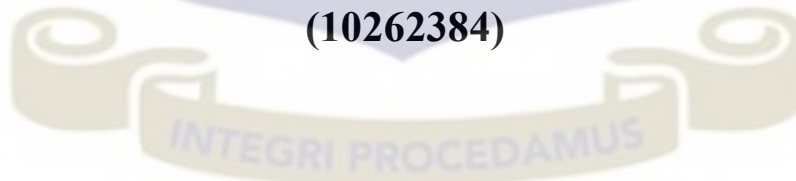


**SCHOOL OF NURSING**  
**COLLEGE OF HEALTH SCIENCES**  
**UNIVERSITY OF GHANA**

**THE PERSPECTIVE OF MIDWIVES ABOUT KANGAROO MOTHER  
CARE IN THE WEST MAMPRUSI DISTRICT OF THE NORTHERN  
REGION OF GHANA**

**BY**  
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**THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA,  
LEGON IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR  
THE AWARD OF MPhil NURSING DEGREE**

**JULY, 2016**

**DECLARATION**

I declare that this study is my original work. It was under the supervision of Prof. Ernestina Donkor and Dr. Abdallah Ibrahim. However, other people's researches used as references have been appropriately acknowledged. Neither has this work been submitted anywhere for the award of any certificate or degree partially or fully.

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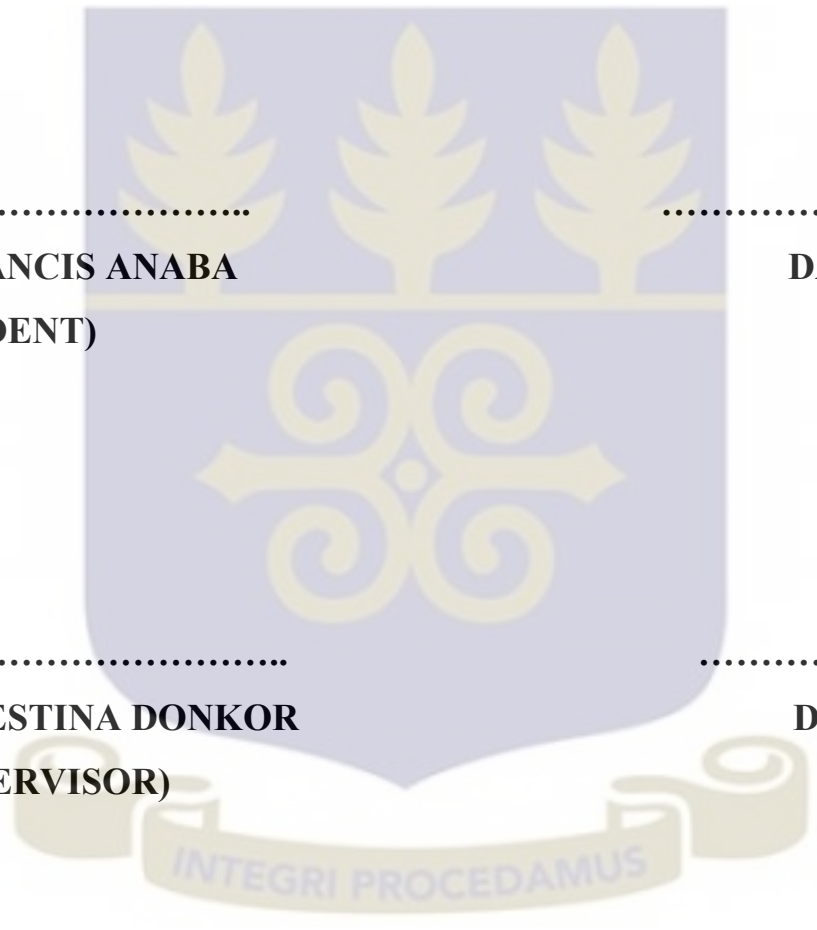
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**DATE**



**DEDICATION**

This work is dedicated to all the midwives of the Mamprusi West District of the Northern Region. It is particularly dedicated to all those who agreed to share their perspectives in the area of kangaroo mother care



## **ACKNOWLEDGEMENTS**

First and foremost, I will like to give thanks to almighty God for his guidance and protection throughout my education till this stage.

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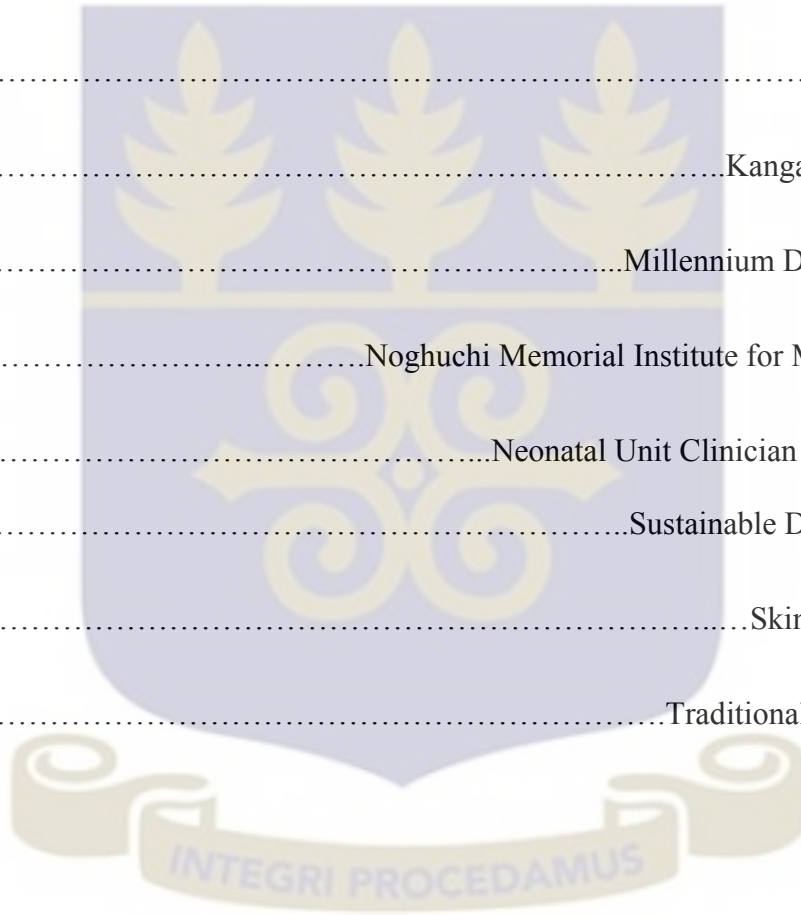
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**LIST OF ABBREVIATIONS**

EmONC.....	Emergency Obstetric and Neonatal Care
BMC.....	Budget Management Centre
BSc.....	Bachelor of Science
CHW.....	Community Health Workers
KC.....	Kangaroo Care
KMC.....	Kangaroo Mother Care
MDG.....	Millennium Development Goal
NMIMR.....	Noghuchi Memorial Institute for Medical Research
NUCAT.....	Neonatal Unit Clinician Assessment Tool
SDG.....	Sustainable Development Goal
SSC.....	Skin-to-Skin Contact
TBAs.....	Traditional Birth Attendants



## **ABSTRACT**

**Background:** Ghana currently does not have neonatal nurses. The care of the newborn is therefore the responsibility of the midwife. Due to scarce resources, the health sector is using cost effective measures that will help meet the health needs of people including the newborn. One of these is Kangaroo Mother Care (KMC). KMC is the skin-to-skin contact between the mother and her newborn especially the preterm/premature and those with low birth weight. It therefore demands that the midwife has the right orientation and perspective about KMC.

**Aim:** The aim of this study was to bring to light the perspective midwives of the West Mamprusi District of the Northern Region about Kangaroo Mother Care.

**Methodology:** The study was a qualitative explorative descriptive study. The target population was all midwives in the District. The sampling method was purposive. The study was based on the Conceptual framework for KMC. The sample size was fourteen (14) midwives. Interviews were used to collect data and thematic content analysis was used to analyse the data.

**Findings:** The findings of this study indicated that midwives need to provide a conducive environment for the practice of KMC. This involves the provision of information to mothers, making sure that there is support and the provision of resources like a cloth to tie the baby in KMC position. They also indicated that midwives should play the role of acquiring knowledge about KMC, teaching and providing support to the family. The study further brought to light that the mother needs to be free of all illnesses-both pathogenic and non pathogenic. As part of maternal requirements the midwives indicated that, the decision to practice KMC solely lies with the mother. A baby for KMC should be preterm or weigh below 2.5kg at birth and should not have any illness. The results also indicated that, there is the need to ensure teamwork among staff and education of those who do not have adequate information about KMC. Whiles some participants perceive KMC as effective, others doubted this. Finally, some of the midwives perceive KMC as substandard form of treatment and should be the preserve of poor communities. This was however disputed by other participants.

**Conclusion:** The study provided insight into how policy makers, planners and managers can improve the practice of kangaroo.

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background**

The millennium Development Goals (MDGs) developed in 2000 by the United Nations (UN) have been the guiding principles for all sectors of the economies of almost all countries more especially the developing ones like Ghana for the past decade and half. This became necessary because of the fact that there were and still some yawning gaps amongst countries in the indicators for development. This was aimed reminding and prompting governments to deliver on their responsibilities and promises. These developmental goals were endorsed by more than 147 presidents and heads of governments spanned a period of 15 years from 2000 to 2015 (Clemens, Kenny & Moss, 2007). Maternal and child health have been given prominence in these MDGs- 4 and 5. These were aimed at reducing under five mortality and improving the lives of women. Following this, there were set targets for meeting these goals (Ghana Statistical Service, Ghana Health Service, & ICF Macro, 2009). Nine years down the line, the issue of child mortality is still much of a problem especially for children who are born prematurely and with low birth weight. In Ghana, more than half (about 60 percent) of infant deaths is accounted for by neonatal deaths. The northern region has one of the largest neonatal deaths of 38 % from 1998 to 2008. The weight of a child at birth is very important to its survival. Notably, infant death rate is twice in small and very small babies compared to average or large babies (Ghana Statistical Service et al., 2009).

With the expiration of the MDGs, the United Nations developed the Sustainable Developmental Goals (SDGs) to safeguard the gains made in the last fifteen (15) years and to set new goals and targets for the next decade and a half. Among the seventeen (17) goals, Goal Three aims to

ensure that people have healthy lives and to promote the well-being of all ages including the new born (<http://www.undp.org/content/undp/en/home/sdgoverview/post-2015-development-agenda.html>). Goal three (3) Target number two (2) specifically deals with child health. This target aims to end the death of the newborns and children under five that are preventable by 2030 (United Nations Open Working Group, 2014).

Newborn care, especially those that are premature and with low birth weight is challenging to most emerging economies like Ghana. The problem is compounded by inadequate numbers of modern equipment like the incubator to care for these types of babies. Long before the development of these MDGs and SDGs, innovation in area of use of cost effective means of care have been considered. One of these is the use of Kangaroo Mother Care (KMC). There is a very urgent need to prepare to enhance the contact between parents and infants in neonatal settings, increase the engagement of parents in infant care, and facilitate the acquisition of skills of confident form of parenting prior to discharge. Some of the challenges to this are related to vulnerable patient population (adolescent mothers, indigenous families, uneducated parents or those living in poverty), limited health resources and health care systems that are fragmented (Raffray, Semenic, Galeano, & Marin, 2014).

Kangaroo mother care is the skin-to-skin contact between mother and her low birth weight infant in a prolonged and continues manner in both hospital and at home until the baby is at least 40 weeks after delivery (Cattaneo, Davanzo, Worku, Surjono, Echeverria, Haksari... Tamburlini, 1998). It is natural and serves as an alternative to the conventional care for the low birth weight like the use of the incubator (Bergh & Pattinson, 2003; Cattaneo et al., 1998). It can be practiced for 24 hours/day in which case it is called Continuous KMC(C-KMC). It is called Intermittent

KMC(I-KMC) which is practiced in settings where there are reasonable numbers of incubators (Nyqvist et al., 2010).

KMC resembles the way the animal kangaroo cares for its young by placing its baby in its pouch. The mother puts the baby in an upright position skin-to-skin with baby wearing only a diaper and maybe a cap in between the breast. This allows the mother and baby to benefit in a collective manner (Roller, 2005). When the baby is placed in the KMC position, auditory sensation and tactile sensations are enhanced (Affonso, Wahlberg, & Persson, 1989). Despite the fact that some of the benefits of KMC need to be substantiated by further evidence, there is not yet any recognised long term or short term adverse effect of the practice of KMC (Hall & Kirsten, 2008).

Kangaroo Mother Care is one means by which humanity has reclaimed wisdom that was inherent with the help of knowledge gleaned from ethnopaediatrics. Kangaroo Care has three main components- Skin-to-skin contact, breastfeeding and mother and baby dyad (Wildner, 2012). KMC does not only put a human face to the care of the newborn, it also helps in the “better” use of both human and technological resources especially in developing and poorer countries (Charpak et al., 2000).

The individuals tasked with the responsibility of caring for the neonate and for that matter, the implementation and practice of KMC must have certain characteristics as caregivers. These personal characteristics must be that he/she must have knowledge and information that others can turn to, be able to show some leadership and managerial qualities and finally be able to help mothers practice KMC in an ethical and caring manner (Davy, Bergh, & Van Rooyen, 2011). Roller (2003) conducted a qualitative study with a sample size of ten women who provided KMC to their infants into their experiences of kangaroo care using transcendental phenomenology method of analysis. The results suggest that nurses are in a position to make a

difference and that they can play an important role in initiating mother-infant relationship which enhances maternal roles of women.

Nurses have the responsibility of communicating to mothers that they (mothers) are the most important people in the infant's life and giving them the assurance that KMC is very helpful to the infant in making it stable and calm because the baby is able to feel, hear, see and even smell the parents. The mothers should therefore be made to understand that, KMC is held as the gold standard and for that matter, should characterize all medical and nursing management of the newborn which is premature and has low birth weight. Nurses must also be able to create that understanding in the mothers that KMC is not a barrier to other forms of care. Even in the practice of KMC, brief interruptions can be made to give care like feeding, tube insertion, tube feeding, chest auscultation, intravenous procedures and change of the babies diapers are not contraindicated (Nyqvist et al., 2010).

The KMC concept has its history back in 1978. It was started by Drs Rey and Martinez in Bogota, Colombia in response to high numbers of Low Birth Weight babies, premature births and low numbers of incubators with the consequent problems of cross infection among babies who shared these facilities (Martinez, Fonseca, & Scochi, 2007; Rey & Martinez, 1983; Whitelaw & Liestol, 1994; World Health Organisation, 2003). Following its success in Colombia and many parts of the world, the world community developed a practical guide to the practice after a formal endorsement (World Health Organisation, 2003). KMC can be practiced both at home and at the health care facility. It is however very crucially important in cold climates where there is very high risk of hypothermia for the neonate (Liyange, 2005).

To meet the targets of MDG number 4 and many others, there must be collaboration in the development of innovations among key stakeholders including the health professional. This is

particularly important because of the economic climate now and the past. These innovations should include inexpensive and creative ways that can solve problems that were hitherto difficult to solve (Ratzan, 2011). Some of the priority solutions to improving access to Emergency Obstetric and Neonatal Care (EmONC) are neonatal resuscitation, Kangaroo Mother Care and rooming-in. Others are increasing the number of midwives and targeting and training of midwives and doctors in the provision of maternal and newborn care by strengthening their life saving skills training (Amofah, Kuma-Aboagye, Faried, Beyai, Dua-Agyeman, Coulibaly,.....Adomako, 2011).

Consequently the WHO held an international workshop on Kangaroo Mother Care where delegates committed their respective countries to the practice of kangaroo Mother Care (Naaso, Bozie, Bawa, Rooyen, & Bergh, 2009). This culminated in the redirection efforts of governments and stakeholders worldwide towards this area and partly due to scarce resources - both human and material with the aim of empowering of communities and individuals to manage conditions, promote health and prolong life by using cost effective means of care.

It is however vitally important to consider certain factors before the application of Kangaroo Mother Care to all small infants. It must first of all be determined which type babies would benefit from it and secondly, that it does not cause any harm to infants or the family - that the benefits outweigh the risks (Doyle, 1997). Safety of the baby is non-negotiably paramount in this practice. To ensure this, the whole concept of KMC will need to be explained and demonstrated to the mother and/or any informal care givers like the father and significant others by staff (example the midwife) responsible for the care of the newborn. Furthermore, all queries should be discussed and when the baby is able to feed well and able to maintain temperature and thriving well then discharge plans can be made (Liyange, 2005).

