements that appeared to be revealing the mothers' experience and perception of 24-hour KMC were written in the margin or

highlighted. This was done to facilitate the organization, identification and retrieval of meaningful information within the data.

Step Two: Review of each transcript and extraction of significant statements

The researcher then reread the transcripts and focused on a line-by-line analysis. In total, the transcripts' eighty-three significant statements or phrases that directly pertained to mothers' experience and perception of 24-hour KMC during the hospitalization of their preterm babies were extracted. However, the researcher took into account that repetitive statements may also serve as an expression of emphasis, and accordingly went through each of the eighty-three statements again. Identical or similar meanings found were either combined together to provide fuller understanding or eliminated from the list. Thus, this elimination process finally resulted in 56 significant statements which eventually became the raw data for the analysis. An example of these statements is *"the baby becomes warm and grows faster"* (appendix J).

Step Three: Formulation of meanings from each significant statement

In this step, each significant statement was read carefully and the following questions were asked to direct the process and thinking, *"What does this statement mean?"* and *"What is the participant really saying?"* The researcher then took each significant statement and formulated the meaning in the context of the participants' own terms (appendix K). These meanings were arrived at by reading, re-reading, and reflecting upon the significant statements in the original transcripts, extracting the meaning of the participant's statement as it was in the original context. This was achieved by paraphrasing what the participants meant without changing the meaning of what they said.

Step Four: Organizing the formulated meanings into clusters of themes

The above step was repeated for each transcript and stated simply, concisely and in the researcher's own words. This required interpretation of each significant statement and discovery of meaning of the participants' comments. It was at this stage that the meanings from a number of interview transcripts were grouped or organized together into clusters of themes using inductive reasoning. This form of reasoning involves reasoning from specific observations to more general rules as explained by Polit and Beck (2004:12). Once these formulated meanings were organized into clusters of themes, each theme was referred back to the original copies of the transcripts for validation. In doing this, the researcher had to ask himself whether there was anything that was contained in the original transcript that perhaps was not accounted for in the clusters of themes and he also had to verify whether the clustered themes proposed any new information that was not included in the original transcripts. The emerging themes were then re-evaluated and compared with the original data for accuracy.

Following the initial readings and preliminary identification of themes in each of the interview transcripts, the researcher met with his supervisor to discuss the themes and areas that required more investigation. This process included re-examination of the previous clusters until three main themes finally emerged (Refer to table 3.2). Meetings with the supervisor were meant to ensure that the 'decision trail' could be followed and that the themes could be refined (Polit & Beck, 2004:435).

Step Five: Integrating results into an exhaustive description of the phenomenon under study

The results of stage four; namely, the participants' experiences and views from each theme were compiled and described at this stage. This process is called an exhaustive description of the phenomenon by Colaizzi (1978). Using an intuitive-reflective process, the meanings of the clustered themes were examined and an exhaustive description of the lived experiences formulated. This step involved transforming a unit of meaning in everyday language into a statement that described the experiences and perceptions of 24-hour KMC and thereby, disclose and elucidate the phenomenon.

Step Six: Formulating an exhaustive description as an unequivocal statement

The exhaustive description of mothers' experiences and perceptions of 24-hour KMC, described above, was at this stage written down in unambiguous statements. Similar themes were grouped together and synthesized into broader, yet more descriptive, themes that were common to all the transcripts. Three major themes emerged, each having two or more sub-themes (Refer to table 3.2) which were later reduced into a common story describing the mothers' experiences and perception of 24-hour KMC in the hospital setting. The participants' exhaustive descriptions of experiences and perceptions at the end of each theme were at this stage presented in the form of a conclusion or with the use of diagrams (Refer to figures 3.1 and 3.3).

Step Seven: Member-checking

This is the final step that is required before a comprehensive research report can be written. It is at this stage that the researcher returns to each participant to validate the interpretations of his or her findings (Polit & Beck, 2004:432). However, this step was

omitted from the present study because all of the study participants had been discharged from the hospital by the time the preliminary results were completed. As a result, other methods were explored as explained earlier in page 38, section 2.6.1.4. In this case the researcher subjected the results for scrutiny to an experienced researcher as advocated by Van Kaam's method of phenomenological analysis (Polit & Beck, 2004:584).

3.6 THEMES AND SUB-THEMES OBTAINED FROM THE DATA ANALYSIS

Three major themes and eight sub-themes emerged from the data analysis. Table 3.2 provides a summary of the themes and sub-themes that were identified.

TABLE 3.2 THEMES AND SUB-THEMES

NO	MAJOR THEMES	SUB-THEMES
1	"It is a bond between me and my child" (3.6.1)	"I play and talk with him/her" (3.6.1.1) "My baby is close to me" (3.6.1.2) "I give love to my child" (3.6.1.3)
2	Nurse-parent interaction (3.6.2)	"They (nurses) taught us" (3.6.2.1) Partnership in care (3.6.2.2)
3	"It is tiring and exhaustive" (3.6.3)	"We don't sleep" (3.6.3.1) "My back is sore" (3.6.3.2) "It is very hot" (3.6.3.3)

Each theme and sub-theme will now be described in more detail and illustrated by quotations from the participants, and supported by the current body of literature on KMC.

3.6.1 THEME ONE: "IT IS A BOND BETWEEN ME AND MY CHILD"

All nine of the study participants described bonding as an ongoing affectionate process that takes place between the mother and her preterm baby during their close contact, talking, playing and breastfeeding. Bonding is referred to in the literature as "maternal-infant attachment" (Hockenberry, 2003:282). The period immediately after delivery and for a short time after is also regarded as a sensitive period where maternal-infant attachment commences (Klaus & Kennel, 1976:68; Klaus, 1998). As a result of maternal-infant interactions, close contact, and commitment to love and care, attachment process progresses between the mother and her baby and endures over time as the mother comes to know, love, and accept her baby (Klaus & Kennel 1976:68; Tilokskulchai, Phatthanasiriwethin, Vichitsukon & Serisathien, 2002:80; Hockenberry, 2003:362) as explained by one participant .

"*Kangaroo care is lovely because it is a bond between me and my child"* (Rachael).

3.6.1.1 *Sub-theme One: "I play and talk with him/her"*

All the participants in this study described maternal-infant attachment as developing during interaction with their preterm babies. Talking and playing is referred to in the literature as maternal-infant interaction that takes place between the mother and her baby during the attachment process (Feldman et al., 2002). These interactions involved talking, touching, gazing, smiling, and playing. It takes place even when the baby is asleep or breastfeeding. Two participants said:

"When he is not asleep, I just talk with him, play with him" (Amikai).

"I sometimes just look at his face and smile. It makes me happy; most of the time I enjoy watching him sleeping" (Lissi).

These behaviours do not occur in a sequence but instead each individual behaviour pattern triggers several others. The effect of maternal-infant interaction is like a multitude of ever-increasing rings that appear in a pool of water when a stone is dropped into it (Klaus & Kennel, 1976:67; Dodd, 2005:224). For example, a baby's cry may prompt other forms of interactions listed above such as mother's touch, rocking and kissing to soothe the baby. One participant explains:

"When my child cries I just play with him and talk with him" (Maggie).

Maternal-infant attachment is a process that begins soon after birth in cases where there is no interference with the interaction between mother and baby (Klaus & Kennel, 1976:67; Klaus, 1998:1244). However, at the time of study, the situation at CHB hospital was different because mothers whose preterm babies weighed less than 1200 grams were immediately separated from their babies after birth. Preterm babies were soon transferred to NICU for specialized treatment. Mothers were discharged home and only allowed to visit their babies. For example, two participants expressed their joy while in the KMC ward:

"I am happy about KC because I am with my baby throughout but before [prior to KMC] *I was with my baby only during the day; at night I wasn't sleeping - thinking about my baby all the time; I am now the one feeding, changing* [the nappies], *you know … I am happy for that"* (Maggie).

"KC is very nice… I am now with her for 24 hours" (Precious).

Literature studies promote 24-hour KMC as a preferred method of maternal-infant interactions and care by mothers with preterm babies because it avoids the separation that normally takes place soon after birth (Legault & Goulet, 1995:504; Roller 2005:215). Separation negatively affects the maternal caring role and results in unsatisfying moments of alienation from their responsibilities of caring (Sim-Jones, 1986:395; Miles, Funk & Kasper, 1991; Miles, Funk & Kasper, 1992). This separation traditionally takes place soon after delivery because the baby's prematurity demands rigorous care in NICU (Fraser & Cooper, 2003:893; & Hockenberry, 2003:338). From these studies, maternal calmness observed during interaction with their babies through sensory experiences of touch promotes the maternal-infant attachment process.

However, failure to introduce 24-hour KMC soon after birth leads to maternal fear of touch while the baby is still on monitoring machines (Bruns-Neumann, 2006). According to most of the participants in this study, fear hindered them from freely touching their babies while in the NICU. This could have had a negative impact on a normal attachment process that is expected to begin soon after birth.

"I couldn't touch the baby because he was very tiny, small. It took me four days to touch the baby and feel the baby; I told myself may be they have changed my baby; this is not mine" (Rebecca).

However, attachment through interaction was also influenced by the expectations that mothers had with regard to their babies' state of survival and indeed, some of the participants did not expect their babies to survive for long. One mother in this study was affected to the extent that she did not purchase any additional clothes for her preterm baby.

She stated that she was not expecting her tiny baby to survive for long and therefore there was no need to purchase more clothes.

"He was so small; It was my first time to get such a small tiny baby; I didn't buy a lot of clothes for him; I only bought two vests, one overall, pair of socks, and a blanket because I didn't believe my child was going to be alive for so long" (Maggie).

Another participant with a similar experience did not wish to be attached to her baby soon after birth because she did not believe that her baby would survive. She said:

"Ah… there were no feelings because he was so small but the only thing that I said is that if he can grow up then he can stay there in the incubator" (Rebecca).

Literature studies show that the arrival of a preterm baby is a fearful experience for mothers because they are psychologically and emotionally unprepared to receive them. This fearful experience is aggravated by uncertainty of the baby's survival (Kersting et al., 2004 & Bruns-Neumann, 2006). Similar findings of unpreparedness were found in this study because none of the participants who were interviewed were expecting premature deliveries in the course of their pregnancy. For example one participant in this study was just attending a scheduled check-up when she was sent for admission after assessment as explained below.