The kangaroo mother care framework and its application is very key for its successful practice. Provided extensively in this framework are issues that pertain to the conducive environment necessary for the practice of KMC, the role of the personnel, neonatal and maternal requirements for KMC practice. The rest are implementation, output and projected outcome of KMC practice (Nirmala, Rekha, & Washington, 2006).

## **1.2 Problem statement**

Some progress has been made in averting the deaths of children under five deaths from 2000 to 2015. Despite these gains made, the proportion of children dying in sub-Saharan Africa and some parts of Asia remains high. These two areas of the world account for about 80% of the worldwide deaths of children under five years (United Nations Open Working Group, 2014, <http://www.un.org/millenniumgoals/mdgmomentum.shtml>).

The health system needs to increase capacity of the sector including the increase in the human capacity and competence. This is particularly important when it comes to the care of high risk children and babies - the premature and the low birth weight babies. In this light, it is evident that, no facility can provide skilled delivery and essential care (like that for the newborn) unless there is a midwife and/or a doctor with the required know how and orientation. This prompted the Ghana government in 2003, to introduce a number of new midwifery schools and increased the intake for the existing ones. Despite these efforts from the government, the country still continue to record challenging health indicators with regards to reproductive and neonatal health indicators (Amofah et al., 2011).

In most jurisdictions babies born premature and with low birth weight are “condemned” to Neonatal Intensive Care Units (NICU) with its attendant problems of breastfeeding (reduced breast feeding, regurgitation and possible choking of the newborn) and attachment between

mother and baby. The nurse or midwife has the responsibility to ensure this is prevented. The nurse must recognize that the mother and baby have shared needs and should be able to blend her expertise as a professional and family focused care (Kearvell & Grant, 2008). The nurse or midwife cannot blend any technical expertise with family focused care if she herself does not have them. Even if she has them but shows apathy in carrying them out, the problem will still exist. The lack of knowledge on the part of both mothers of newborns and nursing staff are some of the barriers to successful implementation and practice of natural cost effective measures like kangaroo mother care (Solomons & Rosant, 2012). Education of mothers no matter its form or level shows a positive correlation with the survival of the babies of these mothers. Mothers without any form of education have the highest death rate for all the types of childhood deaths as compared to their educated counterparts (Ghana Statistical Service, Ghana Health Service, & ICF Macro., 2009). This education could also be in the form of health education from the midwife to mothers especially those of newborns and by extension the premature and low birth weight ones. Moving further, lack of adequate training and continuous education, cultural problems like beliefs, attitudes and practices, resistance of managers and health professionals and finally, increase in workload of health professionals are other barriers to the practice of kangaroo mother care (World Health Organization, 2003). Most mothers and health care professionals have come to understand the benefit of kangaroo mother care. They however fail to comply with KMC protocol following discharge and the reasons range from their own personal or community beliefs and practices (Bergh, Manu, Davy, Rooyen, Asare, Awoono-Williams.....Dedzo, 2013) hence, this study.

### **1.3 General objective of the study**

The purpose of this study is to bring to light the perspectives of midwives about kangaroo mother in the Mamprusi west District of the Northern Region.

### **1.4 Specific objectives of the study**

1. To explore the conducive environment necessary for KMC
2. To assess the role of midwives in KMC practice
3. To determine the maternal and neonatal criteria for KMC practice
4. To explain successful implementation of KMC
5. To bring to light the output of KMC practice
6. To explore the projected outcome of KMC

### **1.5 Research questions**

1. What is the conducive environment necessary for the practice of KMC?
2. What is the role of midwives in the practice of KMC?
3. What are the maternal and neonatal requirements for the practice of KMC?
4. What is the successful implementation KMC?
5. What is the output of KMC?
6. What is the projected outcome of KMC?

### **1.6 Significance of the study**

Though an academic exercise, this study stands to benefit a lot of individuals, stakeholders and the country at large. First and foremost, the findings of this study bring to light some perspectives of midwives about the concept of kangaroo mother care. Secondly this study informs health authorities in the Mamprusi West District and by extension the whole of the

Northern Region on the training models to develop to increase the capacity in terms of knowledge base of midwives with regards to the practice of kangaroo mother care. It also highlights some misconceptions of midwives about KMC. It also makes some recommendations to managers, stakeholders and the body mandated for the training and regulation of the practice of nursing and midwifery in Ghana-the Nursing and Midwifery Council of Ghana. This will help them exploit the findings of this study to institute measures to properly utilize the practice of KMC to the maximum.

### **1.7 Operational definitions**

**Perspective:** The evaluation of a situation or a fact from the point of view of a group of people of similar characteristics.

**Kangaroo Mother Care (KMC):** A method of providing skin-to-skin contact where the newborn particularly those that are preterm/low birth weight (LBW) infant are placed uprightly between mother's breasts to provide closeness between infant and mother. It is also to provide warmth to the baby.

**Implementation:** Teaching, guiding and providing practical support to mothers with newborns especially those of premature and low birth weight to put babies to KMC position and sustaining it.

**Premature Baby:** Babies that are born less than 28 weeks of gestation.

**Low Birth Weight:** A baby whose birth weight is less than 2.5kg or 25lbs

**Preterm Baby:** A baby born before 37 weeks of gestational age.

**Output:** The effect of practice of KMC on the baby, mother and health professional.

**Projected outcome:** The likelihood that KMC will be promoted by midwives.

**Infant mortality:** The dying of a human being between birth and exact age one year.

**Child mortality:** The dying of a child between exact age one and five years.

**Midwife:** A health professional trained and licensed to deliver women of their babies and takes care of these mothers and their babies after delivery.



## **CHAPTER TWO**

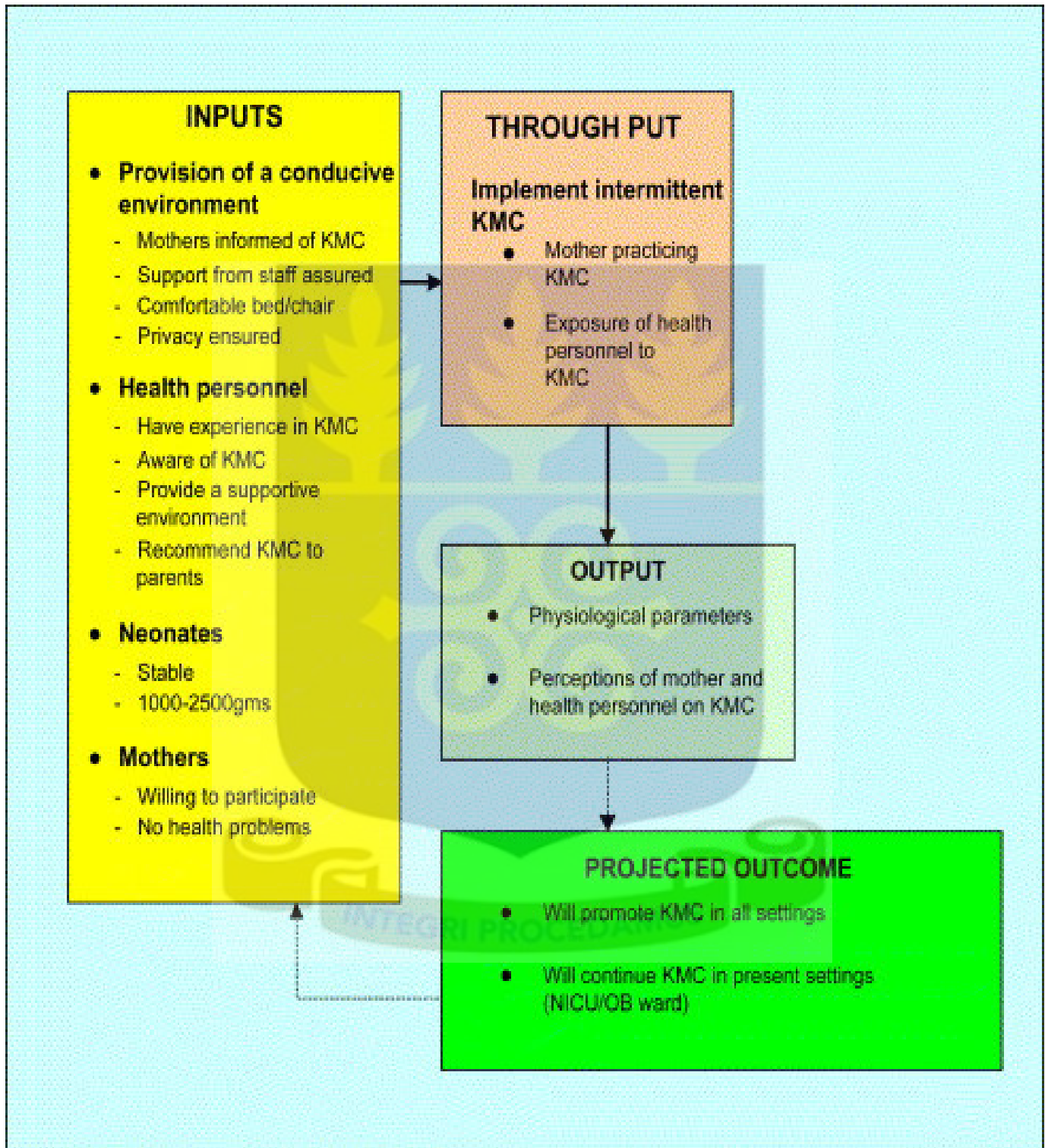
### **LITERATURE REVIEW**

This study reviewed literature that is relevant to kangaroo mother care and the aim of this study from a wide range of databases. Specifically, they are Sage Journals, Hinari, PubMed, Science Direct, Google Scholar, JSTOR and MEDLINE. To make the search easy and simple, the following terms were used; “Kangaroo Mother Care”, “barriers to the practice of KMC”, “KMC and the nurse”, “KMC and the midwife”, “Knowledge, attitudes and practice of kangaroo mother care by midwives/nurses” and “perspectives of midwives about kangaroo mother care”

This study is based on the conceptual framework of kangaroo mother care developed by Nirmala, Rhekha and Washington (2006). The framework is a possible cyclical one with four main-inputs, through component, output and projected outcome (See figure 2.1).



Fig. 2.1: Conceptual framework of kangaroo Mother Care



Source: Nirmala, Rekha and Washington (2006)

Inherent in this framework are six main constructs. These are;

- ❖ Conducive Environment
- ❖ Health Personnel
- ❖ Neonatal and Maternal Criteria
- ❖ Implementation
- ❖ Output
- ❖ Projected outcome

**Conducive Environment:** The conducive environment has four parameters-mothers informed of KMC, support from staff assured, comfortable beds/chairs and privacy

**Health personnel:** Experience in KMC, awareness of KMC, provision of supportive environment, recommendation of KMC to parents

**Neonate:** under this construct the baby must be stable and the birth weight must be between 1000-1500g

**Mothers:** Willingness to practice KMC and absence of health problems

**Implementation:** This has two parameters. These are, mother practicing KMC and exposure of health personnel to KMC.

**Output:** This has physiological parameters and perception of the health care workers about KMC.

**Projected outcome:** Promotion of KMC in all setting and promotion of in the present settings

## **2.1 Application/adoption of the model to this study**

The scope of this study is the perspective of the midwives about KMC. The framework is applied wholly. This is because all the main constructs have some relevance with regards to the midwives perspective about the practice. This was also because this study tried to look at what the midwives thought are the conducive environment for the practice, what they perceive as their roles with regards the practice of KMC. The study also sought to find out their views of the neonatal and maternal conditions necessary for KMC practice, what they thought should be the case of a successful implementation of KMC. Lastly the study also sought to find out what the midwives thought are the output of the practice of KMC and their perspective on the projected outcome of KMC practice. Projected outcome has to do with whether they will promote KMC depending on what they think are the output of KMC practice.

In view of the research topic, the objectives of this study and the inherent constructs in the kangaroo mother care model by Nirmala, Rekha and Washington (2006), the literature review was organized under the following headings:

- ❖ Conducive Environment necessary for KMC Practice
- ❖ Role of Health Personnel in KMC Practice
- ❖ Maternal and Neonatal Criteria for the practice of KMC
- ❖ Implementation of KMC
- ❖ Output of KMC
- ❖ Projected outcome of KMC

## **2.2 Conducive environment necessary for KMC practice**

A quantitative descriptive study was conducted using PRECEDE-PROCEED model involving 292 midwives. The aim of the study was to determine the opinions of midwives about the

enabling factors of kangaroo mother care immediately after birth in Tehran (Iran) hospitals. This study brought to light that over 90 % of the midwives said for successful implementation of KMC, authorities in the health sector need to provide a plan for skin-to-skin contact. A little over 96% of the midwives think that education of mothers before pregnancy, during the antenatal period and in the labour room will encourage mothers to practice KMC. They further stated that collaborative teamwork among midwives will encourage mothers to practice SSC (Nahidi, Tavafian, Haidarzade, & Hajizadeh, 2014). The researchers' choice of quantitative methodology appears not to be a good means of measuring the midwives opinions about SCC. This present study design used qualitative explorative approach to determine the midwives' perspective about KMC. The gap that is left by the quantitative approach in the previous study is addressed by this current study that used a qualitative means.

With the aim of finding out the link between education and perception of key stakeholders of family centered care, a 24 item likert scale was used. The study was carried out in three hospitals in New York and the results were analyzed quantitatively. The results indicated that about 50% of the nurses gave the indication that, they should provide support to the mothers and this should be assured before KMC is introduced (Hendricks-Muñoz, et al., 2010). Though the approach of qualitative nature was appropriate, the setting was a developed one (three hospitals in New York, USA). This study therefore looked at a comparatively less developed setting of the West Mamprusi District of Northern Region of Ghana which shed some light on midwives perspectives in this particular setting.

### **2.3 Role of health personnel in KMC practice**

In a Swedish setting, participants in a study indicated that, all clinical staff need to acquire and have adequate knowledge about KMC. In this vein according to the researchers, they should be

offered some support and training to better equip them. They agreed that, though staff usually have some adequate knowledge about KMC, they needed more knowledge to enable them encourage mothers to practice KMC. The participants were recruited from two units A and B. Unit A practiced continuous KMC and unit B practiced intermittent KMC. The sample size of 126 of nurse physicians and nurse assistants were used in a study and the data analysis was a quantitative approach. (Strand, Blomqvist, Gradin, & Nyqvist, 2014). The choice of participants for this study was appropriate since in most parts of the world, it is nurses, midwives and their cohorts who are responsible for the care of the newborn. They therefore were in a better position to share any information that concerns the care of the newborn.

In a more recent study, three methods of data collection were used in a cross-sectional study in three countries- India, Indonesia and Philippines. One of the data sources included interviews with key stakeholders with regards to the practice of KMC. Participants identified that staff need to have some training in KMC but these training should be one that allows them to visit other countries to benefit from best practices. They also identified among other things the use of posters and flipcharts to teach health workers about the practice of KMC (Bergh et al., 2016).

In Brong-Ahafo Region of Ghana, a study was conducted with the aim of bringing to light the acceptance and barriers to skin-to-skin care involving 23 mothers, 20 TBAs and 3 health workers. The method used to collect data from the health workers was in-depth interviews and thematic analysis was used to analyze the data. The results from the analysis of data from staff indicated that, they (staff) need to be patient and be supportive because KMC is a new kind of practice that will be difficult for mothers. They also have a responsibility of educating the mothers about the concept and practice of KMC (Bazzano et al., 2012). The sample size of three (3) for the health workers was woefully too small. It is however worth noting that this small

sample size was compensated by the method of data collection used. The researchers used in-depth method to collect data. This method of data collection yielded very rich data that provided some insight to the aim of the study.

Nahidi et al. (2014) in their PRECEDE-PROCEED model study also shed some light on companion involvement in the practice of KMC. Their descriptive study involving 292 midwives in their Iranian setting also provide some information with regards to the support for mother in the practice of KMC. They provided some evidence that close to 90% of the participants in that study indicated that, companions of the mother are a major stakeholder to improving the practice of SSC. They explained that, the midwife therefore needs to educate them about KMC.

Educating companions according to the results of the study will better improve upon the practice of KMC. They also provided some evidence to the effect that, about 82% of midwives think that the presence of an educated companion in the labour room improves SSC while a small proportion of them (4.8%) said that the presence of an educated companion has no impact on the practice of SSC by the mothers. Another minority of the respondents (12.7 %) were not sure of the effects that companion involvement has on the practice of KMC.