"When I went to the clinic I was told I was to be taken to the hospital for admission because my blood pressure was high; the sonar indicated that my child was not breathing nicely and hence I was done caesarean section before time" (Maggie).

In spite of these interferences with maternal-infant interactions soon after birth, the findings of this study noted a change of perception after each participant had started

providing KMC to their babies. Their negative perceptions of their babies did not last long and some of participants who were initially afraid to touch their babies were then able to interact with their babies freely during KMC. One mother explains:

"Before, I was so scared; I was so scared because she was so small; I couldn't even wash her; it is my first child … so you understand why I was so scared; I kept looking at her; I had never touched her until here [KMC ward] *and as time goes by, I became fine and accepted; actually when I see her now I see a big child; I am used to her now; I am no longer scared of anything"* (Precious).

Interruptions during the early interaction process combined with concerns about the newborns' survival and long term prognosis may interfere with the maternal-infant attachment process (Klaus & Kennel, 1976:67; Nystrom & Axelsson, 2002:278). However, with early introduction of KMC, initiation of maternal-infant attachment is enhanced even in the NICU environment (Roller, 2005:213).

3.6.1.2 ***Sub-theme Two: " My baby is close to me"***

Maternal-infant closeness was described by all participants to have had a link in bonding them with their babies because of being with them 24 hours a day. In addition, each participant perceived a close relationship between the baby's safety and closeness during the attachment process and breast milk production. Although most of the participants did not use the word 'safety', their descriptions of closeness linked KMC to the easy monitoring of their babies with regard to any potential complications.

"When providing KC to the child, it is easy to see her if in case any changes like colour or anything happens to her. It is easy to see. Even breathing you can hear the heart beat when

she is in your chest but in the incubator you won't be able to notice that earlier. In the incubator she is not all that close like in my chest" (Precious).

A similar experience was shared by another participant who stated:

"You know sometimes 'nneh' one thing about kangaroo care is that the baby is with you but when she is in the bed you can't hear if something goes wrong with her" (Gloria).

Evidence of attachment during KMC is noted when a mother and her baby are temporarily separated. For example, one participant in this study who was temporarily separated from her baby when she was taken for specialized treatment experienced a feeling of loneliness within 12 hours even though she could deliver her usual maternal services such as cleaning, changing of nappies and feeding. She said:

"I feel lonely because I am used to having her close to me; kangaroo is a nice experience" (Rachael).

Similarly, another participant reported that her baby would feel uncomfortable even with a short separation.

"My child cries whenever I am not with her until I come back… that's when I leave her and go to the toilet" (Gloria).

The literature suggests KMC plays a major role in enabling mothers and babies to become acquainted with each other as this is the first step in the attachment process (Goulet, Bell, St-Cyr, Paul, & Lang, 1998:1073; Roller 2005:213). They argued that mothers' closeness to their babies during KMC enables them to become familiar with each other's cues. For example, one participant in this study said:

"My baby gets to know me better because I am next to her. She gets used to the smell; in the incubator she is not all that close like in my chest" (Precious).

The literature suggests that recognition through closeness to the mothers' nipples and auxiliary odours play a major role in maternal-infant attachment. Newborn babies tend to learn more about their mothers' cues through this kind of odour thus enabling them to recognize their mothers' unique scents and attract their maternal responsiveness towards their needs. Mothers' responses may include greater levels of nurturing and loving care in terms of feeding, embracing, rocking and maintaining prolonged visual contact (Cernoch & Porter, 1985:1596; Goulet et al., 1998; Porter & Winberg, 1999; Britton, Britton & Gronwaldt, 2006).

In addition to the process of acquaintance and concerns for the baby's safety, other additional benefits of maternal-infant closeness have been observed. For example, stimulation of mothers' breast milk and early initiation of breastfeeding have also been observed among the preterm babies when mothers experience this kind of closeness to their babies through skin-to-skin contact (Tessier et al., 1998; WHO, 2003). In this study, one participant who had twins initially did not have enough breast milk for her two babies but observed an improvement after starting to provide KMC.

"My milk wasn't enough to accommodate my two babies before but now is much better … the milk is just coming out fine; it can accommodate the two of them" (Lissi).

Another participant explains that her breast milk was enough for her baby to breastfeed at any time that her baby wished to suckle during KMC.

"I am breastfeeding on demand; my milk is too much" (Maggie).

It has been noted that early maternal-infant closeness promotes breastfeeding. Moreover, mothers who breastfeed their babies, in the absence of contra-indication, are noted in the literature to display an enhanced sensitivity towards their babies, fostering secure maternal-infant attachment (Gromada & Spangler, 1998:448; Vaidya, Sharma, & Dhungel, 2005:138; Britton et al., 2006).

3.6.1.3 ***Sub-theme Three: "I give love to my child"***

The sub-theme "I give love to my child" was described by each participant as an experience that creates responsibilities and choices that benefit the baby. All participants in this study felt responsible for the love, growth and development of their babies. For example, one participant said:

"I just give love to my child wholly. Kangaroo care wants you, a real mother… because sometimes you feel so tired but if you are a mother you can do it. You can't feel tired because you like it and you want your child to grow up but if you are not a real mother you can't do this [KMC]*; premature baby needs love, strong care, you see"* (Amikai).

Feelings of love in the relationship with the baby are essential for acquiring higher levels of affiliation that may create an emotional climate conducive to attachment (Goulet et al., 1998:1075). A close link between attachment and how mothers respond to their babies' cues however, has been established in the literature (Mercer, 2004:227; Roller 2005:213). Attachment enables parents to provide nurturing behaviours that support the baby's growth and development (Dodd, 2005:226).

For conducive growth and development of the baby during KMC all participants in this study conceded with the fact that any mother providing 24-hour KMC ought to

demonstrate love for her baby. Based on their description, attached mothers feel engaged toward their babies' growth and development by being committed not only to oneself but also by ensuring that nothing within their environment distracts their commitment in administering their maternal loving care. Two participants said:

"You must be happy, you must be friendly, you must talk [while providing KMC] *and if there is anything worrying you then you must call the sister and say I have a problem like this and this and she can help you"* (Maggie).

"If you are stressed it affects the baby; it affects the weight… especially when breastfeeding because of the bond… the child sense anything that goes on in your life" (Rachael).

According to Radke-Yarrow and Nottleman (1989); Bialoskurski, Cox and Hayes (1999), babies are in tune with their mother's emotional signals such as voice, gestures, movements and facial expressions. At the same time any negative or less positive emotions may interfere with the attachment between the mother and her baby. Babies who elicit negative emotions during the care may cause the mother to feel rejected and discourage her efforts in developing a mother-baby intimacy (Goodman & Gotlib, 1999; Armstrong, Fraser, Dadds, & Morris, 2000:558). In this study the participants expressed that their observation of their babies' growth played a crucial role in their commitment to love and care while providing 24-hour KMC. This involved the monitoring of their babies' weight. Positive results encouraged them to continue with the care and findings revealed that they slowly became convinced of and satisfied with the benefits of 24-hour KMC as they continued with the care.

"At first I didn't believe in this thing called KMC, I thought it was a waste of time but since I came here to KMC ward my baby has grown; it helps the baby to grow; I then started believing in this thing, it is amazing; it is working; I am happier my baby is growing because of KC" (Lissi).

In this study the benefits of KMC were found to have been more rewarding than any of the challenges that participants were facing. For example, one participant explains how the benefits of KMC provided her with strength and joy. She said:

"For the first time, you get tired but after sometimes, you don't get tired because you need that weight, you are pushing that weight; it gives you power and happiness" (Maggie).

In a separate study by Karen (1994), Bernal and Meleis (1995), mothers were noted to develop pride and deep satisfaction when they were with their babies, providing nurturing care and observing their growth. In addition, mothers also expressed their comfort during KMC through active participation in gazing at their babies, talking, smiling and even playing with them (Klaus & Kennel 1976:67; Legault & Goulet, 1995:504; Feldman et al., 2002).

Based on their experiences, each participant in this study attributed their babies' progress to their commitment to love and care during 24-hour KMC. Besides commitment to love, they all described KMC as a provider of a comfortable, satisfying, and warm environment for their babies. For example, one participant said:

"Kangaroo care is a good thing because it keeps the baby warm and make the baby grow faster; this kangaroo thing is still an incubator " (Rebecca)

Warmth was measured by some participants through sweat. Two participants said:

"I have noticed the child becomes warm while in my chest… every time I take her out, I see some sweats coming out from both of us" (Gloria).

"I am feeling hot even when I am sitting in a chair … I am feeling sleepy." When asked what this meant to her she said, *"It means my baby is growing"* (Rebecca).

Mothers and their preterm babies appeared to have a thermal synchrony during KMC. Thermal synchrony is described by Anderson (1989:662); Ludington-Hoe and colleagues (2006:227) as a state in which a mother's temperature rises when the baby's temperature is low as a natural attempt to restore the equilibrium.

Another positive result of mothers' commitment to care and love during KMC was evidenced through the quality of the baby's sleep. For example, one participant noted that her baby slept quietly for longer periods of time when he slept on her chest compared to his sleeping patterns in the incubator. This made the participant feel that KMC was a comfortable environment for her preterm baby. In her argument, KMC is similar with the mother's uterus, making the baby feel comfortable to play and move around freely. She said:

"Once in my chest, he could sleep quiet longer than when he was in the incubator… so you can see that he is much more comfortable; in most cases … what he is experiencing is what he was experiencing while in my 'stomach', the warmth, he moves around, you know, because of the warmth" (Pearl).

As a confirmation of these findings a comparative case study done between an open-crib and KMC by McCain and colleagues, (2005:692) showed similar results. They discovered that the baby in the open-crib was restless and fussy, which revealed the baby's stress levels. However, soon after he was transferred to KMC, these signs of restlessness ceased immediately and the baby fell into a quiet sleep.

Although the majority of the participants found 24-hour KMC to be exciting, satisfying and felt that it enhanced their commitment to love and care during the attachment process, the youngest participant, however, found the ward environment boring. She explains:

"You just long to get home quickly because they don't make the environment friendly for the mothers; it is good for the babies but the problem is for the mothers because we are not sick; it is not fun to be here; it is boring, it is boring; doing the same thing day in day out; at least the TV is here, it gives us company but we should go out at times instead of being locked here for 24 hours; I missed the people, my family and friends" (Maria).