Another study also produced similar results using qualitative approach with the use of semi-structured interview guide as data collection tool. The aim of the study was to identify and analyse the meanings health team members attribute to parents' participation in the care of premature children in hospital. The sample size was 23 and the setting was a public hospital in San Luis Potosi, Mexico. All of the respondents (100%) agreed that there is the need for the midwife to involve both the mother and father in care of the premature child in neonatal units (Martinez, Fonseca & Scochi, 2007). The use of semi-structured interview guide to collect the data was most appropriate in this kind of study. This is because it allowed some flexibility on the

apart for the researchers to alter the mode of questioning in order for them to be able to illicit the right data from the participant. The previous study used a South American setting. This current study used a similar tool but in a West African setting.

A quantitative approach to another study produced indecisive results with regards to companion involvement. More than half (53.3%) of the staff were not sure whether they should be involving both parents in KMC. This results came out of a cross-sectional study in the eastern sub-district of Cape Town using cross-sectional study involving 15 nurses and 30 mothers (Solomons & Rosant, 2012). The results of this study could have being influenced by the design of the study which is cross-sectional. Their behaviour and responses could be affected by the fact that they knew they were being studied over time.

Qualitatively, eight (8) midwives in Germany think that they should be involving fathers or companions in the care activities of KMC if for any reason the mother is not able to engage in the KMC (Zwedberg, Blomquist, & Sigerstad, 2015). The results of this study could be criticized in the sense that the sample size was inadequate to make that generalization. This present study bridged this difference by expanding the sample size to fourteen (14) participants.

Staff should not involve companions in the activities of KMC. This is because they will have to go and work to earn some income for the family. They will therefore not be able to make the time to do babysitting. This was the results a descriptive-explorative study in Denmark to understand the perception of nursery staff about fathers participation in KMC activities of their wives. The participants were 2 nurses and 6 nurse technicians. Data collection methods was interviews and content thematic analysis was used to analyze the data (Santos, Machado, & Christoffel, 2013). The choice of descriptive-explorative design and interviews as data collection

measure was good. This is because it provided the participants with a better opportunity to actually express their role with regards the involvement of companions.

Strand, Blomqvist, Gradin, & Nyqvist (2014) in their study also revealed some information about Staff's responsibility to the mother and child in the practice of KMC. Staff in their study setting B gave the indication that, a baby that is in the KMC position should be monitored and the midwife should do this both day and night. They added that monitoring is done better when the baby is in KMC position than when it is in incubator. The setting was Swedish university hospital. The method was a cross-sectional survey using questionnaire that had likert scale and additional space for comments. The aim of the study was to compare the attitudes of nurses in the two high-tech units. This study was conducted in a well resourced and developed country. This present study looked at the perspective of midwives in a rural district in a deprived region of an emerging economy of Ghana.

From a qualitative view, 11 community health workers (CHW) in Uganda suggest that care of the preterm include breastfeeding and cleanliness. These 11 CHW were part of sample size of 37 with the rest being parents (Waiswa, Nyanzi, Namusoko-Kalungi, Peterson, Tomson and pariyo, 2010). In another qualitative study carried out in Denmark using 5 mothers and 7 nurses in an attempt to explore neonatal nurses and mothers of preterm daily challenges. The setting was a level III university hospital using interviews and content thematic analysis. The results indicated that, the nurses had the view that they should give support to the mother. The conclusion was that indirect nursing care was given to the babies when support is given to the mothers. This support when given by the midwives enables the mother to have confidence in managing the baby (Hall, Brinchmann, & Aagaard, 2012). In the same vein, a small proportion of nurses (less than 40% of them) think that they should not take the responsibility of discussing the matters of

the KMC with parents despite their strong feeling about its effects. The setting was New York and the data collection tool was a Likert scale and the participants were neonatal nurses (Hendricks-Muñoz, et al., 2010).

Ten (10) participants including doctors, nurse managers, nurse educators, lactation consultants and neonatal nurse practitioners were used in a study. The aim of the study was to explore their perception about barriers and facilitators to implementing Baby-Friendly practice in NICUS including KMC. The findings indicated that, the health professional needs to educate the mother and family. This can be done with the use of pamphlets, videos and promotional materials. Care of the preterm infant also needs to be a teamwork and must involve everybody in the health team (Benoit & Semenic, 2014). The participants in this past study included other professionals aside nurses and midwives. These professionals' views about the whole concept of neonatal care and for that matter KMC might be different and their submissions might not be the same as with nurses and midwives. This could have affected the final findings. This current study therefore bridged the gap by using only midwives who have a direct link with newborns as far as neonatal nursing care in Ghana is concerned.

#### **2.4 Maternal and neonatal criteria for the practice of KMC**

Before training, barriers to health workers encouraging mothers to practice KMC were concerns about temperature, airway, infant stress, infant size and inadequate time. They however reported that they will promote KMC under some conditions. These conditions are stability of infant under room temperature and ventilator, availability of guidelines and equipment, support from other staff and retraining. These findings were contained in a plan-to-do study in a level III facility (Stikes & Barbier, 2013).

Using a quantitative approach to examine the neonatal nurses' knowledge and beliefs about KMC in Ireland using sample size of 62, over 80% of nurses gave the assertion that KC is not contraindicated in babies less than 28 weeks of gestation and in babies who weigh less than 1000g. About 77% of them agreed that infants on phototherapy do not pose as a contraindication to the practice of KC. About 74.2% of nurses believe that intubation of the infant is not a contraindication to participate in KC. However very few nurses (17.7%) believe that umbilical venous line was a contraindication to the practice of Kangaroo care (Flynn & Leahy-Warren, 2010). The study is deficient in the sample size (62 nurses) for a quantitative study. This qualitative study therefore provided better understanding using a qualitative approach with an adequate sample size.

The aim to describe the different and compare staff attitudes that give different opportunities to mothers in a Swedish setting, qualitative study was carried out. A cross-sectional design was used for this study. The study settings were two units A and B. Unit A had more opportunities than unit B. Participants were 126 registered nurses physicians and nurse assistants. At the end of the study staff indicated that staff expressed resisted about using KMC for babies with umbilical problems. Staff also expressed the view that it increases parent- infant attachment, bonding and the physiological status of the baby. They also expressed the view that if the baby is born after 28 weeks of gestation and is stable, then KMC can be introduced and used (Strand et al., 2014). In a similar study, Solomon and Rosant (2012) in a bid to illicit knowledge and attitudes of nurses and mothers towards KMC conducted a cross-sectional study. Out of a sample size of 45 with which 15 of them were nurses in the eastern Sub district of Cape Town, about 60% of the nurses disagreed that KMC should be initiated for babies who weigh between 1-1.8kg. The health of the mother is also another issue. Following caesarean section, mothers are not able to

move due to pain. Due to this, midwives felt that mothers should recover from the effects of the surgery before they can adequately engage in KMC. This result was found in a German setting of Stockholm when the study participants were made of eight (8) midwives using a qualitative approach (Zwedberg et al., 2015).

## **2.5 Implementation of KMC**

Skin-to-skin care or KMC is when the baby is naked wearing only a diaper against the breast of the mother with the face turned to one side so that the mother can see it. This was one of the findings of a three country –Sweden, Denmark and Norway study involving a sample size of 18 nurses. As part of a larger study it aimed to describe the phenomenon of how nurses enact SSC for the dying preterm and their parents (Kymre & Bondas, 2013). Accordingly Valizadeh, Ajoodaniyan, Namnabati, Zamanzadeh, & Layegh (2013) have shown that about 68.2% of nurses with sample size 23 in a hospital in Tabriz (Iran) also gave the clue that KMC was not meaningful without the skin-to-skin contact between mothers and infants. More than 90% of the participants agreed that the infant need to be undressed to have effective KMC. The methodology was quantitative.

During the implementation of KMC, staff should also be educated on the neonatal care and KMC with the use of education tools. This can produce huge positive results even in those who do not have knowledge about neonatal care. This came to light in a case study in Kenya, with one midwife serving as the participant and the researcher. Also, care of the neonate should include the infection control and prevention and the promotion of feeding. Staff should also monitor the vital signs (Lloyd-Nyunja, 2011). Another qualitative study produced similar results. Staffs have the responsibility of making themselves available to supervise junior staff in order that they can both provide KC. This can also build confidence in the junior staff in the practice of KC. These

came out as some of the findings in a study that used a Neonatal Unit Clinician Assessment Tool (NUCAT) to assess knowledge and confidence to perform kangaroo care positive touch. The data collection was combined with interviews using a semi-structured interview guide. The sample size was 51 respondents (made of doctors, neonatal nurses and nursery nurses) in the neonatal unit in University Hospitals in Coventry and Warwickshire National Service Trust (Higman, Wallance, Law, Bartle, & Blake, 2014).

Using focus group discussion in a study in neonatal units in Sweden that aimed at bringing to light staff experiences in the implementation of guidelines of KMC, results showed that education of staff is necessary. There indicated that for the effective practice of KMC, staff will need some education or orientation of some sort to produce the best results (Wallin, Rudberg, & Gunningberg, 2005). A quantitative study produced similar results. Using student nurses as participants, sample size 322 of undergraduates to investigate their knowledge and believes about KC in Korea, the conclusion was that there is the need to develop educational programmes in order to boost their knowledge and develop a positive belief about KC. The design of this study was a cross-sectional one (Park, Koo, Choi, & Kim, 2016). The sample size for this study was appropriate for a quantitative study. The choice of participants was however inappropriate. This is because the study recruited student nurses and might not be able to appreciate an information judgment regarding the care of the newborn since they might have outstanding areas to learn. This is addressed in this current study by using qualified midwives who are licensed to practice.

Using an explorative-descriptive design, a study was conducted with the aim of understanding the perception of nurses in Neonatal Unit at University of Sao Paulo (Brazil) Hospital about the implantation of kangaroo Mother method. Five (5) nurses were recruited for the study and the

tool for collecting the data was a semi-structured questionnaire. The results came out that the staffs were not consulted before the programme was introduced and there was no mutual discussion between the policy makers and the staff. Consequently, they felt that they are forced to implement the programme. That apart, they also complained about the inadequate resources especially human to supervise mothers to practice KMC more especially at weekends. The last issue that came out was the lack of motivation of staff to adhere to the practice of the KMC. The initial enthusiasm died down because they thought that the introduction of the practice would have come with some motivation from the proponents of the programme (Parisi, Coelho, & Melleiro, 2008). Similarly, strand et al (2014) showed that, nurse physicians and nurse assistants in Sweden think that KMC did not add extra work to them.

Qualitatively, Waiswa, Nyanzi, Namusoko-Kalungi, Peterson, Tomson & pariyo (2010) have given the indication that, care of the newborn should not be the duty of mainstream health workers alone. They think that traditional birth attendants (TBAs) should be involved in the care of preterm babies. This study involved a sample size of 37 participants of which 11 of them were community health workers. Data collection for this study was in-depth interviews and the setting was Uganda.

With the aim of exploring the experiences and perceptions of midwives about skin-to-skin contact between mothers and infants after caesarean section, a qualitative approach was used in Stockholm with a sample size of eight (8) midwives using interviews. The researchers came out the indication that the participants held the view that, the decision to engage in KMC lies with the parents. So for KMC to be practiced the parents must agree (Zwedberg et al., 2015).

Using focus group discussion in a study in neonatal units in Sweden that aimed at bringing to light staff experiences in the implementation of guidelines of KMC, they noted that meetings

serves as a medium to increase their knowledge about KMC. They noted that during these meetings, they are taught about KMC to increase their ability to better able to manage clients who need those services (Wallin et al., 2005). Similarly, Staff working in the area of infants care acknowledged that, education of staff is crucial in the care of the infant. When they are all educated it will ensure consistency in the care of the infant. Staff should therefore take measures to ensure that they are all educated. The sample size for this study was ten (10) participants that included doctors, nurse managers, nurse educators, lactation consultants, and neonatal nurse practitioners (Benoit & Semenic, 2014).

## **2.6 Output of KMC**

In a study of the members of a health team, parts of the results indicated that, they view KMC as having positive effect on the baby. Consequently, they are interested in implementing it with the view that it brings about stability, growth, development and bonding between the mother and the child. In this study the sample size was 23 and the setting was Mexico (Martinez, Fonseca & Scochi, 2007). Another study but using quantitative approach also produced some results that indicated that KMC has some benefits. With the aim finding out the link between education and perception of key stakeholders of family centered care, a 24 item likert scale was used. The study was carried out in three hospitals in New York and the results were analyzed quantitatively. The results indicated that over 60% of the nurses in two of the hospitals think that KMC has benefits to the infant (Hendricks-Muñoz, et al., 2010).

A descriptive study was conducted in a university hospital in Iran involving 23 nurses who worked in the Neonatal Intensive Care Unit. The study revealed that, 100% of the nurses believed that KMC had a tremendous impact on affectionate behaviour like touching the infant. Another revelation was that 95% of the nurses believed that KMC offered the mothers the

opportunity to engage in caretaking behaviour like holding the babies with both hands. The study also revealed that 90% of the nurses believed that KMC increase the mothers' affection, improved mother-neonate relationship and mothers' presence in the unit. Further, it consoles the neonate, calms the mother and helps her to greatly participate in the neonate's care like bathing and feeding. The study finally concluded that nurses have a strong positive perception about KMC. They had the conviction that KMC supports developmental care and improves the attachment between the mother and baby (Valizadeh, Ajoodaniyan, Namnabati, Zamanzadeh, & Layegh, 2013).

Another quantitative study produced similar results. According to Solomon and Rosant (2012), 53% of nursing staff agree that KMC enhances bonding between mother and baby. This came out when they conducted a cross-sectional study in South Africa to know the attitudes of nurses and mothers about KMC. The nurses were 15 and mothers 30. In another quantitative study, 98.4% of neonatal nurses indicate that KMC prevents hypothermia, and bradycardias. The aim of this study was to assess the knowledge and believes of 62 nurses in Ireland (Flynn & Leahy-Warren, 2010). In one other quantitative study, a national survey of all heads of neonatal units and hospitals with neonatal wards using a semi structured questionnaire in Germany was carried out which had a response rate of 51%. The data was analyzed quantitatively. In 42% of the responses, the neonatal heads indicated it reduces bradycardias in neonates (Thiel, Längler, Markus, & Ostermann, 2016).

Using focus group discussion, a study was in neonatal units in Sweden that aimed at bringing to light staff experiences in the implementation of guidelines of KMC. The results showed that KMC increases the wellbeing of both mother and baby and increases the attachment between them. They however acknowledged that it increases workload (Wallin et al., 2005). A Similar

but case study produced results in similar direction. In a case study in Kenya, with one midwife serving as the participant and the researcher, she noted that KMC is very effective in thermoregulation (Lloyd-Nyunja, 2011).

Divergent results were seen in two Swedish neonatal units. Two units in Sweden (A which was practicing continuous KMC and B practicing intermittent KMC) were studied with the aim of comparing the attitude of the nurses in those units. In both units staff maintained that monitoring parents to practice KMC did not add extra workload to them with those unit B indicating that they were less likely to encourage parents to practice KMC even if it did not increase workload. Those in unit A considered KMC as a routine work task. They also added that workload could further be reduced if they staff provided information to mothers on how to care for the baby during KMC (Strand et al., 2014).

.A descriptive and comparative study was conducted in three Nordic countries-Denmark, Sweden and Norway to investigate the application of skin-to-skin care (SSC), the existence of guidelines and the attitudes of neonatal staff towards SSC. The sample size was 1446 participants. The conclusion drawn was that NICU staff agree that SSC is beneficial to both the infant and family (Olsson, Andersen, Axelin, Jonsdottir, Maastrup and Eriksson, 2012). This study recruited an appropriate sample size for this study considering it three setting nature. This helped the researchers to make the necessary generalizations.

Midwives in the Brong-Ahafo region of Ghana perceive KMC as an irregular practice and it looks funny. They thought that mothers might be ridiculed by members of their communities if they are seen practicing this type of care at their communities. According to them, this therefore affects the continuity of care on discharge home. This was the outcome of in-depth interviews of

three health workers who formed part of a larger study with other participants that included 23 mothers and 20 TBAs in the Brong-Ahafo (Bazzano, et al., 2012).

In a German setting to explore the experiences of midwives' experiences and perceptions of skin-to-skin contact between mothers and infants after caesarean section, a qualitative approach was used with a sample size of eight (8) midwives using interviews. The findings indicated that KMC provides some positive effects for both parents and the baby. It is time consuming to engage the mother in the activities like giving information. The cultures of the family where the parents are coming from also pose as problem for the practice of KMC. The KMC is not a usual practice of some cultures and will therefore pose as problem for the women (Zwedberg et al., 2015).

With the aim of increasing the participation rate of KC within a level III NICU, a methodology of Plan-Do-Study-Act Model where strategies are planned and implemented to overcome barriers was used. The results for pre-training indicated, health staff doubted the efficacy of KMC (Stikes & Barbier, 2013).

## **2.7 Projected outcome of KMC**

KMC is seen as a below standard form of treatment that should be reserved for the developing world. This was the view of those at the helm of affairs of coordinating the activities of KMC. This finding was seen in low- income countries and surprisingly disputed by respondents in well planned health care systems. This is gross incongruity of findings came from a study of 17 respondents from 15 countries (Charpak & Ruiz-Pelaez, 2006).

In 2010, a qualitative study involving 11 community health workers, 10 mothers and 6 fathers in Uganda to explore the care for and perceptions about preterm babies among members in eastern

Uganda. The data collecting method was in-depth interviews. Some of the results showed that health workers generally had no knowledge of KMC but once the procedure is described to them and they have the adequate knowledge, they are willing to implement and promote it (Waiswa, Nyanzi, Namusoko-Kalungi, Peterson, Tomson & pariyo, 2010).



## CHAPTER THREE

### METHODOLOGY

This third chapter describes how the research was carried out in order that the research questions could be answered. Sub-headings under this chapter include the design, setting of the study, target population, sampling and data collection procedure. The rest are data analysis method, ethical consideration, data management and measures that were used to ensure rigour.

#### 3.1 Research Design

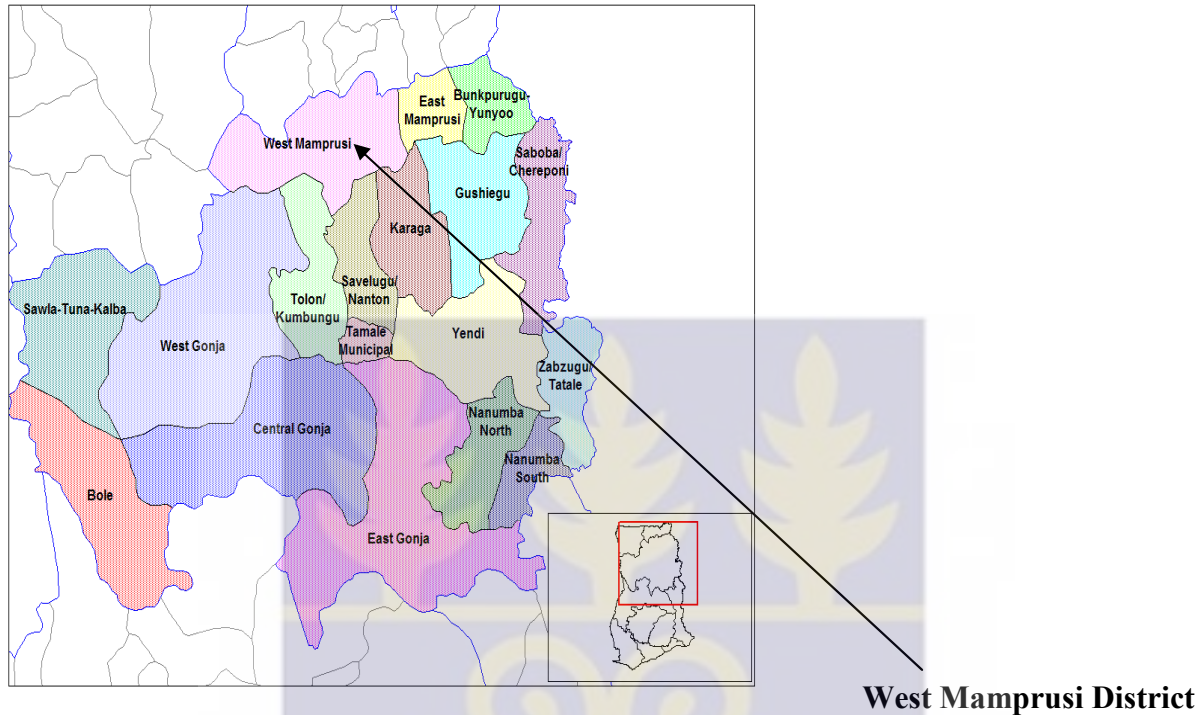
The design for this study was a qualitative descriptive explorative one. This was necessary because it sought to dig deeper to explore what they really thought about KMC by gathering enough data. Qualitative research collects enough data as much as possible that will encapsulate all the elements of an event that come together to make the event what it is (Sandelowski, 2000). It is a multi-method that involves interpretive and natural approach to any subject matter. It has the purpose that describes diverse realities while providing understanding and being able to capture everyday life and human perspective. It also seeks to examine into maximum context and interaction of the researcher with the participants while collecting data face-to-face from the participants. It has naturalistic characteristics and takes place in the real world with manipulation from the researcher. It also attempts to gather much information as possible by way of detailed narrative description about the phenomenon under study rather than statistical calculations (Trumbull, 2005). Descriptive studies paints the picture of a situation, person, event or show how things are related to each other (Gray, 2009). In this type of design open ended and emerging data is collected with primary aim of developing themes (Creswell, 2003). Qualitative designs generates large amount of detailed data among a small number of participants (Mays & Pope, 1995). In qualitative research both the researcher and the participant contribute uniquely

and this make the participants feel involved because of their involvement in the examination of their personal experiences (Karnieli-Miller, Strier, & Pessach, 2009). This type of study aims to provide an in-depth understanding of the participant's experiences, perspectives and histories characterized by the exploration of phenomenon from the perspective of those that are being studied (Spencer, Ritchie, Lewis, & Dillon, 2003). This type of design was necessary because it afforded the researcher with the opportunity to get a deeper understanding of the participants' evaluation of a KMC practice from their own point of view.

### **3.2 Research Setting**

The choice of a research setting depends on whether or not the researcher will be able to observe the research phenomenon under study. The setting should maximize and intensify the phenomenon and the frequency that it occurs (Morse & Feild, 1996). The study setting was the west Mamprusi district of the northern region with its capital being Walewale. It is one of the twenty districts in the northern region. It has a total population of 168,011 people (Ghana Statistical Service, 2010). The district covers a total area of 4,892 km<sup>2</sup>. It has an under five mortality rate of 175/1000 live births (Ghana Statistical Service, 2013).

It was chosen because it is one of the poorest and deprived districts in Ghana. It also has health facilities both public and private with midwives that provide a range of services with limited resources. This demands that the staff use innovative and cost effective means to care for patients/clients. Important among them is KMC.

**Fig. 3.1: Map of Northern Region showing west Mamprusi District**

**Source: Ghana Statistical Service (2013)**

### **3.3 Target Population**

This study targeted all midwives in the Mamprusi West District of the Northern Region. These included those that had a straight three (3) midwifery training, those that had post-basic midwifery and the Bachelor of Science (Midwifery). There were about twenty-two (22) midwives serving the whole of the district. The study targeted this category of health workers for two reasons. The first reason is that, Ghana did not train neonatal nurses. The responsibility of caring for the newborn lay with midwives. The second reason is that, the Mamprusi West District is one of the deprived districts in Ghana with accompanying inadequate numbers of modern equipment like the incubator. This particularly makes it imperative for midwives to develop an attitude of one that is positive towards a more cost effective and cheap method of

caring for the preterm and low birth weight infants. As indicated, qualitative study makes it possible for the researcher to increase understanding of the features of the target population (Procter & Allan, 2006).

### **3.4 Sample size and sampling technique**

Sampling helps the researcher to choose participants for a study since it is not possible to include every member of the target population in the study (Procter & Allan, 2006). Of particular importance of sampling to qualitative research is that it solves the problem of data redundancy. In qualitative research, sampling does not aim to select sample that is representative of the target population (Pope, Ziebland, & Mays, 2000). Qualitative studies usually study small groups. It must however be stated that sample size is not a prerequisite (Polkinghorne, 2005; Trumbull, 2005). The main aim of qualitative studies is to collect data that will provide understating, describe and clarify human understanding of issues and not to provide avenues for generalizations. The participants are therefore selected because of the study's aims (King, 2004) and that, they are capable of providing sufficient information for the study (Polkinghorne, 2005). The researcher achieves this by using purposeful sampling method where the researcher select participants he/she conceives will yield the right data to address the research questions (Trumbull, 2005). In this light, this study used a purposeful sampling technique to select a sample size of fourteen (14) participants for the study. It was at this number that there was saturation of data. It must also be stated that their willingness to participate in the study remained paramount.

### **3.5 Inclusion criteria**

The criteria for inclusion in this study were;

- ❖ All neonatal care staff with midwifery training.
- ❖ All midwives working the Mamprusi West district. These included those working in both private and public institutions.

### **3.6 Exclusion criteria**

- ❖ Exclusion criteria included all neonatal care staff without any form of midwifery background.

### **3.7 Data collection tool**

There are three major ways by which of qualitative data can be gathered and these are through documents, observations and interviews. The use of interviews is the common way of gathering data in qualitative research (King, 2004; Qu & Dumay, 2011). This study employed the use of a data collecting tool (Appendix A) that has two sections – section A gathered demographic data of the participant and section B was the interview guide used to gather data relevant to the study.

The source of topics included in the guide came from the literature that the researcher reviewed and his own experiences and knowledge in the area (King, 2004). King, (2004) recommends that instead of using a formal set of questions to be asked, the researcher should use guide that has list of areas he intends to cover in order to answer research questions while making provision for probes to get greater details. For this study, an interview guide was used. In order not to unduly take the midwives away from their main duties of caring for their clients, agreements on venue and dates was reached with them without unduly distorting the plan for the study.

### **3.8 Piloting**

Piloting is where the data collecting tool is used to collect data from a small number of the people who have characteristics that are similar to those that will take part in the study itself. This is aimed at identifying misinterpretations and items that are missed out so that modifications can be made to the data collection tool before the full study is carried out (Lacey, 2006). Piloting for this study was done at the Bongo District Hospital which is a different district and region from the setting where the study was actually carried out. Three (3) midwives were used for this pilot study.

### **3.9 Data collection**

Data collection or gathering has the purpose of providing evidence for the study (Polkinghorne, 2005). At this stage, the researcher is completely dependent on the willingness of the participants to take part and share their experiences in the research on the topic. The relationship that is established between the researcher and the respondent determines the quality and quantity of the research (Karnieli-Miller et al., 2009).

The midwives for this study were selected from the district regardless of whether they worked in private or public facility, hospital or health center. The authorities as far as health delivery is concerned in the district were duly notified and shown the ethical approval from the Noghuchi Memorial Institute for Medical Research (NMIMR) and also to seek their approval to carry out the study. The relevance of the study was explained to each participant. Since all the participants could read and write, this was made easy with the use of the information sheet of the study (Appendix E). Though this form was self explanatory, where there were doubts they were explained and clarified to the participant by the researcher. After the participant had gone

through the form and satisfied that she was comfortable with the terms on the information sheet and agreed to take part in the study, she was then given the consent form (Appendix E) to sign.

The data collecting tool (Appendix A) section A elicited demographic data from the respondent and also used to establish rapport between the researcher and the respondent for a smooth interaction. Section B of the data collecting was used to illicit data that was relevant to the objectives of the study through skilful interviewing of participants. It resulted in the production of quality data. It is able to produce a first-person account of the experience of the phenomenon under study. Mostly these interviews are one-to-one or dyadic (Polkinghorne, 2005). The section B (interview guide) contained seven (7) main questions and a number of sub-questions with probes and prompts as and when necessary. This was aimed at digging deeper into the perspectives of the midwives about the practice of kangaroo mother care. Each participant was interviewed for a period of 45-60 minutes. With the permission of the participants, the interviews were audio taped. Polkinghorne (2005) indicates that interviews are usually audio taped for better analysis.

### **3.10 Data analysis**

Unlike quantitative analysis that yields numerical values, qualitative analysis works with bits of field notes that include narrative accounts of conversation, interviews, observation, etc. To analyse this kind of data, it must be iterative that begins at the point of data collection and till the end of the whole study (Weiss, 1998; Bradley, Curry, & Devers, 2007). Sandelowski (2000) indicates that, numerous methods are available for qualitative analysis of data. Among these is thematic analysis which is a deductive way of analyzing qualitative. Deductive analysis summarises data, identifies links between the objectives of the study and the results from the data and establish a framework for evidence from the raw data (Thomas & David, 2006).

In this study, thematic content analysis was employed. In this study, the first task was transcribing the audio recordings into raw data. The next step was to read extensively the data several times in order to become familiar with it. Coding was then done according to the objectives of the study and also in line with the framework of the study. The sentences or phrases of the transcripts that had direct link with objectives and the framework were identified, highlighted and labeled electronically using the “review” tool of Microsoft word. The electronics coding was used to ensure that any alteration could be made without having to waste any materials as is with the case of printed transcripts.

A coding frame was then developed. This frame had four columns with a number of rows depending on the different codes that were identified. The headings for the columns were “code label”, “code name”, “description” and a “quote” from the transcript to illustrate the description. The next stage was the identification of patterns and grouping of the codes according to these patterns. Sub-themes and themes were then developed. Some were collapsed and then reframed in order to answer the research objectives. Some quotes from the transcripts were used to illustrate the themes and sub- themes.

### **3.11 Methodological Rigour**

Regardless of the approach that is taken for a particular study, its trustworthiness is usually evaluated. This can be done by peers, grant reviewers and readers (Krefting, 1991). In the academic world it is usually reviewed by a team of examiners. The rigour of qualitative research is ensured by a systematic and self-conscious research design, collection of data, their interpretation and communication (Mays & Pope, 2000). It is greatly influenced by the integrity and honesty of the process. The process should appear transparent to those who will review and use the findings (Polkinghorne, 2005). There are qualitative strategies to ensure that the study is protected against

biases and enhance the reliability of the findings (Mays & Pope, 1995). Reliability can be achieved by religiously keeping the record of the interviews conducted and observation made during those interviews. Collection of the data should be done in such a way that it can be replicated by other researchers (Trumbull, 2005). There are four aspects of trustworthiness-credibility, transferability, dependability and confirmability (Guba, 1981). This study applied all four of these to ensure rigour at the end of the study.

**Credibility:** The researcher in this study ensured credibility by focusing on the truth. All the interviews were audio recorded and transcribed verbatim. The researcher also ensured that each respondent got to listen to the tape of their own voice for them to agree that indeed that were their voices recorded. Finally, the researcher this study kept a field diary to take note of all respondents' gestures and other non-verbal communication that could not be captured by the tape recorder. The researcher's own interactions with the respondents were also recorded in this field diary. All these records had dates and time at which they were recorded. The researcher in this study also ensured credibility by personally collecting the data. The researcher did this to reduce any distortions in the data from any research assistant. This study therefore did not employ the services of any research assistant.

**Transferability:** This is the ability of the researcher to compare one context to another possible context. The researcher achieve this by having a thick descriptive data and giving a thick description of the context (Guba & Lincoln, 1982; Guba, 1981). The researcher achieved this in this study by making use of the nonverbal recordings done in the field diary and that of the tape recording.

**Dependability:** Prominent in determining the dependability of a study is the audit of the process. A decision trail provides a very essential tool for the researcher to establish an audit trail (Koch,

2006). Audit trails are documentation of the actual note of the interviews and gives a running account of the process (Guba, 1981). This was done by keeping a field diary to keep every record of whatever transpired at the field as a backup. Small sketches of facial expressions were made on the field diary to illustrate.

**Confirmability:** This is the ability to show how interpretations and results have been arrived at (Koch, 2006). The researcher in this study ensured this by using a variety of means to collect data. First and foremost interviews were used. Another way was that, the researcher kept an audit trail to keep a record of all events including the body language of the respondents that could not be captured by tape. This study therefore used methods that included interviewing and careful observation of body language and gestures of participants.

Additionally, Krefting (1991) acknowledges that, unlike quantitative studies where the researcher ensures trustworthiness by distancing himself or herself from the subjects, it is achieved in qualitative by decreasing the distance between the researcher and the informants. In this study trustworthiness was also achieved by increasing the period of interaction between the researcher and the participants (the midwives). This study ensured that the researcher collected data himself so that there were no distortions from any research assistant.