Boredom is defined by Wehmeier (2000:124) as a state of being weary and impatient due to lack of interest. Based on WHO (2003:23), mothers providing 24-hour KMC are required to engage in any acceptable activity such as walking, standing, sitting or getting involved in different recreational, educational or income-generating activities to reduce boredom. These activities may make their hospital stay more enjoyable and reduces boredom.

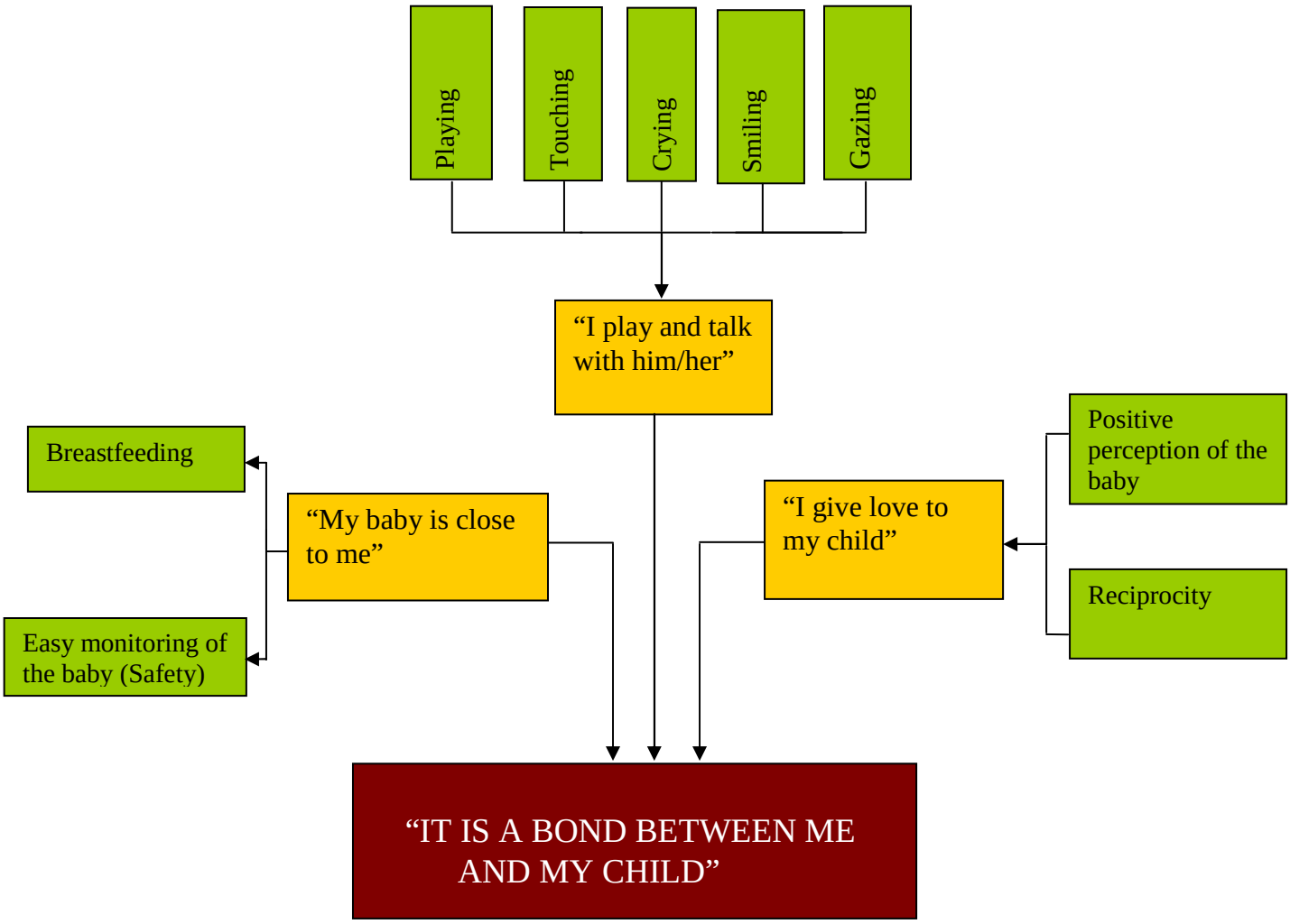
As stated in page 30, section 2.3.5 of chapter two, the KMC ward at this hospital consists of a hall with twenty adult beds and an equal number of baby cots. There is a chair and a small cabinet next to each bed. It is approximately one meter between each bed. Newly

admitted babies and their mothers were given beds next to the nursing station while those who had demonstrated competence in care and were about to be discharged were placed at the extreme end of the ward. The ward had one television set. Each mother was free to move around within the ward with the exception of the specialized treatment room unless her baby was in that room undergoing treatment. Since the surrounding walls were made of transparent glass, it was not possible for the mothers to look out.

3.6.1.4 Conclusion on the theme "It is a bond between me and my child"

Bonding (maternal-infant attachment) involves continual maternal-infant interaction, closeness and maternal commitment to love and care for their babies. Interaction with their babies through talking, playing, smiling, gazing and touching are among the attachment behaviours that mothers display during their attachment process. This arouses feelings of love and joy in the mother and enhances maternal-infant attachment. Figure 3.1 provides a summary of the theme.

Fig 3.1 Maternal-infant attachment



3.6.2 THEME TWO: NURSE-PARENT INTERACTION

The nurse-parent interaction was described by all participants as helpful in acquiring knowledge and getting into partnership to care of the baby. The partnership with the nurse was of great significant in the period of transition to motherhood and adjustment in the KMC ward. Some of the expectations noted in this study included mothers' desire to acquire information regarding their babies and KMC which was new to all, close supervision, and to be involved as partners in the care of their babies.

3.6.2.1 ***Sub-theme One: "They (nurses) taught us"***

All participants needed information regarding their preterm babies and the care during their transitional period to motherhood. From each description, nurses played a crucial role in helping them to learn how to care for their babies during this period.

"*They* [Nurses] *have taught us to look at the legs of the baby, the hands, finger tips … you see and toe nails; we have also been taught what you can do when the baby reacts that way, …"* (Pearl).

The literature describes the role of the nurse, which includes the sharing of health information with the mothers, the organisation of opportunities for them to network with others mother facing similar problems and helping them in their transition to motherhood (Abriola 1990; Gill, 2001:403 Ekstrom & Nissen, 2006). Through the organized support group facilitated by nurses in this KMC ward, some participants in this study reported that they were able to learn more about preterm baby care during their 24-hour KMC.

"We get to come together and talk about our children, when they get sick what to do and then to check actually … the whole issue about motherhood; obviously you will know what to do when the child gets sick since we have talked about that" (Lissi).

The knowledge of care during the transition period may originate from interactions with nurses, paediatricians, mothers in the same situation, relatives, friends, books and magazines (Bondas-Salonen, 1998; Veddovi, Kenny, Gibson & Starte, 2001). However, this knowledge may not be possible without the facilitation of the nurses. In this study, knowledge acquired during 24-hour KMC was highly appreciated by each participant because their preterm babies were prone to complications and such knowledge prepared

them for any such crisis. In their explanations of what they had learnt, two participants said:

"I know the colour of my child is pink, so if I look at her and see a colour like blue, I know that there is something wrong with my child; I also know how she breathes; if she can breathe slower or faster, I can tell" (Precious).

"What I have also learnt here is that when doing KC, you have to be observant; it might happen that your baby changes colour, you see… like in less oxygen" (Pearl).

The role of the nurse during the transition period is to maintain ongoing communication with parents and enhance maternal responsibilities and control in the care of their babies (Holditch-Davis & Miles 2000; Jackson, Ternesstedt & Schollin, 2003:126). Continuous communication between the mothers and the nurses including support and counselling may enable mothers to develop a sense of meaning, mastery, and self-esteem during KMC (Affonso, Bosque, Wahlberg & Brady, 1993; Mok & Leung 2006; Wiegers, 2006). In this study, the sense of meaning and mastery was evident as Rachael explains:

"It is something new I have learnt. I never knew about KC and so they [nurses] *taught me the first time I came here* [KMC ward]*; I want now to take my baby home… I know how to take care of him because I have the experience and I can do it for myself; I am not complaining now about KC… it is a nice experience… it is lovely "* (Rachael).

Knowledge acquired through nurse-parent interaction empowers parents in the care of their babies, encouraging them to participate in decision making, and ensuring continuity of care. Parents expect nurses to be a human resource and give support, not an authority but someone who would be on their level to share their feelings during hospitalization of their

babies (Fagerskiold, Wahlberg & Ann-Christina, 2000). When the nurses are friendly, the mothers' fears of disease, strangeness and alienation are replaced by feelings of satisfaction, belonging and involvement and this clearly contributes to a deeper enjoyable experience (Geanellos, 2002 & Jackson et al., 2003:127). Moreover, this relationship within the present study was reported to have been of great value when participants were faced with problems. For example, one participant who at the beginning of KMC was discouraged by a drop in her baby's weight later became satisfied because of the support she had received from the nurses at the KMC ward. She said her discouragement had resulted in her negative perception of KMC, perceiving it as a waste of time and could not believe in it any more.

"I got discouraged [when the weight of her baby dropped] *and couldn't believe in it… but later I got encouragement when the nurse talked to me about KC and explained everything"* (Lissi).

Encouragement and support provided by nurses to mothers during 24-hour KMC improved their level of confidence. This in turn facilitates the continuous involvement of their babies' nursing activities and prepares them for new challenges that may arise during the course of their maternal responsibilities (Legault & Goulet, 1995:505; Mercer, 2004:227; Mok & Leung, 2006).

3.6.2.2 <u>Sub-theme Two: Partnership in care</u>

Participants in this study expressed satisfaction during their babies' hospitalization for being treated by nurses as partners in the care of their babies. Partnership in care started while their babies were still in NICU. Negotiation between the parent and the nurse in

relation to the wishes of the family forms the basis for partnership in baby care (Darbyshire, 1994; Thompson, Hupcey, & Clark, 2003:144). In this study, the participants were involved in decision-making. For example, one participant said:

"When he was off medication, one sister came to me and asked me if I knew about KMC. I asked her a lot of questions. What does it do? How does it help my baby… things like that (Pearl).

In relation to the baby's nursing management another participant said:

"They asked us if we want early discharge" (Maggie).

Taking time to listen and communicating has been recognized as a crucial requirement in building a trusting relationship between parents and paediatric nurses (Mok & Leung, 2006:729; Lynn-McHale & Deatrick, 2000). Positive nurse-parent relationship in this study enabled some participants to express their feelings of disappointment freely to the nurses whenever they were affected. One participant mentioned the following example:

"Whenever the sister hurts me I go to her and express my feelings and as soon as she apologizes it gets finished like that" (Maggie).

Handling different parents' needs in an individual fashion is perceived as an important way of establishing a nurse-parent partnership with each individual parent (Darbyshire, 1994). This study revealed that the nurse-parent relationship made some participants feel at home and comfortable during the hospitalization of their babies.

"When I came here I felt at home; KC is so exciting" (Pearl).

Although all the mothers in this setting were actively involved in the care of their babies, nurses were always there for them, available for questions and assistance in case of any problem. For example one participant in this study narrated how partnership in care helped her friend's baby. She said:

We were breastfeeding the babies and after she put her baby inside [her chest], *she couldn't feel the baby breathing. Due to this she looked at him and the baby's mouth was bluish and the sister helped her… the sister took the baby back to the ICU" (*Rebecca).

Partnership in care enables mothers to shift from being passive observers to active participants. This occurs when nurses provide different kinds of information at different stages of their babies' hospitalization. When mothers are continuously and consistently informed about their babies' condition, they become knowledgeable and more likely to be active partners in caring for their babies, particularly in the areas of babies' health, babies' care, coping with and adapting to her individual baby (Mok & Leung, 2006:731).

3.6.2.3 Conclusion on theme of nurse-parent interaction

Mothers were satisfied with the nurse-parent interaction because of the role that nurses played in helping them during the transition period into motherhood and adjustment to KMC through their teaching, support, guidance and monitoring.

3.6.3 THEME THREE: "IT IS TIRING AND EXHAUSTIVE"

All the participants in this study described their experience in the KMC ward as including a consistent feeling of tiredness during 24-hour KMC as a result of inadequate sleep, high body temperatures, and the use of one position for sleep and rest. This experience is referred in the literature as fatigue and is considered as a common problem among mothers that continues for as long as 19 months after delivery (Carty, Bradley & Winslow, 1996; Troy, 2003:254). A detailed description of the current study is provided below:

3.6.3.1 *Sub-theme One: "We don't sleep"*

Each participant described inadequate sleep as the result of interruptions to the normal sleep cycles. These disruptions were the result of the routine three-hourly baby care provided by the mothers to their preterm babies. These included feeding and the changing of nappies. Besides this, the sleep according to some participants was not comfortable because their babies lay on their chests while they were asleep.

"You don't sleep normally, you are always awake, nurses are always here, they check on you, you change the nappies, feed the baby; you don't sleep nicely; besides that you don't sleep normally, you sleep with the baby; that is not normal, baby in the chest, that is not normal" (Rebecca).

According to DeLaune and Ladner (2002:944) sleep generally occurs in a periodic cycle that usually lasts for several hours at a time. Normal sleep consists of two stages; namely non–rapid eye movement (NREM) and rapid eye movement (REM) stages. NREM is further subdivided into the following 4 stages: Stage one is comprised of light sleep while stages two, three and four comprise of deep sleep. Stages one, two, three and four are

followed by REM sleep. A complete sleep cycle, from the beginning of stage one to the end of REM sleep, usually takes about 90 minutes. When each stage is interrupted the cycle begins afresh. One complete sleep for an adult comprising of all the cycles lasts approximately seven to eight hours.

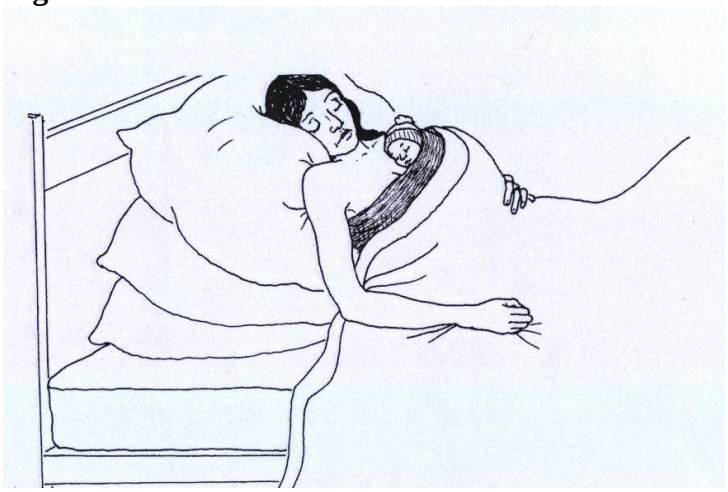
However, it is clear from the findings of the study that one complete sleep was not possible with the care of the newborns because each baby required three-hourly feeding. This made adjustment, both to KMC and the environment, somewhat difficult for most of the mothers in the first few days. DeLaune and Ladner (2002:945) further explain that when the sleep pattern is not consistent, a desynchronization, or mismatching of the circadian biological rhythms occurs, thereby disrupting the timing of physiological and behavioural activity, which in turn causes fatigue. In relation to this, one participant said:

"Oh … I was so tired, I felt like crying; I felt like crying because my eyes were painful but my baby kept me strong because I love my child; I told myself that I have to be strong; I shouldn't allow my tiredness to overpower me" (Precious).

In summary of these individual experiences, all of the participants in this study initially found 24-hour KMC to be tiring.

3.6.3.2 <u>Sub-theme Two: "My back is sore"</u>

Fig 3.2



All participants in this KMC ward were expected to be in reclined or semi-recumbent positions whenever they wanted to sleep or rest as observed in figure 3.2.

(WHO 2003: 24) [Permission for reproduction obtained from WHO – Refer to appendix L]

Each participant described this position as a precursor to backache and fatigue during KMC. Backache was a common problem among all nine of the mothers doing KMC. For example one participant in this study said:

"Everything was okay except that it was difficult the first time to kangaroo the child; I had the back sore … backache … you see" (Gloria).

The literature suggests exercise as a means of alleviating discomfort and backaches (Cailliet, 1984; Fraser & Cooper, 2003:218; Rainville, Hartigan, Martinez, Limke, Jouve, & Finno, 2004). Exercise alleviates backache by permitting greater movement of the back when the muscles are elongated. Two participants concurred with this as they temporarily discontinued 24-hour KMC in order to relieve their backs through slight exercises:

"I happen to get pain may be on my shoulder, my back; it is discomforting me; I stop the kangaroo; they [Nurses] *just asked us why are you not doing KC and then you tell the reason; do some exercise may be for fifteen minutes or so"* (Lissi);

Another participant similarly said:

"When you are tired you can let your baby on the crib, you are resting your back and you are resting yourself and then you take back your baby and kangaroo again" (Pearl).

Fraser and Cooper (2003:33) understood women's fatigue during the postnatal period as a consequence of the physical demands of caring for a newborn baby and that is augmented by disturbed sleep. WHO (2003:24) instructs mothers who are providing KMC to sleep in a reclined or semi-recumbent position forming an angle of about 15 degrees upwards as shown in figure 3.2. This position was achieved in this ward by using several pillows.

Once the preterm baby was in this KMC position, it was able to feed well, maintain a stable body temperature and once it had attained a minimum weight of 1650 grams, he or she was eligible for discharge especially if the mother had demonstrated confidence in KMC. This is crucial because according to Tessier et al., (1998) and WHO (2003:25), mothers are expected to continue providing 24-hour KMC after discharge until the baby completes 40 weeks of gestational age. However, upon reflecting on their individual experiences of fatigue, all the participants in this study conceded not to use 24-hour KMC once discharged. Their decision was made mainly upon anticipation of other responsibilities that are expected of mothers in the home environment. For example two participants said:

"I don't want to lie to you; I want to tell you straight; at home there are many things that you need to do; it is not like here; I am not going to do for 24 hours but will do most of the time" (Precious).

"It is going to be difficult because at home I will be doing some work; it is not like here where they cook for us, they do everything for us and only leave us to do kangaroo care and bathe ourselves" (Maggie).

Although mothers realize the importance of KMC, personal and family problems with maternal responsibilities have been shown to interfere with their active involvement of care (Toma, 2003).

3.6.3.3 ***Sub-theme Three: "It is very hot"***

All participants experienced high temperatures during KMC and felt these were responsible for their continuous exhaustion. Participants found it difficult to adjust to the high temperature caused both by the ward's temperatures and their bodies' heat in relation to direct skin contact with their preterm babies. The heaters were at the time of study regulated to the WHO's suggested environmental temperatures of 22-24 ^{o}C. (WHO, 2003: 15). Two participants said:

"They opened the heaters; it is hot; the heaters are always open here; it is hot; we open the windows sometimes but sometimes are closed; they say the babies need to get warmth; it makes me feel so tired" (Rebecca).

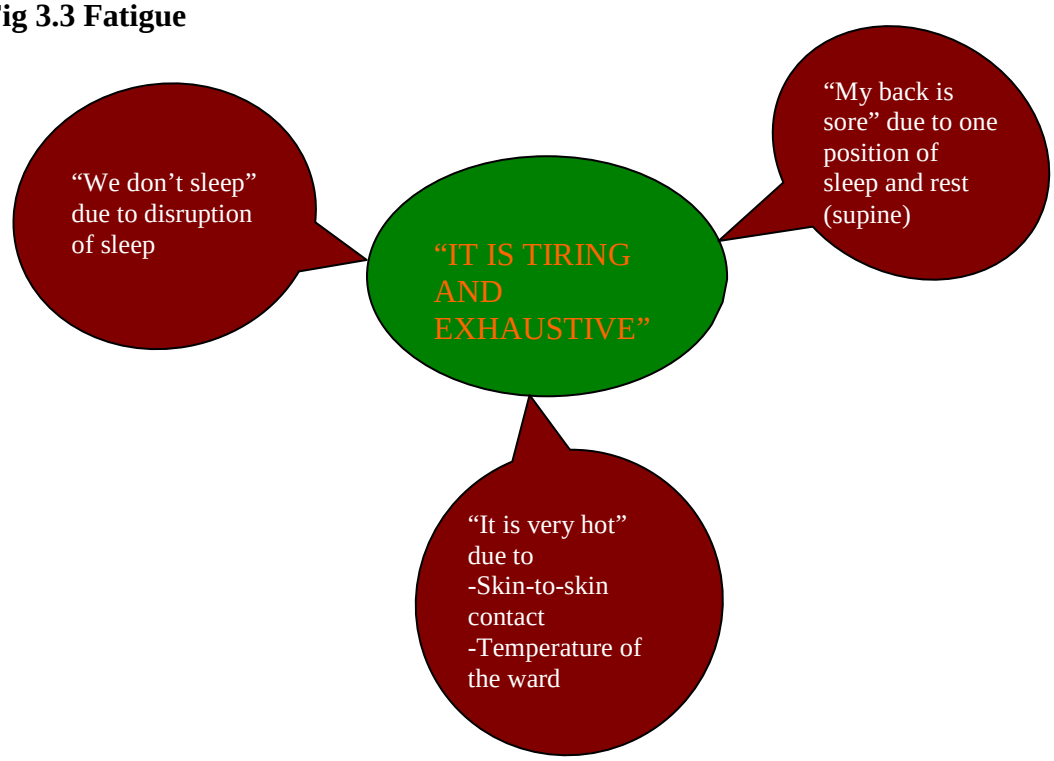
"It is tiring; it is hot when the baby is here, skin to skin, though the heaters also contribute; you can't do anything out there when the baby is here; this is what I have experienced; you feel sleepy" (Maria).