### **3.12 Ethical Considerations**

The welfare of the participants is very crucial in the conduct of any qualitative research (Polkinghorne, 2005). Harm to participants in a research are prevented or reduced when ethical principles are appropriately applied. It is therefore imperative for the researcher to be protective of the human participants (Orb, Eisenhauer, & Wynaden, 2000).

This study of midwives of West Mamprusi District ensured that this was guaranteed. First of all, the researcher committed himself to the Noghuchi Memorial Institute for Medical Research (NMIMR) to seek for an approval before carrying out the study. Apart from this, the researcher also sought approval from the Mamprusi West District Health directorate. The researcher also sought individual consent from the midwives who were recruited for this study. They were provided with all the information regarding this study with help of information sheet before they were given the consent form (Appendix E) to sign when they agreed to take part in this study.

Another way that guaranteed the safety of the respondents (the midwives) was by obeying the main ethical principles- autonomy, beneficence, non-maleficence and justice (Gillon, 1994; Johnson & Long, 2006; Orb et al., 2000).

**Principle of Autonomy:** This study ensured that respondents were at free will to choose as to whether they wanted to take part in the study or not. They were not forced or coerced to take part in the study.

**Principle of beneficence:** While seeking to avoid doing harm to the respondents, the results of this study benefits the midwives in the sense that the study made recommendations to the various stakeholders on how stakeholders can take steps to improve their practice as midwives.

**Principle of Justice:** A classical feature of this principle is the avoidance of exploitation and abuse of the participant. It is that principle that seeks to ensure equal share and fairness (Orb et al., 2000). The choice of participants for this study was not based on any special qualification apart from the fact that they were midwives working in the district and that they can easily be reached.

**Principle of non-maleficence:** No physical or psychological harm was caused to the respondents while taking part in this study. The clients were not also denied of their services because respondents had to take part in the study.

### **3.13 Data management**

Gray (2009) acknowledges that qualitative data are gathered in the form of verbatim transcription of interviews or discussions, notes from observation or any other written documents. This makes the information intimidating to the researcher making it essential to manage the data. The researcher managed data from this study by abiding by all the recommendations of the University of Ghana and NMIMR. The data is kept under lock and key and only the researcher and the supervisors have access to them. Identifying information such as demographic information was kept at the same place with the printed or transcribed data. The data will be only discarded after five years



## **CHAPTER FOUR**

### **FINDINGS**

This chapter contains the findings on the perspectives of midwives about KMC in the west Mamprusi district of the Northern Region. The findings are in two parts. The first part has to do with the basic data of the participants in the study and the second part contains the themes and subthemes.

#### **4.1 Demographic characteristics of participants**

The study involved a sample of fourteen (14) participants. It was at this number that the researcher reached data redundancy. The majority of the participants were in the age bracket of 50-59+ with the least recorded in brackets 20-29 and 40-49 years. All participants were Ghanaians with one having dual citizenship (Both Ghanaian and Burkinabe). Majority of the midwives were community midwives. None of the midwives had a Bachelor's degree qualification. Five of the midwives had years of practice experience in the range 10-19 years. (Please see appendix H for detailed Demographic data)

#### **4.2 Themes and sub-themes from the interviews**

The second part of the findings presents themes and subthemes that came out of the narrations of the midwives from the fourteen (14) interviews. Thematic content analysis was used to analyse the data. The main themes centered on the framework (Nirmala, Rekha and Washington, 2006) and the objectives of the study. There were seven (7) main themes. Each of these themes has a number of subthemes under it (please see Table 4.1).

**Table 4. 1: Themes and subthemes**

Themes	Sub-Themes
Provision of conducive environment	Information for mothers Support from staff Resources for KMC
Role of the midwife in KMC practice	Knowledge acquisition Family teaching and education Support for family
Neonatal criteria for KMC	Health of baby Birth weight Gestational age of baby
Maternal criteria for KMC	Health of mother Willingness to practice KMC
Implementation process of KMC	Mothers practicing KMC Dissemination of information to co-workers Involvement of co-workers
Output of KMC practice.	Bonding and affection Improvement in condition of baby Positive perception of midwives
Projected outcome of KMC practice	Promotion of KMC practice in all settings Promotion of KMC in poor communities

During the analysis of data from the field, notes were added to provide richness to the findings. Direct quotes from the participants were also added to provide some evidence and more understanding of the results in this study. In order to conceal the identification of the participants, pseudonyms were used to represent the respondents. Below are the details of themes and sub-themes.

#### **4.2.1 Provision of conducive environment**

The first main theme was the provision of conducive environment for KMC practice. The participants in their narrations thought that conducive environment for KMC practice must be in place before KMC can be introduced, practiced and sustained. Under the main theme provision of conducive environment for the practice of KMC, analysis of their narration came out with three subthemes. These were; Information for mothers, Support from staff and Resources for KMC practice.

##### ***4.2.1.1 Information for mothers***

The midwives acknowledged that, the mothers will need some information in order to appreciate the concept of KMC. They need to be taught using posters and any other means available.

In the narration below, a participant confirms that she will use poster to teach and show as example for the mothers to appreciate;

*I will have to show them pictures. I can use things like the one over there (pointing to a poster on the wall of a man with baby in kangaroo mother care position). That is what I think. We will have to be giving them these things to see. I have to teach them before they will be able to appreciate it.*

***Maggie***

This second narration provides some more information for the mother to be given some information using evidence of posters. She says;

*....you know information is important. You can't practice if you don't know how to do it. I will teach her using pictures. If you teach her, I think she needs to see examples. Maybe I will use a picture. I think is good.....when they see these white women with their babies in front, it will boost them to also do it. No, they can't read but I will translate the writing for them.*

**Theresa**

#### **4.2.1.2 Support from staff**

According to the participants, support from staff for the baby and mother adds to the creation of a conducive environment for the practice of KMC. This support ranges from monitoring the mother and baby, counseling and education and finally to teaching and health education of family. This, according to them must be assured before KMC can be introduced.

The need for continuous monitoring of the progress of the child was one of the supports that featured in the narration of this study. This they said can be done either in the facility or when the mother is discharged home. Some of the things mentioned in their narrations to be monitored include the progress in health, vital signs and weight. They emphasized that the midwife should not just leave the mother to herself after giving her the information about KMC and how it is done when introduced. This must be assured before KMC is introduced.

A midwife says that KMC is new to the mothers and that there should be the assurance that there will be continuous monitoring of the child to be sure that the child is doing well, especially when they come to the health facility for reviews and child welfare services. She narrated:

*....I should be monitoring. Oh, I will monitor by making the woman to come from time to time for me to see her and the baby. You will not be in the house with her. Ahhhhaaaa (agreeing with herself). Since it is something new you have told her, you need to see her from time to time and then find out if she is okay. Just like they come for child welfare clinics. We usually encourage them to come for child welfare and immunizations. Or if she comes....(incomplete sentence) she*

*will just pass and show the baby to you. It will enable you to see if there is any problem or concern. If this is not put in place before everything, it will not work.*

**Adama**

Another midwife indicates that it is necessary to do some home visits to monitor things like the weight, temperature, activity and colour of the baby and to see if the child is coping. This is what she actually said:

*.....You just don't leave the child there because you have shown her how to do kangaroo mother care. No, even when the client goes home with the baby, you follow-up. You do home visits or you refer to the next level for them to help in the care of the baby till you know that the child is well matured to survive as any ordinary child. Just as we were saying, you check for their activities, their temperature even at home. Because you go to visit them, you take the necessary things there. You take the temperature, the weight, and maybe the changes in color and whatever. That is necessary for you to know that this child is coping with treatment or is surviving along what you are doing. You need to prepare for all these for this kangaroo thing to take off smoothly.*

**Ruth**

Encouragement and counseling also featured prominently in the submissions of the midwives with regards to support from them to mothers and babies. They attested to the fact that midwives need to be patient and encouraging in their dealings with the mother. They also added that they need to deal with issues that border on emotional issues affecting the mothers.

One of the participants says this encouragement must be a constant one and that, it does not take much effort to do that. Here is her narration:

*.....you know, encourage the mother by constantly counseling her and telling her the importance of the kangaroo mother care. You see? So you have to counsel her.... it is just some short period of time that you have to do. So you have to be patient. Tell her she should be more patient and practice it. As I have said before, you have to stress on the personal hygiene which is very important.*

**Laila**

In one other narration to support this, one participating midwife states that there should be encouragement and supervision which is necessary to deal with mothers' worries as well as other post-natal health conditions.

*I have to Encourage and supervise.... The woman should be encouraged to come regularly for you to see that the child is doing well. And if there are any issues she is worried about, you reassure the person. Or if there is any necessary medical intervention too, you undertake it as early as possible. Yes, I should be monitoring. We need to have this assurance from all of us. If not, our labour will just be in vain. You see?*

**Adama**

#### **4.2.1.3 Resources for KMC**

As one of the subthemes, the issue of resources for KMC featured prominently. It was the view of the midwives that before anyone can get to practice KMC, there is the need for certain material things to be put in place. They made mention of a special cloth that is used for this purpose. However if this special cloth is not available, improvised materials can be used. This can be the mothers own cloth or empty bread floor bags. According to them, the use of other materials aside the ones originally designed for them helps to reduce cost to the family.

This midwife narrates that there exist the special carrier for the practice of KMC but can be improvised with mother's own cloth;

*..... We have a cloth. A special cloth which we use to tie the baby.... And if you don't have that special cloth, any cloth can be used. Any of the women's cloth can be used. You can use it for kangaroo mother care....*

**Kisu**

She further narrates that empty bread floor sacs can be cut open and used to design these baby carriers;

*No, it is just a cloth. Even this "sam botto" (Local parlance for bread floor bag). You can buy and then....(incomplete sentence). You cut it in such a way that, there will be two edges here (pointing to the sides of her abdomen). One on each side of the abdomen. So that after placing the baby on the abdomen you will use it to tie behind. You then bring the other one to tie the feet*

*below. Ahhhhhhaaa (Agreeing with herself). The feet are stretched on the mother's abdomen. So they are not expensive. Any type of cloth can be used. You must be sure that you have all these available.*

***Kisu***

Another participant went on to emphasize the use of empty bread flour sack without mentioning the special KMC cloth. This according to her can be acquired by the facility and used to help the women when the need arises. She puts it this way:

*.....you can even buy these empty bread flour sacks. You open them, wash, and keep them. If someone comes you can bring them out for her to be able to do the kangaroo mother care. Not all of them come without cloths. Those who come without them and you want them to practice, you can bring them for them to do that.*

***May***

The participants failed to mention the issue of furniture, including comfortable beds and chairs where the mothers can rest while practicing KMC as part of the resources for the practice of KMC. Infact, none of them mentioned them despite the promptings.

#### **4.2.2 Role of midwife in KMC practice**

The narrations of the participating midwives revealed that, the health professional and for that matter the midwife has some responsibilities as far as the practice of KMC is concerned.

Analysis of their narrations yielded three subthemes. These were the need to be aware of and acquire knowledge about KMC, provision of support for family during practice and family teaching and education.

##### ***4.2.2.1 Knowledge acquisition***

The midwives in their narrations indicated and defended the need for them to have some knowledge about KMC. Their narrations pointed to the fact that, it is the responsibility of the midwife to acquire knowledge in this area of KMC to be able to help those who need these

services. They should therefore take steps to acquire this if managers will not make it possible for them to have the knowledge.

In the view of several of the participating midwives, it is important for the midwives to make efforts to attend workshops to upgrade themselves and that student midwives should make it a responsibility to acquire the knowledge about KMC especially now that KMC is being taught in the training schools.

This is one of such narrations to that effect:

*All begins with the midwife. Yes, you have to get the knowledge first before you can teach the woman. How can you teach her if you don't have the information yourself? So if there is workshop, you have to force and go. The students too, emmm I am now sure they are teaching them in school. So they also have to force and learn it very well.*

**Fina**

In the following evidence, a participant describes how the issue of finances affects their ability to attend workshops. She therefore placed the responsibility of acquiring knowledge on the doorsteps of the individual midwives. This is what she exactly said:

*I think, they sometimes say we should go for workshops. But we don't go for workshop again because of the problems of finances. So maybe we have to learn it ourselves. There are so many books. We have to look for them and read else we will not have anything to teach the mothers. We have to learn. Once it is your job, you have to learn.*

**Gina**

#### **4.2.2.2 Support for family**

The participants were of the view that there are certain specific supports to be given to the family as a whole before the midwife will be able to achieve the objective of KMC. Among them are the involvement of companions, promotion of feeding and nutrition and promotion of personal hygiene.

Quite an appreciable number of the participants in their narrations pointed to the fact that, the mother alone cannot practice the KMC hence the need to involve others. They were of the view that teaching the woman alone will not yield the desired results. They noted that among amongst those to be involved should be the companions of these mothers. The danger of teaching the woman alone according to them is that she might not be able to remember everything she has been taught. The companions according to the midwives remind the mother if the need arises. They further emphasized the point by indicating that one of the policies of the Ministry of Health preaches on male involvement in matters of reproductive and child health. Hence when the men are involved, they provide the necessary help to the mother to reduce the burden on her. This involvement of men according to them is the responsibility of the midwife. In one of such narrations, this midwife expressed her view with regards to the fact that involving the husband helps as a reminder to the mother. This is what she said:

*..... if you are teaching the woman alone, maybe she will forget. But if the man is around, if she forgets the man will remind the lady. That is why they said we should even encourage the men to come to ANC (meaning antenatal care) with their wives. They are preaching male involvement. Normally when the men come with their women like this we identify that they have left their work schedules and they have come. So we normally attend to those men who come with their wives first because we want to encourage them to come.*

***Vida***

Another also expressed her view that companion involvement reduces the burden and stress of motherhood. She narrates:

*I think that we should involve the men a lot. It is not only the mother that is responsible in taking care of the babies. When you involve them, it will reduce the stress in the mothers. Some of the mothers are even afraid to handle the small babies like that. Ahhhhaaaa (agreeing with herself). But when you involve other people, you see that it will reduce workload..... Just like I was saying, it is not only the mother that can carry the baby. But other family members like the father can help in carrying the baby.*

***Diane***

In the view of other participants however, men should not be involved in the practice of KMC. They were of the view that making men to stay at home to provide KMC will be economically unwise since it is the man that is responsible for the provision of the needs of the family. They added that, since it is the mother that has the feed for the baby, she stands at a very better side of caring for the baby than the man.

In one of the participants' narrations one midwife states how the involvement of the man will affect the family economically. She says getting daily bread for the family will be challenged.

*Oh, if the man should stay and practice kangaroo mother care, who will now bring the food for them to eat? The man will not stay. He will have to go to the farm or go to wherever he works to earn a living for them or get daily bread for the family. And if the man has to stay at home and hold the baby, the mother too holds the baby, who will then give them food? Moreover, is the woman who is going to breast feed. It is not the father. The feeding is with mother. So I think the men ahhhh "tuo"(local parlance for keeping to her thoughts), I don't know. Everybody and his or her line of thought. Me "ddei"(meaning in my view).....*

***Fina***

Another participant reaffirms the need for the man to be excused to concentrate on the getting income for the family rather than sitting down to practice KMC. This is seen in the following narration:

*Is this man working? Because if you involve them hmmm. Ah well, I don't know but I think there will be some money problems. He has to go out and bring money ooo. If not, it won't work. Feeding will even bring fight. I think they should not be allowed. They should rather work.*

***May***

According to the participants, babies who need KMC services also have feeding problems and that the midwife owes it a duty to make sure they are breastfed well and exclusively. Where necessary, the midwife needs to ensure that the breast milk is expressed into hygienic containers and given to the baby in bits. This is necessary to prevent gastrointestinal problems like diarrheal

diseases. That apart, the mother also needs to feed enough to be able to produce enough breast milk for the baby.

This following narration is one of those that illustrate the need for the midwife to ensure that good nutrition for the mother and baby is maintained.

*Talking of feeding the baby, if she carries the baby and the baby sleeps for long, she should bring the baby out and to feed. She should have time for the baby. Then practice the exclusive breast feeding. And then cleanliness in the materials used should also be advised..... She herself will need to feed well for breast milk production. The midwife has to ensure this is done.*

**Christie**

This is also another illustration that drums home the need for the midwife to support the mother to maintain a hygienic way of feeding the infant to prevent illnesses. In order to ensure this, the mother needs to demonstrate for the midwife to see and be sure that she will do the right thing even at home during home visits.