The continued use of heaters was encouraged to maintain the recommended ward temperature as explained previously, especially given that the data was collected during the winter season where exterior temperatures ranged between 0 and 16 degrees centigrade. Moreover, mothers' feelings of exhaustion and sleepiness could be attributed to the heat generated through skin contact with their babies. In the literature studies, skin-to-skin contact during KMC enables a mother's breasts to generate heat in response to the thermal needs of the baby (Anderson, 1989:663; Ludington-Hoe, Nguyen, Swinth, & Satyshur, 2000; Ludington-Hoe et al., 2006:227).

3.6.3.4 Conclusion on the theme "It is tiring and exhaustive"

Fatigue during 24-hour KMC appears to result from mothers' inadequate sleep, high temperatures of the ward and supine position of sleep as illustrated previously in figure 3.2. Fatigue is summarized in the next page, figure 3.3:

Fig 3.3 Fatigue



3.7 SUMMARY

The lived experiences and perception of mothers have been expressed in this chapter through descriptions of their narrated experiences, views, and perceptions of KMC during the hospitalization of their preterm babies. Three major themes with eight sub-themes have also been described and supported with direct quotations from the participants involved, and available literature.

CHAPTER 4

REVIEW, LIMITATIONS, IMPLICATIONS, RECOMMENDATIONS AND CONCLUSION OF THE STUDY

4.1 INTRODUCTION

This chapter reviews the findings of the study with regards to the mothers' experiences and perceptions towards 24-hour KMC during hospitalization of their preterm babies at CHB Hospital. The limitations of the study are described including the implications of the findings for nursing practice and education. Conclusion and recommendations for further research are also discussed. The chapter then provides the summary of the study.

4.2 REVIEW OF FINDINGS

The purpose of this study was to convey the experiences and perceptions of mothers towards 24-hour KMC at CHB hospital. Objectives and purpose of the study were adequately met. A total of nine participants were interviewed, thereby producing the data for the study. Data analysis resulted in three themes and eight sub-themes. The findings showed that KMC initially seemed strange and difficult for all the participants during the first few days in the KMC ward and their satisfaction evolved gradually as they experienced its benefits. Among the benefits reported were their closeness as well as continual interactions with their babies, which then facilitated the maternal-infant attachment. KMC was found to be a relief and a healing period from the separation anxiety that had occurred when their preterm babies were transferred to NICU or a transitional unit soon after birth.

Maternal-infant attachment was a recurrent experience among all the participants interviewed in this study. This maternal-infant attachment was described as a process that emerged from maternal-infant interactions, maternal-infant closeness and maternal commitment to love and care for their babies. From their descriptions, these interactions involved gazing at each other, smiling, touching and responding to the baby's cry and breastfeeding. The findings with regards to maternal-infant attachment during 24-hour KMC were consistent with the findings by Klaus and Kennel (1976:67), Klaus, (1998:1244), and Tessier et al., (1998) where KMC was found to promote the attachment process between the mother and her newborn baby. The participants experienced that, as attachment evolves, other benefits associated with KMC emerge, such as the baby's security and nurturing care. This may have occurred because attachment is known to play a role in promoting maternal nurturing behaviours that support a baby's growth and development (Dodd, 2005:227). It has also been revealed that maternal-infant attachment during KMC empowers the mothers' feelings, making them more responsible and confident in their capacity to care for their babies (Tessier et al., 1998; Feldman et al, 2002).

However, the main factor reported to play a role in interfering with maternal-infant attachment during 24-hour KMC is the mother's physical and psychological discomfort resulting from exhaustion, a boring environment or the longing to go home due to separation from the rest of the family members and friends. In this state of mind, a mother may not be in a position to respond quickly to the baby's cry or provide gentle soothing measures that include smiling, playing or rocking (Radke-Yarrow & Nottleman, 1989). In addition to this, a related study by Bialoskurski and colleagues, (1999) identified attachment as a process that may not occur automatically because of overt and covert

attachment processes involving the health status of the baby and the mother, environmental circumstances, and the quality of care which the baby receives.

Both this study and the literature reveal that KMC is an ideal environment, which equips mothers with the knowledge and skills associated with motherhood responsibilities (Roller, 2005:214; Mercer, 2006:650; Mercer & Walker, 2006:570). The love and an enabling environment created by closeness between mother and child during KMC appears to promote a conducive environment for the learning of new skills and increases the mother's understanding of her baby's cues.

Nurse-parent interactions according to the findings of the study improve mothers' satisfaction during the hospitalization of their babies. Trust within the nurse-parent interaction is regarded in the literature as a cornerstone for any quality care (Mok & Leung, 2006; Lynn-McHale & Deatrick, 2000). This may be due to the guidance, support and health care information received directly or indirectly from nurses. In this case, direct information was communicated to the mothers through health training provided by the nurses. Indirect information on the other hand, was obtained through sharing of information in peer groups' forums of discussion created. The knowledge which the mothers acquired from the nurses and their own peer group are crucial for the care of their preterm babies as it provided empowerment, confidence and feelings of satisfaction at being able to do something positive for their preterm babies.

Meeting other mothers with similar problems was perceived as one way of receiving support and satisfaction during this period of preterm birth and KMC experience. Abriola (1990) argued that the support group during this period is helpful because it provides

mothers with care information and it connects them to a group of other mothers with similar problems. As a result of this connection, one mother in this study developed a strong commitment to care, realising that she was not alone and that there were other similar babies in the KMC ward gaining weight and being discharged. Observing their babies' progress was a time of relief and joy, especially for those mothers who at the beginning felt that KMC was a waste of time.

Mothers took a sense of pride and satisfaction by being their babies' companion, observing their growth and providing maternal nurturing care (Bernal & Meleis, 1995). In addition to maternal nurturing care, babies' developmental progress in this study was attributed to a warm comfortable KMC environment resulting in the baby's ability to sleep quietly for longer periods of time and rapid weight gain. Weight gain is partly associated with the baby's ability to sleep longer, thus conserving energy and preserving caloric expenditure toward growth (McCain et al., 2005:692 & Melnyk, Feinstein, Alpert-Gillis, Fairbank, Crean, Sinkin, Stone, Small, Tu. & Gross, 2006). With KMC, babies have been observed to spend longer hours sleeping which other literature studies link KMC to baby's natural habitat (Ferber & Makhoul, 2004). This was in agreement with the description of one participant in this study who viewed a similarity between the mother's uterus and KMC, referring to it as a comfortable environment in which the baby can play and move around.

All participants however, encountered fatigue as their main challenge during 24-hour KMC. This was associated with factors experienced in the KMC ward such as inadequate sleep, the use of one position for sleep and rest (supine/back position) leading to backache, high temperatures from skin-to-skin contact and the ward environment. Inadequate sleep was the result of interruptions to normal sleep cycles caused by the three-hourly feeding

programme of their preterm babies. This interruption of sleep therefore contributed to mothers' fatigue while providing 24-hour KMC.

4.3 LIMITATIONS OF THE STUDY

The following limitations were noted in this study:

Language- The use of the English language could have limited the participants from fully articulating their experiences, feelings, and opinions of 24-hour KMC as this might not have been the case if they were allowed to speak their first languages. The researcher is not familiar with the local languages in South Africa and the chosen language was the second or third language for all the participants.

Time – given unlimited and unrestricted time and resources at ones disposal, the researcher would have spent more time with participants. For triangulation, the researcher situated the data into the current debate in qualitative phenomenological studies to add credibility to the study.

Validation- Since an average period of hospital stay was two to three weeks as stated in chapter three, member checking was not utilised in this study because by the time preliminary results were completed, all participants were already discharged. Thus, if member checking was done, additional points or disagreements to the researcher's interpretations might have emerged.

4.4 IMPLICATIONS FOR NURSING PRACTICE

The findings of this study may have the following nursing implication:

Nurses should use the positive and negative findings of this study to formulate interventions relevant to the needs of individual mothers providing KMC and perhaps use it as baseline knowledge for further research. This is because not all mothers had the same experiences. For example, some enjoyed the hospital environment while others experienced boredom, meaning participants' way of perceiving things were different and should be handled differently.

4.5 CONCLUSION

As I finally reach the end of this study, I am overwhelmed by a sense of gratitude and very excited about the idea of 'closing up'. This study explored and described the mothers' experiences and perceptions of 24-hour KMC during the hospitalization period of their babies in a preterm baby unit. Participants' feelings and thoughts suggested that KMC influenced on their satisfactions and maternal-infant attachment. This form of care facilitated by a positive nurse-parent interaction helped mothers in the healing process from their preterm birth experience and separation from their babies soon after birth. Fear of touch and separation initially hindered mothers from freely interacting with their preterm babies soon after birth but the introduction of 24-hour KMC alleviates mothers' fears of their babies' survival and enables them to perceive their preterm babies in the same way as a normal baby. Nursing support, counselling and teaching enabled mothers to touch, smile and talk with their babies and thereby greatly enhancing their satisfaction of care. This in turn promotes positive nurse-parent relationships and maternal-infant attachments.

Maternal-infant closeness manifested through skin-to-skin contact stimulates the production of more breast milk during KMC as compared to days before 24-hour KMC.