*.....The mother can express the milk into a cup and cup feed the baby or spoon feed the baby. So you have to teach her how to keep the utensils clean. If you don't teach this mother how to do it, and she uses unclean cups to feed the baby, the baby will run diarrhea..... You also have to let her demonstrate for you to see anytime you go for home visits. You make her demonstrate how to position the baby, express the breast milk and how to feed the baby. Ahhhhhhaaa (agreeing with herself). All these things you let her do it every day for you to see.*

**Theresa**

#### **4.2.2.3 Family teaching and education**

The last of the subthemes identified in the main theme, role of the health personnel in KMC practice is, family teaching and education. Some of the participants' narrations bordered on making them understand the concept of KMC and what it does for the newborn. Their narration made mention of some of the things that the mother needs to know about the concept which is their (the midwives') responsibility.

Health talks were some of the things that the midwives said they will be embarking with their clients to get them to health facilities so that their babies can be taken care of well in the area of KMC. This is one of such narrations:

*I have to give her health talk. Health talks to my clients about kangaroo mother care. This education should be in such a way such that those who do home deliveries can bring their babies to the clinics to be taught how to take care of their babies. When they come, I will have to teach them about kangaroo mother. I will advise them against sitting in the house for the baby to die.....*

***Fati***

In a typical narration, this midwife stressed on the need for her to teach the mother about personal hygiene due to vulnerability of the baby to diseases. The following were her exact words:

*.....You (referring to the midwife) teach her personal hygiene. Yes, because if she hasn't taken her bath and she puts baby on her abdomen or her chest to do Kangaroo mother care, I think it is not the best. Because, this baby is a preterm and it is prone to infections. You know, so you will teach her personal hygiene. How to wash her hands, how to handle the baby, how to wash the baby's clothing.*

***Theresa***

#### **4.2.3 Maternal criteria**

In their narrations, there were certain maternal requirements for the practice of KMC. The health of the mother and willingness of the mother to practice KMC remained paramount as part of the maternal requirements for effective practice of KMC. The midwives in their narrations indicated that, there are a number of pathogenic and nonpathogenic conditions of the mother that can pose as challenges to the practice of KMC. For the mother to be able to practice KMC, she must be free of these conditions. The second subtheme under maternal requirement is the issue of willingness of the mother to practice KMC. In their narrations the midwife must be willing to practice KMC before it can actually be practiced since she is a major stakeholder in KMC.

#### **4.2.3.1 Health of mother**

The participating midwives mentioned that there are pathogenic and none-pathogenic conditions that can pose as challenge to the practice of KMC. They specifically mentioned obstetric related surgeries like caesarean surgeries as one of the problems related to the practice of KMC. In this vein according to them, the mother must be free of these or these need to be overcome before KMC can be practiced.

In their submissions, the participants indicated that infectious diseases especially those of the skin and chest pain will pose as problems to the practice. This is one of such narrations to confirm:

*Well if the mother is having diseases like rashes or something like that, I will advise her not to put the baby to kangaroo mother care. Or if the woman is having some infectious disease, the child too may be infected. Apart from that, I don't think there is anything that will prevent her from practicing kangaroo mother care. If the mother also has chest pains it will pose as a problem for the mother to put the baby to kangaroo mother care. Apart from that I don't think there is anything else.*

***Vida***

Some of the midwives also attested to the fact that childbirth related surgeries are major issues in KMC practice. Specifically of such are caesarean sections. This surgeries cause discomfort like pain to the mother that can prevent her from putting the mother to KMC practice. The following two sentences shed some light in this direction.

*If the mother is operated upon like CS (referring to caesarean section) case and she is still in pains, she cannot do it. The effect of the surgery must be over first.*

***Shetu***

This is another narration to drum home the same effect:

*If she delivers a preterm baby through an operation and she is very sick in bed, can she do kangaroo mother care? She cannot do kangaroo mother care. So people will help her at home. Ahhhhhhaaaa (agreeing with herself). If she gets well then she can do it.*

**Laila**

In the following narration the midwife stressed on the need for the mother to be healthy before she can practice KMC:

*When the mother is healthy, there is no problem and I will advise the mother to practice kangaroo mother care..... I will advise her to practice kangaroo mother care when the mother is healthy. It is only when the mother is healthy that she can practice. Without good health, she can't do it.*

**Vida**

#### **4.2.3.2 Willingness to practice**

All the participants were of the view that the woman must be willing to practice KMC before it can actually be practiced. They alluded to the fact that, refusal by the woman to practice will jeopardize the effort of the midwife to implement the practice of KMC.

In the following narration, this participant explains how it is important that they get the mother to agree to practice KMC:

*I think one of the things is that, the woman should be willing to put the child to the chest or the abdomen? You can do all that you think is necessary but if she refuses it won't work (shrugging her shoulders). I think she should be willing to do it first.*

**Maggie**

This second narration helps to further confirm that the practice of KMC depends largely on the mother's willingness to practice KMC. One participant narrates:

*You have to be convincing to the woman. She must accept to practice. If she says no, what can you do? The woman is the main problem. If she is willing, fine. But I think you must make her accept to practice. It is very very important....*

**Theresa**

#### 4.2.4 Neonatal criteria

The participating midwives in this study also pointed to the fact that the neonate must meet certain criteria before it can be put to KMC position. Their narrations fell under three main subthemes. These were the health of the neonate, the weight of the neonate and the gestational age at which the child is born.

##### 4.2.4.1 Health of baby

Disease conditions of the child can greatly hamper the practice of KMC. They mentioned congenital and infectious conditions in the child as major examples. For the babies to be put to KMC position, then the baby must be free of congenital and infectious conditions.

Among the several narrations by midwives with respect to this, this midwife verbalizes that spina bifida, infection of the umbilicus and wounds on the child can affect KMC practice. It went this way:

*I don't think babies with spina bifida can be put kangaroo mother care. Another problem is maybe sepsis on the umbilicus or some sores. You know sometimes you deliver a baby full of blisters and pemphigus on the body. The baby should not have these for the practice of kangaroo mother care.*

**Fati**

##### 4.2.4.2 Birth weight

In their narrations also, one of the issues identified in relation to the neonatal requirement for the practice of KMC was the weight and size of the baby. They indicated that the baby should be put to KMC if it appears to be small and when the measured weight at birth is below 2.5kg.

An illustration by one of the narrations confirms the size of the baby as one on the criteria for KMC. She narrates:

..... So when you observe that the baby is very small, you can put the baby to kangaroo mother care. Maybe you are an experienced mother, you know that you have been delivering your babies and they are always big and now that this one is small, and we should know that this baby needs kangaroo mother care.

**Kisu**

Another midwife added more information by recommending KMC to babies that are less than 2.5kg which usually occurs in twin delivery. The following is an illustration:

*What I know is that kangaroo mother care is a care that we give to mothers who deliver children less than the actual weight. That is if the weight is less than 2.5kg. Mostly in twin delivery, some weigh more than the other one. If you see that the child weighs less than the normal weight. You can just put the child to kangaroo mother care.*

**Maggie**

#### **4.2.4.3 Gestational age of baby**

Also paramount in their narrations emerged the issue of gestational age of the baby at birth. In terms of the gestational age, the participating midwives indicated that it should be recommended for babies that are born preterm.

In the following narration, the midwife does not see any reason why mothers with term babies should practice KMC. This goes to affirm that, they will ask mothers to practice KMC if the baby is preterm. She verbalizes:

.....*That is why I was saying that, when the baby is preterm, you can ask the mother to practice that. Ahhhhhha (agreeing with herself). Because if baby is term and is active, why should you practice kangaroo mother care? Do you understand?.....*

**Theresa**

This midwife adds her voice to the recommendation by other midwives that, it should be for babies that are born preterm.

*Kangaroo mother care I know is a care that is given to baby that is premature.... If the child is a premature baby, is good to practice kangaroo mother care.....*

**Melda**

There were also skepticism about the use of KMC for babies born before the 28th week of gestation. The participants mentioned that, at gestational age of 28 weeks or below, it is considered as an abortion. In that light there is no question of KMC or incubator. They contended that the baby will not even survive. At best if they survive, they should be cared for using incubator or any other specialised care.

The illustration of gestational age of 28 weeks and below not having anything to do with KMC is seen below.

*At that time I believe the baby is too small. And with even gestational age of 28weeks, they say is abortion. But above 28weeks, they need more to care for the baby than skin-to-skin.*

**Gina**

Babies born before 28weeks of gestation do not have well developed body parts. Even if they survive according to the participating midwives, they will need specialised care. But all the same they considered babies born before 28 weeks as abortion. The following narration is the evidence:

*Even babies born before 28 weeks we consider that as abortion. We don't consider that as a baby because every part of the child is not so matured. Unless maybe the specialised areas like the big hospitals whereby some....(Incomplete sentence). Recently I heard even at gestational age 20 weeks or 22 weeks, they can keep the baby and nurse the baby to mature. But in settings like this, we still determine it as abortion. The survival of the baby is very, very slim.*

**Ruth**

#### **4.2.5 Implementation process of KMC**

In the main theme of implementation of KMC the participants' submissions were classified into three main subthemes. According to them, the mothers need to be seen practicing KMC, dissemination of information to co-workers about KMC and involvement of co-workers in the activities of KMC.

#### **4.2.5.1 Mothers practicing KMC**

Participants' narrations pointed out that, for KMC to be observed, then the baby must be in front of the chest skin to skin with the mother. Anything that excludes this cannot be considered as KMC.

This piece of narration affirms that KMC is only observed when the baby is on the chest of the mother.

*In the practice of kangaroo mother care, your eyes must see the woman with baby there like this (using her hands to demonstrate on her chest). How can kangaroo mother care be there when the baby is not on the chest? It must be there. It must be on the chest. You see?*

**Theresa**

Adding to the above narration, this participant indicates that the child must be naked and placed on the chest of the mother. This was the narration:

*In kangaroo mother care, the baby should be on the chest skin-to-skin with the mother. I think so. It shouldn't be at the back. If it is at the back how can it be kangaroo mother care? The baby must be in front of the mother and be naked. I think so.*

**Adama**

#### **4.2.5.2 Dissemination of information to co-workers**

The midwives in their submissions also brought to light that during the implementation there is the need for other workers who work with them (midwives) to have basic information about this kind of care. The way to go about this is through teaching them and organizing workshops or briefings for them.

Teaching other health workers was one of the issues that emerged from the subtheme dissemination of information to co-workers. The discussion underscored the need for everybody working in the area of mother and child regardless of whether one is a midwife or not, to be taught KMC. This they said is to ensure that everybody working in the area of child health has

the requisite knowledge about KMC. This according to them is for them to be able to contribute to meaningful to the management of the neonate using the knowledge acquired to help mothers and babies who need that particular care.

A midwife describes the need for other workers to be educated on the subject and gives her reasons to that effect. This is how she put it:

*I think they should also be educated about the kangaroo mother care. Everybody working in the area of child health should have the require information about kangaroo mother care. This will make everybody do her part for these babies. So if they also have the knowledge about it, is better.....*

**Diane**

Another midwife also indicates specifically that, community health nurses and community volunteers can be educated to augment their work. This is the evidence:

*Those you are working with, you need to teach them too. Yes you tell them the importance of it. Why they need to do it. You have to teach them how to do it. The community health nurses too need to be aware. The can also help in the supervision too. Mostly we are busy in the clinics such that we are not able to do visit homes. You can teach the volunteer about it. Teach him what to do, he can also be visiting. The midwife alone cannot do it. Ahhhhaaa (agreeing with herself).*

**Shetu**

According to some other midwives, dissemination of information can be done through the medium of workshops or in the form of briefings. The midwives described how they share knowledge on the subject of kangaroo mother care. They do this routinely on a specific day of the week using dolls to practice to have hands on experience before actually practicing on real human beings. This is usually done in the form of briefings or workshops. They also had the chance by trying their hands under the guidance of professional midwives in the unit.

One of the midwives recounts how a particular day of the week is chosen to enable them to discuss among themselves information about the practice of KMC regardless of whether one is a midwife or not. She narrates:

*In this clinic, Tuesday is our clinic day (meaning day for mothers to bring their babies for child welfare services), we discuss how we will help the women. There is a doll that we use to teach everybody whether you are a midwife or not. When we went to that course they said we should be teaching.*

**Fati**

Another midwife recounts how other staff should be briefed and allowed to try their hands on the real babies with guidance and supervision till they gain the skill of helping the woman in the practice of KMC. She shares her experience:

*..... those who went for the workshop came and we were all...(incomplete sentence). We had a meeting or a workshop. They briefed us on it. If a woman should deliver here and we are putting the woman on kangaroo mother care, the enrolled nurses, the student midwives all come round to see how am doing it. So if I should do it, the next client or the next patient who would come also later, a student would also do it. They would observe and learn. They will also catch up. You then let her demonstrate for you to see. When she does it once, then she has picked it.*

**Fina**

#### **4.2.5.3 Involvement**

In the last of the subthemes under implementation, the participating midwives indicated that, the practice of KMC should involve everybody- whether you are a midwife or not. There should be teamwork among the health workers. They narrated that this is important in the sense that, the practice of KMC can continue even if the midwife is absent. Another essence of this is that they can even teach mothers who have not had their babies in the health facility to practice it. They also said that, other staff who work in the communities need to be involved so they can help the mothers.

This midwife provides evidence that they will need to involve everybody so that they can fill in when the midwives are not available. These were her words:

*They should be involved. Because is not all the time that you the midwife will be available. So you will have to get them involved. So that, in your absence anybody can teach a mother how to practice kangaroo mother care. Everybody should be involved in kangaroo mother care. They*

*can also teach people in their home, communities about kangaroo mother care. So it should be a general thing. Everybody should be involved.*

**Christie**

This narration goes further to reaffirm the importance of involving everybody in the facility that is concerned with the care of the baby especially the community health nurses. This according to them is to avoid the situation where the work comes to standstill when the midwife is not available. This is exactly what she said:

*If you are in a unit with a community health nurse or a general nurse, you try to involve them in what you are doing. This is because you can go out at any time. They will also have to do the work. The work must go on. So as a midwife, if you are working with them, you need to let everybody take part. It should not be you alone. If you are not there, the work comes to a standstill. You should involve everybody.*

**Vida**

#### **4.2.6 Output of KMC practice**

The output of KMC per the narrations of the participating midwives in this study indicated that, there are a number of things that result either to the baby, the mother and the health professional in this case, the midwife following the practice of KMC. The subthemes that came out of the main theme of output were bonding and affection, improvement in the condition of the child and perception of the midwife. The subthemes are discussed below.

##### **4.2.6.1 Bonding and affection**

In this subtheme, the midwives expressed what they personally thought were the output of KMC practice. With regard to the bonding and affection, they indicated that this was due to the close proximity with which the mothers interact with child and the nature of the care. The midwives described how strong the bonds between the mother and baby can be such that, the baby will even refuse strangers.

In this narration, the midwife illustrates that, the practice of KMC makes the baby to be able to recognize the scent of the mother and the mother becomes the first point of learning for the child.

This makes the child even resist separation from the mother:

*The Baby will know the mother very well. If I am a stranger and I want to pick this baby, the baby will not come to me. This is because, a baby knows the mother. The baby will know the scent of the mother. You understand? There are so many things baby will learn from the mother. They are even able to know the smile and your voice. Whatever you do, baby will learn from you the mother first before anybody. So kangaroo mother care is good.*

**Laila**

Additionally, this participant indicates that, the eye to eye contact between the mother and the child during KMC increases the bond and affection of the mother and baby:

*It creates some kind of bond between the mother and the baby. This is because almost every time, the baby is with the mother. We midwives believe that eye to eye contact with the baby brings about some kind of affection and bond between the mother and the baby.*

**Diane**

#### **4.2.6.2 Improvement in condition of baby**

The narrations of the participants in this respect were those in the affirmative. They acknowledged that, KMC has some positive effects on the temperature of the baby. They said there is thermoregulation thus preventing hypothermia in the child. Their narrations also included an improvement in the other vital signs like respiration. Another physiological parameter mentioned by the participants that gets improved with the practice of KMC is the weight of the baby and at the long run tends to increase the survival of the child.

The following narration is one of such that goes to confirm the fact that KMC regulates body temperature of the child and improves upon the respiration;

*It is very beneficial. Because emmm (Laughing), if the baby is kept close to the mother, the mother's body temperature will keep the baby warm. The baby will not be exposed to drought and all that. So it will prevent the child from getting cold or developing hypothermia.....it keeps*

*the baby warm, and the process also improves or supports respiration. It helps the child to breathe better in that position.*

**Adama**

In her narration, this midwife illustrates how it brings about an improvement in the weight of the child with subsequent increase in the survival rate of the child. These were her exact words;

*.....So through kangaroo mother care, the baby has been able to survive and gain weight up to errr (trying to remember the magnitude of the weight gain). These babies have been able to survive. This is through kangaroo mother care. This is beneficial to the baby. Baby can survive and also live up to normal human being. It has benefits to the mother because if a baby is preterm and mother loses the baby, you know as a mother you will be worried. Once the baby has survived and is putting on weight, the mother too will be happy.*

**Kisu**

#### **4.2.6.3 Perception of midwives**

The third and last of the subthemes under the main theme output is the perceptions of midwives about KMC. Under this subtheme, the issue that came out of the participants' narrations was that, they saw KMC as a form of treatment. To some of them, KMC was effective while others doubted its effectiveness. Some of the narrations pointed to the effect that KMC is an unconventional way of caring for babies. Lastly, while KMC was seen as part of the normal routine by the midwives others alluded to the fact that it adds extra work to the midwife.

The participants thought KMC was a modern way of caring for the newborn. Though it has been practiced for a while now, it is still seen as a modern way of caring for the newborn. A participant had this to say:

*It is not an old fashion. Though it has been there for some time now, we still see it as a new fashion.*

**Laila**

Another participant compared it with the “conventional backing” of children that has been there for long but cannot be classified as outmoded. She indicated that it is a good practice. These were her words:

*I think it is the right thing. I believe it is good because it helps save a life. So I don't believe it is old fashioned. What I believe is that it saves life. Is not old fashioned because mothers still put their babies on their back which has been there for long. So if you can put your baby at the back why can't you put the baby in front? It is not old fashion.*

**Gina**

Effectiveness of the practice of KMC was expressed in varied forms by the participants. Some of them indicated that KMC was effective and others doubted the effectiveness of the practice.

The last group of the participants held the view that, for it to be effective, it must be used in conjunction with an artificial warming system- that is either with incubator or baby warmer.

Some of the participating midwives in this study indicated that, the use of KMC in their units has drastically reduced the mortality rate. They expressed how effective it is for everybody. They indicated that they would have preferred to personally use it for their own babies but for the fact that they are no longer going to have kids of their own.

A participant recounts how effective the practice is and by what margin it has been able to reduce neonatal deaths:

*Yes, it is a good thing. When I was the in-charge of the maternity ward, our children were dying prematurely. Maybe one in ten will survive. But when kangaroo mother care came, most of our preterm babies survived. When we delivered ten in a month, maybe one will die and the nine will survive.*

**Fati**

In another narration, a midwife exemplify that she would like to use KMC but for the fact that she is no longer going to have babies but will encourage her own relatives to use it for their babies.

*Me, I feel it is good but we are health workers and we cherish it. I said I have already stopped delivering. But if not, I would have been carrying my babies in front. Because is easy for me to do that. But if I have my daughter who has delivered a preterm baby I will advise her to practice kangaroo mother care..... to me, I think it is good,... Yes I like it. That is why I told you that unfortunately I can't give birth again. That would have been my choice.*

**Vida**

According to some of the participants, the effectiveness of KMC to newborn was in doubt. They expressed it as being dull leading to a decline in its use in their facility. They expressed the view that, the baby warmer is more effective. According to them, the baby warmer is virtually flushing KMC out of the system. They also expressed doubts in the survival of the newborn with the use of KMC especially if they are born below 28 weeks of gestation.

This participant says the use of KMC has declined due to the use of the artificial warmer and mothers have come to love and even wished that they had them for their personal use.

*For now its use has been very dull. It is a long time I haven't seen it being practiced. This is because now we have this embraced nest warmer (another form of artificial warming system for the baby). This time round, that is what we use. The mothers even like it so much. They are asking whether they can get it from the open market..... If you put the babies inside, the mothers appreciate it a lot.....*

**Melda**

This midwife doubts its effectiveness for babies of gestational age of 28 weeks.

*.....Well to me I have never come across babies of gestational age below 28 weeks. Yes. But with 28 weeks that is why I am saying, if only the child is active. There are some children if you do kangaroo mother care at 28weeks, they survive. Others too don't survive. Yes.*

**Maggie**

The participating midwives also perceive KMC as unconventional. They verbalized that, KMC is an unusual practice for the mothers. They said they feel that it is not the norm of the women's communities and villages to have babies put in the front of mothers. The women are used to putting their babies at the back especially with previous children and sudden change to this type of care would present a challenge to them. To some of the midwives, KMC looks funny.

The following narration by one of the midwives provides an insight into the challenge that is related to the non-conventional nature of the practice:

*.....because it is not usual of this our surrounding mothers placing their babies in front of them. I think that is a challenge. This is because within our localities it is not the usual practice to have the mother do that.*

**Diane**

In the following except, the participant describes KMC as being funny to the mother.

*It looks funny to them because, they were not using that. They are used to the back. Now you say she should put her child in front of her, just below the breast. It will look funny to them..... in the beginning, there will be a challenge.....*

**Vida**

Another category that came out of the subtheme of perception is that, some of the midwives in their narrations perceive KMC as extra work for them. They described it as tedious having to go through the pain of taking woman through KMC after delivering them of their babies. This has led to the midwives not encouraging mothers to practice KMC anymore in their units.

In this narration, the midwife describes what she goes through in trying to deliver mothers of their babies. It is difficult for her to do this and having to add KMC. They are however prepared to do since it is part of their job description:

*Of course it is. Because you deliver a child, you monitor her, first through labour and delivery. After that you continue with kangaroo mother care. It is actually tedious but sometimes we have to sacrifice because that is our job.*

**Vida**

This other narration further affirms the midwives' preparedness to do it because it is part of their job description.

*It is extra work. But as a midwife you enjoy doing it because you want to save the life of the baby. Even though is extra work, you don't mind about the extra work. It is extra work but we do it with happiness.*

**Kisu**

Another midwife narrates how the extra work nature of it has led to the extinction of KMC in her unit. This according to her is due to the lack of continuity of other midwives. She added how they are already overloaded with a lot of work in the maternity ward:

*As for that, it is an additional work. It is additional work “paa” (really). Because you have to be on this woman tying, teaching her to do kangaroo mother care and wasting your time (laughing). That is why it got vanished here like that. Because some will not get time to do it. If I come and do it, some will come because of the time that it wastes, they won’t do it. The work is too much in the maternity ward. Sometimes it is “geri geri geri” (meaning, the nature of work in the ward is unpredictable).*

*Fina*

#### **4.2.7 Projected outcome of KMC practice**

Participants in this study identified settings for the practice of KMC as what they termed rich and poor communities. In their submissions, one group indicated that KMC should be practiced in both areas regardless of whether mothers can afford the cost of incubator services or not. The other group also maintained that it should be promoted in areas that are considered as poor. In these areas according to them, there are limited resources for health delivery with particular reference to incubator services, hence, the need to promote the use of KMC. The following are the subthemes.

##### **4.2.7.1 Promote KMC in all settings**

Some of the midwives said that, it should be practiced in both richer and poorer communities. They held the view that, no one can be nursed in hospital for a very long time. They also attested to the fact that, no one can afford a private incubator at the house. Even if one can afford it they cannot acquire it. So eventually when they are discharged back home, the only option left is KMC. The participants further narrated that, it does not matter whether one’s setting is rich or poor. The most important thing is to care for the child and the mother. Usually those in communities that are perceived rich, people leave the little things that are necessary for the

survival of the baby and concentrate on bigger things that end up being detrimental to the child and mother.

In this narration, a midwife justifies how individuals cannot acquire personal artificial warming system for their personal use. Even those facilities that have incubators, payment for these services is usually a problem for most mothers. She also added that the use of artificial warming system is temporal and that the ultimate is the use of KMC. Her words went this way:

*.....incubator services are not free. How many mothers can pay for that? Are incubators in individual homes? They are at the hospital level. As far as I know, I don't know of a private incubator at home, no (with a frown). I only know that we have incubators at the hospitals. So you can't nurse the child in the hospital for a thousand months. If you see that the child is fine and can survive extra incubator, then you discharge them home to continue with kangaroo mother care.....*

**Ruth**

Another narration from one participant also indicates that it should be used for both poor and richer communities. For her, it does not really matter whether one is coming from a richer community or poorer one. The care of the child is what matters. Those who leave the little that are necessary things that are needed for the survival of the child and concentrating on rather bigger things end up harming the mother and child. The following is what she verbalized;

*Whether "colo" (meaning old fashioned) poor or rich, a baby is a baby. The mother is a mother. Some mothers are not highly educated but they know how to manage their babies. Whether is a high class or low class, it doesn't matter. Some people think of bigger and leave the small things that can help the baby to survive. No, we should not leave it for poor class..... With the education, every mother can practice it. It should not matter whether one is in richer or poorer community.*

**May**

#### **4.2.7.2 Promote KMC in poor communities**

According to this group of participants, KMC should be the preserve of the poor communities such as the community that they work. This according to them is due to the fact that the richer ones have health facilities that have incubators and people are more likely to be able to pay for their services. The health facilities cited in the poor communities however do not have incubators. Even when mothers are referred, it becomes a burden on the family in having to look for money for transportation to where there are incubators.

In one midwife's narration, she recounts how people eventually do not go to referral centers for incubator services because of economic hardships. She put it in the following words:

*.....When you refer mothers go to where there is incubator, they won't go. The lorry fare is a problem for some of them. During the colonial times when mothers had premature babies, they used to put coalpot with fire in the room to make it warm. So where the communities are poor we should encourage them to use kangaroo mother care than referring them to where there are incubators.*

**Fati**

In the following narration the midwife recommends bothering less about the richer communities because they have incubators. She recommends that efforts should be concentrated on the villages where the premature babies are dying due to prematurity:

*.....those days our preterm babies were dying in the villages. Let's us not talk about the cities because as for the cities they have incubators and other things. Now kangaroo mother care has come. When we teach our mothers, our preterm babies will survive.*

**Laila**

Another midwife indicates that KMC is good especially in her locality or facility.

*It is a good practice especially in our area like this (referring to the community where she works) and the season. It will be very important or necessary for kangaroo mother care. So it is a good practice.*

**Christie**

### **4.3 Summary**

At the end of the analysis there were seven (7) main themes that centered on the main constructs of the framework used for this study. They included provision of conducive environment, Role of the health professional (midwife) in KMC practice, Neonatal requirements for KMC practice, Maternal requirements for KMC practice, implementation of KMC, output of KMC and projected outcome of KMC practice. Each of these main themes had subthemes distributed across the main themes. There were a total of twenty (20) subthemes.

The results indicated that the midwives held the view that, the mothers will need to be given information about KMC sometimes with the help of pictures before KMC can be practiced. Also as a prerequisite, there should be assurance that the midwife should be to monitor, give encouragement and supervise mothers during the practice. Finally as a prerequisite for KMC practice, the midwives mentioned that there should be resources. Particular mention was made of the “kangaroo carrier” (special cloth for the carrying the baby in KMC position). In absence, the woman can use her own cloths or empty bread floor sacks to improvise.

The midwives also deemed it as their responsibility to acquire the knowledge on KMC both in school and in the field as practitioners. They were also of the view that the midwife also has the responsibility of making sure that the mother is provided support. This support according to them is to involve the companion. This was however disputed by some of them. In their view, involving them will be economically detrimental to the family. Finally on the issue of support, they asserted to the fact that the midwife has the responsibility of promoting feeding in both mother and baby.

The midwives in their narrations also concluded that, the baby must not have any disease conditions that will hamper the practice of KMC. Mention was made of skin infections and

umbilical conditions. In their view the baby must not have any of these conditions. They also mentioned that the baby must visibly be small or weigh less than 2.5kg. Another criterion is that the baby should be premature. They however noted that a baby born before 28 weeks is considered as an abortion and has no place in KMC.

Additionally, the issue of the health of the mother was identified as a factor in KMC. In this case, the views expressed were that the mother must not have any skin infections that could be transferred to the baby. It also came to light that, obstetric related surgeries can hamper the practice of KMC and hence the mother must be free from this. Also, the decision lies with the mother to practice KMC or not. According to them, this is crucial for the practice of KMC.

Another thing that also came to light was the fact that, the mother must be seen with the baby in KMC position during the implementation of KMC. Also during this stage in the whole concept of KMC, midwives need to be a team builder by involving everyone, disseminating knowledge and information about KMC to other health workers like enrolled nurses and community health nurses through teaching, workshops and briefings.

Also inherent in the results of this study is that, the participants indicated that the practice of KMC brings about bonding, affection and love between the baby and mother. It was also seen that, it leads to the improvement in the vital signs of the baby, helps in weight gain and brings about thermoregulation of the child. The perception of the participants about KMC was expressed in various forms. It was seen as a modern form of treatment. To some of the midwives, KMC is effective for managing the newborn while others doubted this. Another group of the participants saw the practice as unconventional. While some of them saw KMC as part of their work in caring for the newborn, others were of the view that it is extra work for them having to monitor women to care for the newborns using this means.

Finally some of the midwives expressed the view that KMC should be promoted in all parts of Ghana regardless of whether the area is a developed area with modern equipment like incubators or not. To the rest of them, KMC should be promoted in areas where health facilities lack artificial system of warming the baby. KMC should be the preserve of areas where the people are likely not to be able to pay for incubator services.



## CHAPTER FIVE

### DISCUSSION OF FINDINGS

This chapter discusses the findings of the study in relation to available literature and in particular, to those that have been reviewed in this study. The purpose of this is to find the relationship that exists between the reviewed literature and the perspectives of midwives in the West Mamprusi District of the northern region. It particularly seeks to determine the consonance, corroboration, similarity or disagreements between the results and those of the reviewed literature.

The discussion of these findings was done in a chronological order and in accordance with the themes and sub-themes identified in this study. The themes included provision of conducive environment, neonatal requirements for the practice of KMC and maternal requirements for the practice of KMC. The rest are implementation of KMC, output of KMC and projected outcome of KMC.

#### **5.1 Conducive environment for KMC practice**

Concurrent collection and analysis of the data from the midwives indicated that, there were issues related to the provision of conducive environment necessary for the practice of KMC. Emerging from the analyzed data, the subthemes were information for mothers, support for family and resources for KMC.

The midwives' views were that, before KMC can be introduced and practiced, the mothers first of all need some information by way of teaching. They indicated that, the best way to do this is by way of using posters and flipcharts. This is aimed at inculcating into the mothers the basics of KMC so they can best appreciate and practice it. This view of the midwives was confirmed by Nahidi, Tavafian, Haidarzade, & Hajizadeh (2014) who brought to light that there should be laid

down plans for the implementation of KMC and these plans includes provision of information to the mothers. In their study they proved that over 96% of midwives think that, when mothers are given information about KMC before pregnancy, during the antenatal period and after labour, it will motivate them to practice KMC after delivery.

The second component of the conducive environment from the participating midwives indicated that, there must be the assurance from the staff that they will be willing to provide support. This support according the midwives included encouragement, counseling and monitoring from the staff. The issue of continuous monitoring of the progress of the child was one of the categories that featured prominently in the narrations of participating midwives of this study. This according to them can be done either in the facility or when the mother is discharged home.

Lloyd-Nyunja (2011) has confirmed this view that midwives should be monitoring the child. She indicated this in the findings from her case study that midwives should be ready to and actually monitor the vital signs of the baby undergoing KMC. The participants in this current study emphasized that the midwife should not just leave the mother to herself after giving her the information about KMC and how it is done when introduced. They indicated that, KMC is new to the mothers and that there should be the assurance that they the midwives will do a continuous monitoring of the child to be sure that the child is doing well especially when they come to the health facility for reviews and child welfare services. Specifically, they mentioned things like the progress of health, weight, temperature, activity and colour of the baby and to see if baby is coping. There were similar findings from midwives in Brong Ahafo Region of Ghana. In this previous qualitative study, the midwives acknowledged that midwives need to be patient and supportive and also provide education to the mothers in order for the smooth implementation of KMC practice (Bazzano, et al., 2012).

As one of the subthemes, the issue of resources for KMC stood out. It was the view of the midwives that before anyone can get to practice KMC, there needs to be certain material things in place. They made mentioned of a special cloth that is used for this purpose. However if this is not available, improvised materials can be used. This can be the mothers' own cloth or empty bread floor bags. According to them, the use of other materials aside the ones originally designed for them helps to reduce cost to the family. There was however limited literature to support this claim by the midwives in this study.