The resulting outcome enables mothers to breastfeed their babies on demand. Other benefits of 24-hour KMC included a satisfying experience for mothers because the warm and comfortable environment accelerated the baby's progress, and was evidenced by weight gain. Moreover, the closeness, a factor responsible for maternal-infant attachment, in combination with continual maternal-infant interactions and knowledge from nurses, enabled mothers to observe any danger signs in their babies and immediately take the necessary measures. Contrary to their joy of being with their babies throughout, mothers may experienced fatigue due to inadequate sleep, high temperatures and one position of sleep and rest (supine position), which subsequently led to backache.

The findings of this study also confirmed the earlier assumptions stated under paradigmatic perspective in chapter one that human beings perceive the phenomenon differently based on internal and external influences. For example, data analysis as indicated in chapter three revealed that the hospital environment and mother-nurse relationship were some of the factors that influenced mothers' way of perception towards 24-hour KMC. Moreover, the researcher also succeeded in bracketing his thoughts and feelings about 24-hour KMC as stated in page 33, section 2.4.1 of chapter two. None of the participants' experiences in this form of care came closer to the researcher's bracketed preconceived thoughts on 24-hour KMC as evidenced in this research report. Thus the researcher did not influence the participants' ways of thoughts and feelings about 24-hour KMC during hospitalization period of their babies.

In conclusion therefore, nurses and doctors in the unit may consider these findings, appreciate their input and assess what they can do to solve the few problems caused by the

environmental set-up and fatigue so as to maximize their objective of quality care to the mothers and babies in the unit.

4.6 RECOMMENDATIONS

Recommendations are given for the future nursing education, research and nursing practice.

4.6.1 Recommendations for nursing education

- The principle of 24-hour KMC should be incorporated and emphasized in all levels of educational training as this practice has been found to have numerous benefits both to the mothers and their preterm babies.

4.6.2 Recommendation for further nursing research

- Subject to the availability of funds, the hospital may consider conducting a small study to find out mothers' experiences and perception of 24-hour KMC in a hospital setting in the presence of well-equipped private rooms with facilities such as DVD players. Consideration should also include a parent-friendly unit in which both parents are accommodated, a play area for other children, a telephone just for parents, a kitchen with a stocked refrigerator, and a visiting area with couches and a television set.
- A study using a quantitative approach could enlighten more on the use of 24-hour KMC and breast milk production.

4.6.3 Recommendations for nursing practice

The benefits of KMC were well articulated in this study by the mothers providing KMC. The negative comments identified can be used as a basis for improving the quality of care for both the mother and her baby. I therefore recommend:

- A light exercise programme for the mothers. Exercise should not be tedious to accommodate all mothers providing 24-hour KMC. These should be done during the 24-hour care as recommended by WHO, (2003:23).
- A home friendly approach to environmental design.
- The hospital may also consider introducing intermittent KMC while the preterm babies are still in NICU. Early initiation of KMC soon after birth, while the baby is in NICU may shorten the period of hospital stay and alleviate parental anxiety levels.

4.7 SUMMARY

This chapter has presented a summary of the study by reviewing all the findings within this study. All three themes have been discussed and summarized, namely “It is a bond between me and my child”, nurse-parent interaction, and “it is tiring and exhaustive”. Mothers were noted to be satisfied with 24-hour KMC because it allowed them greater proximity to their babies, hence giving them the opportunity to observe their growth and become fully involved in the care. KMC was additionally noted to have provided a comforting and warm environment for their babies, thus enabling them to grow faster and this in turn increases maternal satisfaction. However, despite these benefits, mothers feel exhausted while providing KMC in the hospital setting and further research may be necessary to eliminate these negative elements. Finally the chapter presented the limitations, conclusion, and recommendations of the study.

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APPENDIX A

UNIVERSITY OF WITWATERSRAND, JOHANNESBURG

INFORMATION SHEET

Dear ……

My name is Titus Tarus, MSc Nursing student at the University of the Witwatersrand. I wish to interview you as part of my research study on mothers' experiences of their Kangaroo mother care during hospitalisation of their babies.

You will be requested to share your experiences on kangaroo mother care as well as any other related information with me. This will be at your appropriate date and time within the KMC unit where you are in the hospital. The length of the interview will be determined by the amount of the information that you will wish to share with me.
If you agree to take part in the study, you may withdraw at any time without any disadvantage to you and your baby. Your name will not appear in the research report and therefore you will remain anonymous.

I will also need your permission to tape record the interview so as to enable me to accurately remember and write up your views and comments. Tape recordings and other information collected will be destroyed after the completion of the research study.

Please be assured that the study has the approval of the Human's Ethics Committee of Witwatersrand University.

Please feel free to ask me any questions related to the study and your participation at any time.
Your participation is greatly appreciated.
Yours sincerely,

TITUS K. TARUS
Contacts: kipwin77@yahoo.com or 0722292686
Date: _____

APPENDIX B

VOLUNTARY INFORMED CONSENT TO PARTICIPATE IN THE STUDY

I_____, give consent and willingly agree to participate in the kangaroo mother care study which intends to obtain in-depth knowledge and understanding of mothers' experiences to KMC for better health services.

I am willing to participate in providing my perception, views and experiences pertaining to kangaroo care through the interview which will be audio-recorded and later transcribed for the sake of accuracy and reliability.

I have also read and fully understand the research's procedures and fully understood that my participation is completely voluntary and if I choose not to participate or withdraw at any time, I will be free to do so without any disadvantage to me or my baby.

The researcher has given me assurance of anonymity and confidentiality in the study and that I will be given access to the research findings, should I wish to do so.

I hereby consent to participate in this study

Signature_____ Date _____

Research participant

Signature _____ Date _____

Interviewer

APPENDIX C

VOLUNTARY CONSENT FOR INTERVIEW TO BE TAPE RECORDED

I_____ consent to be interviewed and I understand that this interview will be recorded on audiocassette.

I have also been informed that the interviews are being recorded for the sake of accuracy and reliability. I understand that consent is voluntary and that once the data has been accurately transcribed and no longer needed for study, both transcripts and tapes will be destroyed.

Signature _____

Date _____

APPENDIX D

Interview Schedule

Introductory questions:

What name do you want me to call you by? (Don't give me your real name for the sake of anonymity)

Guiding Question

Can you please talk to me about kangaroo mother care. I would like to know what you know based on your experiences (views, feelings, and perceptions).

Probes:

The opening question was followed by general probes such as 'could you say more about that? How did that make you feel?' (This varied depending on their individual responses).

Ending questions:

(End of interview. Participant was thanked and informed that she was to be contacted later to confirm and/or clarify the identified issues that was going to emerge from the interview).

Faculty of Health Sciences
UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

7 York Road PARKTOWN Johannesburg 2193 Telegrams WITSMED Telex 4-24655.SA
FAX 643-4318 TELEPHONE 717-2075/2076
E-MAIL healthpg@health.wits.ac.za

MR TK TARUS
ROOM 211, WEST CAMPUS VILL
PO WITS 2050
1 JAN SMUTS AVENUE
2050

APPLICATION NUMBER 0502497G
STATUS (DEG 37) (MM033) PZZ

2006-07-06

Dear Mr Tarus

Approval of protocol entitled Mother's experiences of kangaroo mother care during hospitalization of their preterm babies in an academic hospital in Johannesburg

I should like to advise you that the protocol and title that you have submitted for the degree of Master Of Science In Nursing (Full-Time) (Coursework) have been approved by the Postgraduate Committee at its recent meeting. Please remember that any amendment to this title has to be endorsed by your Head of Department and formally approved by the Postgraduate Committee.

Mrs. AA Tjale has/have been appointed as your supervisor/s. Please maintain regular contact with your supervisor who must be kept advised of your progress.

Please note that approval by the Postgraduate Committee is always given subject to permission from the relevant Ethics Committee, and a copy of your clearance certificate should be lodged with the Faculty Office as soon as possible, if this has not already been done.

Yours sincerely

S Benn (Mrs)
Faculty Registrar
Faculty of Health Sciences

Telephone 717-2075/2076

Copies - Head of Department_____Supervisor/s

Plan your career and first-year curriculum online - explore our website: www.wits.ac.za/ec2
The University seeks to serve South Africa by furthering access to equal opportunity while striving for excellence in teaching, learning and research

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Division of the Deputy Registrar (Research)

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)
R14/49 Tarus

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER M060409**
PROJECT	Mothers' Experiences of Kangaroo Mother Care during Hospitalization of their reterm Babies in an Academic Hospital.....
INVESTIGATORS	Mr TK Tarus
DEPARTMENT	Dept of Nursing Education
DATE CONSIDERED	06.05.05
DECISION OF THE COMMITTEE*	Approved unconditionally

Unless otherwise specified this ethical clearance is valid for 5 years and may be renewed upon application.

DATE 06.05.15 **CHAIRPERSON** .....
pp (Professor PE Cleaton-Jones)

*Guidelines for written 'informed consent' attached where applicable

cc: Supervisor : Ms a Tjale

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10005, 10th Floor, Senate House, University.
I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to a completion of a yearly progress report.**

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

(First and last section of evaluation form) APPENDIX G

PROVINCIAL RESEARCH COMMITTEE.

RESEARCH EVALUATION FORM FOR APPROVAL BY THE HEAD OF THE DEPARTMENT.

Researcher's Name: Tarus T
Researcher's contact details: Tel:
Fax: 011
Research Topic: Mothers' Experiences of Kangaroo mother care during hospitalization of their preterm babies in an academic hospital in Johannesburg.

Supervisor's Name: Mrs. A Tjale

Date submitted: 09 May 2006

Date Reviewed: 29-06-06

Research Site(s): Chris Hani Baragwanath Hospital

Type of research: Non trial

Reviewer's name: Dr ML Likibi

SECTION A

	YES	NO	N/A
1. Is this research project within the scope of the Department of Health key policy priorities/directives?	X		
2. Content of Research: Original work • New facts, ideas • Confirmation of uncertain data • Repetition of known data and consequently of limited	 X X		

We have no objection to recommend that the study be conducted in this province.

The Evaluator:

Dr ML Likibi
Specialist Research and Epidemiology

Approved/not approved

Dr A Rahman
Acting HOD
Date: 03/07/2016

CHRIS HANI BARAGWANATH HOSPITAL

DR A. MANNING
CHIEF EXECUTIVE OFFICER
PO BERTSHAM
2013
TEL.NO. (011) 933-8146
FAX.NO. (011) 938-8161
E-MAIL: amanning@mweb.co.za.

Titus K. Tarus
University of Witwatersrand, Johannesburg
Faculty of Health Sciences,
Nursing Department
7 York

Dear Sir

RE: PERMISSION TO CONDUCT REASEARCH STUDY AT CHBH.

Your request for permission to conduct a research study on Mother's experiences of kangaroo mother care during hospitalization of their preterm babies in kangaroo care unit (ward 40) is approved.

Thanks.

DR A. MANNING
CHIEF EXECUTIVE OFFICER
CHRIS HANI BARAGWANATHN HOSPITAL
04 July 2006

EXCERPTS FROM THE INTERVIEW TRANSCRIPTS

Below are selections of short excerpts from each verbatim transcript of the nine interviews. These short excerpts have been selected to enable the reader to have a glimpse of the content and process of the interview. Field notes obtained through observation during the course of each interview are presented in brackets. These were inserted during the transcription of each interview.

The interviewer is represented by letter 'I' while the name of each participant varies depending on the pseudonym names they chose to use. Prior to each interview, every participant was asked to give her preferred pseudo name. This was for the sake of their confidentiality and anonymity.

GLORIA (G)

I Tell me what you know about kangaroo care based on your experience

G **Pause**

…kangaroo care… I have noticed the child becomes warm… and grows faster

I How did you know that?

G Yes because every time I take her from my chest, I see some sweats coming out from both of us

Silence

G Sometimes the child also forgets to breathe

I Oh

G ... and so by my breathing, she remembers to breathe.

I Mm mm

G yes, you know sometimes 'nneh' one thing about kangaroo care is that the baby is with you but when she is in the bed you can't hear if something goes wrong with her. If she is here on my chest, I can hear anything. If her nose gets blocked, I can hear that she has stopped breathing.

Pause

G. Mm mm… one other thing is that the child can easily recognized me

I Can recognize you…

G Yes by smelling.

I Oh

Silence

I What prompts you to say this during this period of the kangaroo care?

G She cries whenever I am not with her until I come back

(Gloria then abruptly looked at the interviewer with some question marks on her face)

RACHAEL (R)

R It is something new that I have learnt. I never knew about KC and so they taught me about it the first time I came here. It is a new experience.

I yah…

R It helps the baby to breathe

At the beginning, I didn't understand. I asked myself why should I have to do this...it is unnecessary… but as days goes by I realized the importance of it.

I Why were you thinking it was unnecessary?

R It was like any other baby, just feeding …

I What was the weight?

R 1354 grams.

I mm mm…

R I was not happy because according to me my child was healthy

I the baby was healthy?

R 'Yah', only the weight. I just wanted it to go up. I just wanted to go home. I had prematures before but I didn't kangaroo them. They got bigger and was discharged after a week

I So this is your first experience in KC.

R Yes

I So in these two weeks what have you experienced

R Ummm… the negative part of it is that I want to go home

I so you want to go home

R Yes, as a mother, I want to go and see the other babies. I want now to take my baby. I know how to take care of him because I have the experience and I can do it for myself

Silence

I So….

R I am okay now about the weight. It is only the jaundice

I So when was the child put in the phototherapy?

R It was yesterday

I How do you feel now without your baby?

R I feel lonely

I Lonely…

R yah (she then laughs)… because I am used to having her close to me

Silence

I So still tell more about KC. I am seeing you have a lot of…..

R One thing… for me is... a nice experience. It is lovely because it is a bond between you and your child… so since I put her on KC, I have a great bond with him. I am not complaining of anything about KC because even when they will discharge me I will still go and do it.

MAGGIE (M)

M Before I started KMC I was feeling sore. My heart was sore because I didn't know if I was going to lose my baby or 'gonna' be alive… you know… Coming in the morning I hold him, check him, and after sometimes I saw he is growing with treatment but then he was too small. After treatment they told me to wait for weight to pick up and for it to be quick I must do kangaroo

I mm mm

M When the baby is in KC then you can feel now that he is breathing

I Okay

M mm and then if you don't give him love that you are the mother; tomorrow you can see the weight. It will drop or stay in the same place but if you talk with him, you give him like the mother…tomorrow you will see the weight is up. You must be happy, you must be friendly, you must talk and if there is anything worrying you then you must call the sister and said I have a

problem like this and this, say it out and then you can give love. Even if you are worried while feeding the child, you can't have patience, yah that is it

Silence

I What is the difference between now and before you started KMC

M Yah here in KMC ward, I am with my baby throughout… before I was with my baby only during the day. At night I wasn't sleeping. I was thinking about my baby all the time. At home I didn't know if my baby was eating or not, nappies changed or not but now I am with my baby throughout. I am the one feeding, changing; you know I am happy for that.

Silence

I If you were to advise other mothers what would you tell them?

M I would advise them not to take their home problems at heart and come here to kangaroo their babies. This would affect their babies because they would not be breathing nicely, busy thinking in their minds. It is like eating 'chepps'0. It is not nice for kangaroo.

PRECIOUS (P)

P I have experienced a lot since I started KC and it is very nice actually. I have bonded with her and I don't think I will be able to leave her here

It is actually so nice feeling skin to skin, feeling heart beat, breathing. It is so nice

Silence

I What else,

P Let me see…. because I am next to her, she gets use to the smell… yah

The only problem is that you can't sleep. You can't sleep on the side; you have to sleep up straight… yah

I What do you mean by up straight

P Every time you sleep at the back and so the back gets so tired

I also felt like crying because my eyes were painful but my baby kept me strong because I love my child. I told myself that I have to be strong. I shouldn't allow my tiredness…

I How can you compare then with now?

P I am getting used to it now. I am not getting weak. I am getting used to it now

Silence

I How about after discharge?

P I don't want to lie, I am not going to do for 24 hours at home but I will do it when there is nothing I am doing because at home it is not like here. At home there are many things that you need to do. It is not like here

I am not going to do KC for 24 hours but most of the time I will be doing it.

I mm… you will be doing it

P I don't want to lie to you. I want to tell you straight. At night I will be doing it for few hours but during the day I will do it most of the times

Silence

I So tell me more

P I know the color of my child is pink. So if I look at her and see a color like blue I know that there is something wrong with my child. I also know how she breathes. If she can breathes slower or faster, I can tell

I What of if she was in the incubator?

P It is not easy, it is not easy. In the incubator she is not all that close like in my chest.

I mm mm

P Even breathing, you can hear the heart beat when she is on your chest but in the incubator you won't be able to notice that earlier

REBECCAH (RE)

I So Rebeccah as you saw it in the letter, I am doing a research on mothers' experiences on KC. So please talk to me about your experiences of KC in terms of your feelings, opinions, views, etc

Re The kangaroo is a good thing because it keeps the baby warm and keeps the temperature in a good position but the bad thing is we kangaroo the babies for 24 hours

I mm mm

Re So sometimes we don't get rest

I Okay…

Re It is so stressful. It is good for a baby in terms of bonding between me and her…the baby grow faster. It is good for them because sometimes they forget to breathe so when my heart beats he remembers that I must breathe again

Silence

Re I was scared to touch the baby and feel the baby soon after birth. I was so scared

I What came to your mind?

Re	I told myself may be they changed my baby. This is not mine
I	Laughs
Re	But after delivery… at least they showed me my baby but the following day when I went to see him, esh, he was so small
I	So what were your feelings when the baby was in the incubator
Re	Ah there were no feelings because he was so small but the only thing that I said is that if he can grow up then he can stay there in the incubator
I	How are you feeling now?
Re	I am feeling hot even when I am sitting in a chair… I am feeling sleepy
I	So what does that mean to you
Re	It means my baby is growing
	Silence
I	So what are some of the other things you can share with me about kangaroo care?
Re	Before … I didn't accept my baby… so now because I kangaroo, I love my baby because she is in my chest and I think the baby is getting used to me that this is my mum

MARIA (MA)

I	Talk to me about your views, experiences, and opinions about KMC
Ma	At first I didn't like it but now I understand. It is okay although exhausting and tiring. But it is okay because it helps the baby to grow
I	mm mm

Ma …. because I have seen the changes in the baby while doing kangaroo… growing better now in kangaroo care

Silence

Ma I think this place is good for the babies although for mothers it is Oh… no… I don't know how I can put it. You are worried about babies, being woken up, we all sit here breastfeeding the babies, doing kangaroo, doing the same thing day in day out, you know… get tired. But at least it is better when compared with before when we could just see the babies at specified times, when feeding, and changing nappies. Here you are with your baby for 24 hours

I mm mm

Yah… you see… in here there is nothing else that you are doing, doing the same thing day in day out, doing KC, eat, sleep, feed, change the nappy, nothing new… nothing…

I What does that mean to you?

Ma It is boring

I miss the people, my family, friends you see

I Besides TV, what else do you think can be done to eliminate boredom

Ma There should be DVDs, CDs… yah

Silence

Ma It is good for the babies but the problem is for the mothers because we are not sick. You are not ill and the environment for us is… I don't know how to put it...we are just being locked... for the babies it is good. I recommend it for the babies. The babies are warm

PEARL (PE)

Pe My baby was delivered through caesarean section because of the foetal distress and so I had to be taken to the theatre. After delivery my baby was taken to ward 66, apparently he was not taken to ICU, he was okay, got medications, whatsoever. When he was off the medications, one sister came to me and asked me if I was breastfeeding or not. I told her that I was not breastfeeding. She encouraged me that I should start breastfeeding and then she asked me if I knew what KMC is. I told her that I knew nothing about KMC and she convinced me that I should start doing KMC. I asked her a lot of questions, "what does it do, mm mm how does it help my baby?"… things like that. Then she told me that it is mother to child bonding apparently, so once the baby's chest touches my chest, he can feel my heart beat. mmm… mm for premature babies it happens that they forget to breathe and so when he hears my breathing he remembers that he has also to breathe… so that is how it helps in most cases and so once the baby is attached to my chest… it helps in warmth. In most cases aa aah what he is experiencing is what he was experiencing while in my stomach, the warmth … you see yah, yes that is it. When he is in my chest, he feels as if he is still in my "stomach", he moves around, you know, because of the warmth … yah.

I mm mm

Pe So kangaroo care also lets you be able to breastfeed especially on preterm babies. It gives them ha ha mm a chance to grow faster, to get out of hospital quickly. And so we are encouraged not to stop when we get home.

Silence

I You also talked of the baby…forgets to breathe…?

Pe Yes that is what we were taught, that's what I have seen

I Tell me what you have seen

Pe What I have seen?

I Yes

Pe Right, aa mm, it happens when the baby is young, right, he feels my heart beat, we bond through the heart beat, so in most cases when he forgets to breathe it is for about five seconds or so and when he comes back he breathes like… faster

I O oh

Pe Yah, faster to catch his breath and so I realized that Oh you were not breathing, you see (she then laughs with the researcher after nodding her head and looking at the chest)

He breathes a lot, faster to catch his breathe

I mm mm

Pe Yah that is what happens

I You also talked of the baby growing faster… talk to me more about that

Pe Yah, as I said that is as if he is inside my "stomach", the warmth that he gets from me "yah"

I I thought the incubator is also warm

Pe Not as warm as my chest

(She responded sharply with her eyes wide open showing disapproval of the interviewer's statement)

I (Interviewer laughs following her sharp reactions)… okay

Silence

I Tell me what you felt the first time

Pe Oh, it was my first experience, “yah”. For the first time, it was weird… you know it was really weird

I What do you mean that it was weird?

Pe I don’t know, ‘man’… I had this feeling… you know, something I was not used to, it was different, but, you see… but I could actually feel the bonding between me and the baby

I “Yah…”

Pe Because once he was in my chest, he could sleep quite longer than when he was in the incubator… so you can see that he was much more comfortable

Silence

I So how do you entertain yourself while here?

Pe We have got music, TV, “yah”, the crying of the babies (The participant laughs upon mentioning crying of babies which made the interviewer to laugh too) that entertains us. And there are other mothers in the ward, we chat a lot.

I talk too much

I With who?

Pe Other ladies (Laughs and the interviewer joins her in laughter because she was all full of humour making her laughter contagious)

I What are the rest of the mothers saying about KMC?

Pe Oh they are very excited. There is another mother who is here, was not actually admitted for KMC, her child had jaundice. Apparently she puts her baby on KC now

I Oh…

Pe … why are you doing that… 'no men… it looks nice, you all look cute when having your babies on you, so I feel like doing it too "yah"

Silence

I tell me in summary the advantages that you have experienced with KMC

Pe The baby grows faster, you bond with the baby, and the baby gets warmth, "yah" and the baby is happy

I Is happy

Pe yes

I How do you know that?

Pe Always smiling (she then laughs)

LISSI (L)

L At first I didn't believe in this thing called KC. I thought it was a waste of time but since I came to ward 40, my baby was weighing 1400 but though KC was actually difficult …I saw improvements as days went by 'yah' well I think it is … it is … a way of mother bonding with the baby "yah'… it helps the baby to grow

Silence

L … okay, so I got used to it and I found that it is fun and I started believing in it. I didn't believe at first because my baby stood at one weight for more than four days

I for more than four days

L "Yah"

When we came here he was weighing 1400. He then gained in three days and then became static at 1450 for two days and then reduced thereafter

I mm mm

L "Yah", so I got discouraged and I couldn't believe it. So I thought it was a waste of time and … I got encouragement "yah", when the nurse talked to me about KC and explained everything. So I just realized … you know I would just mm … carry on doing it and then … well he improved, "yah" he improved

I What do you think might have happened to contribute to the drop of the weight?

L … well I think may be I had something disturbing me as this also affects the baby, that's what I think, mm

I What might have disturbed you then

L "Yah" the fact that I couldn't breastfeed, my milk wasn't enough to accommodate the two… so I just got stressed

I Okay

L mm mm

But I didn't tell anyone (she then laugh)

I didn't tell anyone so that was it

Silence

I Now if you compare your first experience with now what can you say?

L I think now is better because I am used to it now and I see improvement in my baby and I will continue doing it because it is best

I It is best

L mm mm for both me and my baby

I You have talked of it being best for you too. Please I want to hear more about it

L It is obvious when you see your baby growing you become happier and then you don't have to think of some other stuff "yah" you have to relax. I am happier my baby is growing because of KC "yah" that is it

I Oh…

L mm anything I think for sure you get to talk with the baby and sometimes I just look at his face and smile yah stuff like that. It makes you happy. Most of the time I enjoy watching him sleeping "yah" doing KC

Silence

I Talk to me more about your experience here.

L Well … we get to come together and talk about our children, when they get sick, what to do and then to check actually… the whole issue about motherhood. It is accommodating for mother and the child

I How was it the first time?

L I was afraid (Laughs) May be when I am holding him he might just fall down but the sister told me hold your baby and breastfeed him. I told her I am scared. She said no, there is nothing, go ahead then I did it "yah"

I How is it now. Are you still afraid?

L No I am not I am used to it now and it is enjoyable (laughs) being a mother

AMIKAI (A)

A KMC is alright…you share everything with your child and … he sees that you are a mother

I What were your feelings the first time?

A Just scared because I wasn't expecting anything so that's why … it was a miracle for him to survive. I was so scared, very scared. I thank God

I mm mm

A Yah but now my child is alive, growing up fast I don't know… and I support with KMC. Every time I take him here (Pointing her chest) I just see him like he is a baby of 9 months. As a parent you have to care, give him some love and everything will be okay like the baby of 9 months "yah"

I What is your experience now with KC?

A I have a nice experience because he is growing fast. It doesn't affect anything, only feeling good, you give him some love; you feel like you are a mother. He is growing fast "yah"

Silence

A Yah it is a nice experience because I now see the improvement which I didn't expect. My child is growing (She said with laughter) yah…you see like now when he is not a sleep, I just talk with him (The baby was awake at this time and quiet on her chest), talk with him, play with him.

Pause

I just give love to my child wholly. You know what? anybody can't do KC. Kangaroo care wants you, a real mother… anybody can't do like this because sometimes you feel so tired but if you are a mother you can do, you can't feel tired because you like it and you want your child to grow up but if you are not a real mother you can't do this… will affect "yah"

I What do you say about 24-hour KMC

A It is okay, alright “yah” because premature babies need love, strong care, you see

I What do you mean by strong care

A Strong care is like… like you do everything when baby is here; caring for your baby but not going to the toilet with him because it is unhygienic

SIGNIFICANT STATEMENTS

1. It is the best thing to do, it is nice experience, it is fun.
2. I play, talk, and sing with him.
3. I am so happy to do kangaroo because… I am so happy doing it.
4. At first I didn't like it but now I understand. It is okay although exhausting and tiring. But it is okay because it helps the baby to grow.
5. It was weird the first time.
6. It was new, I didn't understand.
7. I accepted as time goes by.
8. At the beginning I couldn't sleep properly because of water on my chest and waking up every three hours. You wake up because of crying... you go through all those things…. But today I am happy.
9. I was complaining and saying I want to go back. They lied to me.
10. I was so scared, she was so small; I couldn't even touch or wash her.
11. Why did God punish me like this.
12. It was a miracle for him to survive.
13. I said this is not my baby.
14. I am getting used to it now, don't fear anything now. When I see her, I see a big baby now.
15. Every day I had to go home leaving the child in the hospital. During this period I couldn't sleep at night. By 3 o'clock I am awake wanting to go to the hospital. I had to wait till 7 o'clock always to come here and see her.
16. At home I didn't know if my baby was eating or not, nappies changed or not but now I am with my baby throughout. I am the one feeding, changing; you know I am happy with that.
17. They teach and supervise us.
18. We get to come together and talk about our babies.
19. I want now to take my baby. I know how to take care of him because I have the experience and I can do it for myself.

20. I know the color of my child is pink. So if I look at her and see a color like blue I know that there is something wrong with my child. I also know how she breathes. If she breathes slower or faster, I can tell.
21. The baby becomes warm and grows faster.
22. It helps the child to breathe.
23. The baby is safe on my chest.
24. Sleeps quiet longer on my chest.
25. The breast milk is too much.
26. I think lying on the tummy for long makes him uncomfortable.
27. It is unnecessary for 24 hours. It is not possible to do for 24 hours at home.
28. You don't sleep normally.
29. Feeling hot, exhausted, and tiring.
30. There is no rest, it is so stressing… you feel backache. Every time you sleep at the back and so the back gets so tired.
31. We are just being locked here.
32. They are keeping us for long.
33. I miss home so much.
34. You long to get home quickly.
35. As a mother, I want to go and see the other babies.
36. Home will not be like here. You have no worries, no longing for anyone because if you get stressed it affects the baby.
37. It is not fun to be here, I don't like it.
38. The environment is good for the babies but not friendly to the mothers because we are not sick.
39. The place is boring, doing the same thing day in day out.
40. If her nose gets blocked, I can hear that she has stopped breathing when she is in my chest but in the incubator I won't be able to notice that earlier.
41. KC requires a real mother to provide strong care.
42. You have to be patient.
43. I encourage other mothers to do it, they should never be lazy.
44. Baby must see love from the mother.
45. Baby's growth provides power to continue with KC.
46. The mother should not be stressed because stress affects the child's weight.

47. I felt like crying because my eyes were painful but my baby kept me strong because I love my child. I told myself that I have to be strong.
48. You can’t sleep in 24- hour kangaroo care because you have to take care; you have to listen every time because they make funny sounds.
49. Baby can easily recognize me by smelling.
50. Cries when I am not with her.
51. The baby sense what is going on in mother’s life.
52. I am with my baby throughout.
53. I feel lonely now when my baby is in the phototherapy because I am used to having her close to me.
54. You have to listen to all those things to be aware of your child.
55. I have experienced a lot since I started KC and it is very nice actually. I have bonded with her and I don’t think I will be able to leave her here.
56. No, it is going to be difficult because at home I will be doing some work. It is not like here where they cook for us, they do everything for us and only leave us to do KC and bathe ourselves.

APPENDIX K

EXAMPLES OF FORMULATED MEANINGS FROM THE SIGNIFICANT STATEMENTS

SIGNIFICANT STATEMENTS	FORMULATED MEANINGS
I have experience a lot since I started KC and it is very nice actually. I have bonded with her and I don't think I will be able to leave her here	KMC is a satisfying experience that promotes maternal-infant attachment.
If her nose gets blocked, I can hear that she has stopped breathing when she is in my chest but in the incubator I won't be able to notice that earlier.	Proximity enables a mother during KMC to easily detect any abnormality with her baby.
I am getting used to her now, I don't fear anything now. When I see her, I see a big baby now.	KMC facilitates the mother's adjustment and changes her perception of her preterm baby.

Subject: RE: Permission

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