## **5.2 Role of the midwives in the practice of KMC**

The issue of the role of the midwife in KMC also featured prominently in the participants' narrations. The first of the roles is the need for them to acquire adequate knowledge. According to them, it is only when the midwives have knowledge about KMC that they will be able to help the mothers. Their submissions were directed towards the responsibility of their managers to ensure that this happens. They however noted that if managers are relenting on this duty, then the responsibility lies with the midwives to find the means to acquire the necessary knowledge themselves. According to them, this can be done at the classroom level or at the field of practice. This evidence was confirmed by Bergh et al (2016) in a three country (India, Indonesia and Philippines) study. They provided evidence that all participants (midwives) were positive that those at helm of affairs of ensuring that mothers practice KMC need to be equipped with knowledge about KMC. Whiles indicating that the use of posters and flipcharts will help, participants in that previous study preferred management took them abroad to countries that have best practices with regards the practice of KMC to learn. There is some contravention in some of the findings of the past study with some findings of this study in this regard. In this recent study, the midwives confirm that managers have the responsibility for their training. The contravention

is seen in where the midwives in the past study hold the view that managers took the responsibility of equipping the midwives with knowledge about KMC while this current study provides the evidence that midwives have responsibility of acquiring the knowledge about KMC if management is relenting in its duties. Another study in Sweden corroborated this finding by bringing to light that midwives or staff responsible for the management of mothers and babies should be trained to enable them manage these mothers and infants (Strand et al., 2014).

Another role of the midwife identified in this current study is support for the family. According to the midwives, this support can be to the baby, the mother or other family members. As indicated by Hall, Brinchmann & Aagaard (2012), indirect nursing care is given to babies when support is provided to those caring for these babies. This can be the mother, the father or other family members. Some of the participants indicated that the midwife has the responsibility of involving the other family members in the care of the neonate as primary support. They alluded to the fact that involving only the mother will not yield the desired results. According to them, the mother needs some support. Most importantly, they made mention of the husband or her companion. Their view was that, they would be of tremendous help to the mother. Martinez, Fonseca & Scochi (2007) supported this finding in a Mexican study. They brought to light that, it is important to involve both the father and mother in the practice of KMC. In the same vein, five researchers Blomqvist et al (2011) in a Swedish study brought to light that, the care of the newborn with regards KMC is a shared responsibility between the mother and father. Nahidi et al (2014) also indicated that midwives see companions as major stakeholders of the KMC or skin-to-skin (SSC) in Iran. They evidenced this when close to 90% of their responding midwives gave the affirmation. The midwives in this current study further buttressed the point by saying that one of the policies of the Ministry of Health preaches on male involvement in matters of reproductive

and child health. Hence when the men are involved, they provide the necessary help to the mother to reduce the burden on her. This involvement of men according to them is one of the roles of the midwife. Zwedberg, Blomquist, & Sigerstad (2015) have provided some evidence using an European setting. In their study, participants indicated that if for some reason the woman is not able to perform this function of KMC, the man should be encouraged and involved in the activities of the KMC.

Not all the participating midwives in this study held the view that companions should play a role in the practice of KMC. Some were strongly against the inclusion of fathers. This was in discordance with the findings of Martinez, Fonseca & Scochi (2007) who provided proof from a unanimous decision by midwives that, it is in the right direction to involve fathers in the care of the baby in the issues of KMC. The findings in this current study alluded to the negative economic consequences if the fathers are involved. This is because the man is usually the sole breadwinner of the family in the northern part of the country. Hence having this man do babysitting would not augur well for the family economically. Their view was that the man needs to be left to concentrate on the getting income for the family rather than babysitting as in the case with KMC. Santos, Machado, & Christoffel (2013) have actually confirmed that fathers cannot be involved in the activities of KMC. These previous researchers held the view that, because they (the fathers) will have to go and work, they will not be able to make the time to engage in KMC. This confirmation was given by eight (8) staff who work in a nursery in Denmark where KMC is practiced. However, Solomons & Rosant (2012) in their cross-sectional study using a quantitative approach in Cape Town, South Africa showed that more than half of the neonatal staff failed to confirm or disapprove the involvement of the father. They were not sure as to whether they should involve companions or not.

Another role of the midwife as indicated by the participants in this current study is for the midwife to promote feeding for both baby and mother. The midwives' perspective in this regard was that babies who need KMC also have feeding problems. The nurse or midwife therefore needs to make sure that, the baby gets the right amount of feed. They went ahead to state that where the baby has difficulty sucking, the breast milk could be expressed and cup fed the baby. The mother according to the midwives in this study also needs to be encouraged to feed well in order that she can produce enough breast milk for the baby. This finding tallies with that of Waiswa et al (2010) in their Ugandan project. In their study, they confirmed that all health workers in that study agreed that care of the newborn should include feeding especially breastfeeding and cleanliness. Also confirming this finding is the results of a case study where Lloyd-Nyunja (2011) used herself as the participant and the researcher. She agreed that in the care of the newborn, one of the supports that the midwife or neonatal nurse has to provide is to take measures to prevent infection and promote feeding of the infant in particular.

The last of the subthemes identified in the main theme, role of the health personnel in KMC practice is family teaching and education. Some of the participants' narrations bordered on making the mothers understand the concept of KMC and what it does for the newborn. Their narrations made mention of some of the things that the mother needs to know about the concept which is their (the midwives') responsibility. Health talks were some of the things that the midwives said they will be embarking on with their clients to get them to health facilities for better of their babies in the area of KMC. Teaching according to them should also bother on making the mothers understand the concept of personal hygiene because these babies can easily contract diseases. Waiswa et al (2010) also shed some light on the issue of cleanliness. Their

view was that cleanliness should remain one of the paramount pillars of care of the newborn because they are prone to diseases.

### **5.3 Maternal criteria for KMC**

The participating midwives in their narrations pointed to two main maternal parameters as the factors that affect the practice of KMC. These were health and the willingness of the mother to practice KMC.

The health of the mother was one of the outstanding issues related to maternal requirements of the mother in the practice of KMC. Pathogenic and non-pathogenic conditions featured prominently in their narrations. According to them, the mother must be free or these need to be overcome before KMC can be practiced. In their submissions, the participating midwives indicated that infectious diseases especially those of the skin and chest pain will pose as problems to the practice of KMC. The non-pathogenic conditions include obstetric related surgeries like caesarean surgeries. According to them, this kind of surgery causes discomfort like pain to the mother that can prevent her from putting the baby to KMC position. Zwedberg, Blomquist, & Sigerstad (2015) have actually provided some confirmation to this finding in a German study. In their findings, midwives agreed that childbirth related surgeries like caesarean section has an impact on the practice of KMC. Their study mentioned in particular the pain associated with surgery and the inability to use the upper limbs to hold the neonate to KMC position due to the effects of anesthesia. They therefore concluded that the mother must first of all recover from the effects of this surgery before they are allowed to practice KMC. This finding in the previous study is in great consonance with those of the present day study.

In the same study, Zwedberg, Blomquist, & Sigerstad (2015) also provide some insight into the fact that the decision to practice KMC lies with the parents. The participating midwives in the

Zwedberg et al (2015) study held the view that the ultimate decision partake in KMC activities lies with the parents. This previous finding is consistent with those of the current study. This current study showed that, all the participants were of the view that the woman must be willing to practice KMC before it can actually be practiced. The present study remained on silent the decision of the father in the practice of KMC. They alluded to the fact that, refusal by the woman to practice will jeopardize the effort of the midwife to implement practice of KMC.

#### **5.4 Neonatal criteria for KMC practice**

The midwives in this study also raised the point that the neonate must also meet certain criteria for the mother to put it to KMC position. The areas identified by the midwives that will determine whether a baby is qualified to be put to KMC or not are the weight, health and gestational age of the baby at birth.

Factors such as disease conditions of the child can greatly hamper the practice of KMC. The participating midwives mentioned congenital and infectious conditions in the child as major examples. For a baby to be put to KMC position, the baby must be free from these. With respect to this, they indicated that spina bifida, infection of the umbilicus and lesions like wounds on the child can affect the practice of KMC. They disclosed that the baby must be free of these things in order to be qualified for this kind of care. This particular finding was actually confirmed in a study that indicated that babies with infections like that of the umbilicus cannot be put to KMC position because of the danger of worsening the plight of these babies (Strand et al., 2014)

Another issue that stood out with respect to neonatal requirements for the practice of KMC was the weight and size of the baby. They specifically indicated the baby must appear to be small and measured weight at birth should be below 2.5kg. According to them, naked eye assessment and a confirmation with the use of weighing scale to confirm that the birth weight is less than 2.5kg

remains paramount in making the decision about KMC. Confirming this, Stikes & Barbier (2013) have highlighted that weight or size of baby at birth is one of the criteria for the practice of KMC. In their study, midwives argued that if babies appear small then KMC should be introduced. This finding of this current study was however in conflict with those of Solomon and Rosant (2012) who provide some proof that about 60% of nurses will not provide KMC services to babies that even weigh between 1-1.8kg.

Gestational age of the baby at birth also emerged as a paramount issue in their narrations. In terms of the gestational age, the participating midwives used the terms premature and preterm to qualify babies for KMC. They indicated that it should be recommended for babies that are born premature. According to them there is no reason why mothers with term babies should be put to KMC. Consequently, they will only ask mothers to practice KMC if the baby is premature or preterm. There were also specific findings about gestational age of 28 weeks and below. The midwives were skeptical of the use of KMC for babies of 28 weeks and below. Infact most participants considered birth of babies below that age 28 weeks as abortion and will not even survive and so there is no question of KMC use in that regard. Participants doubted the effectiveness of the practice in those kinds of babies. According to them, if those babies should survive they will need to be put in the incubator or some specialized care in bigger hospitals than KMC. This particular reference to gestational age of 28 weeks was confirmed by a study which indicated that staff are hesitant using KMC for babies that are born below gestational age of 28 weeks (Strand et al., 2014). This finding was however debunked by Flynn & Leahy-Warren (2010). In their study they proofed that over 80% of the nurses in their study held the view that KMC should not be a contraindication to babies born below gestation age 28 weeks.

### **5.5 Implementation process of KMC**

Kymre & Bondas (2013) in a Scandinavian study using a qualitative approach, nurses described KMC as when the baby is naked wearing only a diaper against the breast of the mother with the face turned to one side so that the mother can see it. The results of this previous study are in line with the views of midwives in this current study. Participants in this study pointed out that, KMC is a kind of treatment for premature and low birth weight babies. In this practice according to the results of this current study, KMC is only observed when the baby is on the mother's chest skin-to-skin with the mother. They further indicated that, the baby must be naked. Anything that excludes this cannot be considered as KMC. By their definition, KMC is only observed when the baby is on the chest of the mother. Also confirming this finding is a quantitative study by Valizadeh et al (2013). Their results held the view that close to 70% of nurses in an Iranian setting said that KMC was not meaningful without skin-to-skin between the mother and the child. Infact more than 90% of them confirm that the baby must be undressed for effective KMC practice.

Dissemination of information to co-workers was one of the subthemes under the main implementation theme. Teaching other health workers was one of the issues that emerged from the subtheme. Narrations pointed to the need for everybody working in the area of mother and child regardless of whether one is a midwife or not, to be taught KMC during the implementation phase. This they said is to ensure that they have the required knowledge about KMC so that, in case the midwife is busy attending to some clients, they can use the knowledge acquired to help mothers who need that particular care while they (midwives) attend to other responsibilities. This finding allies with the results of a UK setting study of midwives by Higman, et al (2014). In this previous study midwives said that staff have the responsibility of making themselves

available to supervise junior staff in order that they can both provide KC. This helps to build confidence in the junior staff in the practice of KC.

To some other midwives, their view was that dissemination of information can be done through the medium of workshops or in the form of briefings. The midwives described how they shared knowledge on the subject of kangaroo mother care. They do this routinely on specific days of the week using dolls to practice and have hands on experience before actually practicing on real human beings. This is usually done in form of briefings or workshops. They also had the chance by trying their hands under the guidance of professional midwives in the unit. This is confirmed in a previous study. In this previous study, results indicated that, other staff who work with the midwife should be educated on the neonatal care and KMC with the use of educational tools.

The previous further indicated that people who do not have the knowledge about neonatal care can produce huge positive results with training (Lloyd-Nyunja, 2011).

In the last of the subthemes under implementation, the participating midwives indicated that, the practice of KMC should involve everybody- regardless of whether one is a midwife or not. There should be teamwork among the health workers. They indicated that, this is important for the continuity of care in the area of KMC even in the absence of the midwife. They also added that, this is particularly important due to the low of professionals in the district. Another essence of this is that they can even teach mothers who have not had their babies in the health facility to practice it. This finding are consistent with that of Waiswa etal (2010) who in their qualitative work gave the indication that, care of the newborn should not be the duty of mainstream health workers in child health alone. They also said that the other staff who work in the communities need to be involved so they can help the mothers. This particular finding of this current study is in indirect contrast to the findings of Parisi, Coelho, & Melleiro (2008) in a Brazilian setting. In

their study it was brought to light that KMC is usually implanted on staff working in the area of mother and child health. They were not consulted before its introduction. There is no mutual discussion on it. The feeling by the midwives in that past study is that KMC is forced on them. Because of this, there is no motivation for them encourage mothers to practice of KMC. Eventually the zeal to continue it dies down.

Bazzano et al. (2012) have provided the clue that KMC is a new kind of treatment and may pose as a challenge for mothers and demand that the midwives in her dealings with the mothers do this professionally. Corroborating this, the participating midwives in this current study also perceive KMC as unconventional. They verbalized that, KMC is an unusual practice for the mothers. They said it is not normal of the women's surroundings and environment to put babies in front of them. According to the midwives, the mothers are used to putting their babies at the back especially with previous children and sudden change to this type of care would be challenging to them. To some of the midwives, KMC looks funny. These results are also corroborated by an European setting study by Zwedberg, Blomquist, & Sigerstad (2015) who provided some evidence of midwives perception about KMC with regards to culture. According to midwives in that previous study, the culture of the family where the parents are coming from pose as problem for the practice of KMC. The midwives in that study indicated that KMC is not usual of some European cultures and will therefore pose as a problem.

### **5.6 Output of KMC practice**

According to the participating midwives, the practice of KMC brings about certain outputs. These outputs bordered on the bonding between mother and baby, improvement in the condition of the baby and the perception of the perception of the midwife.

The midwives in this study have largely agreed that there are some benefits of practicing KMC as confirmed by Olsson et al (2012). First of all, the midwives threw some light on the fact that, because of the close proximity between the child and mother in KMC position, it increases bonding and affective behaviour between the child and the mother. This makes the baby to be able to recognize the scent of the mother and will even resist strangers. They added that, this bonding and affection is further enhanced by the eye-to-eye contact between mother and baby. Martinez, Fonseca & Scochi (2007) in their study also agreed among other things that, KMC increases bonding between mother and baby. This view makes them (the mothers) develop some enthusiasm to engage in KMC. Also confirming this is a quantitative study by Solomon and Rosant (2012). They indicated that about 53% of nursing staff agree that KMC enhances bonding between mother and baby. Another confirmation was given by Valizadeh et al Ajoodaniyan, Namnabati, Zamanzadeh, & Layegh (2013) who in their quantitative study revealed that about 90% of nurses believed that KMC increases mothers' affection and improves mother-neonate relationship.

Another finding that was prominent in the results of this current study under the theme output of KMC is that the midwives revealed that, KMC has some positive impacts on the condition of the baby. They gave the indication that, KMC improves the condition of the baby especially with the physiological parameters. These include the regulation of the temperature of the baby and other vital signs like the pulse and respiration. Also mentioned in this study, the midwives indicated that, KMC brings about improvement in the weight of the baby and as a result increases the survival of chances of babies. Flynn & Leahy-Warren (2010) confirmed in a quantitative study that 98.4% of neonatal nurses in Ireland indicated that KMC prevents hypothermia and improves upon the pulse especially in neonates that have bradycardia.

The perception of midwives about KMC featured prominently in their submissions. The midwives were unanimous in their submission to the effect that KMC is a standard and modern form of treatment. However the results of a study by Charpak & Ruiz-Pelaez (2006) found a different view. Despite the fact that the settings of the Charpak & Ruiz-Pelaez (2006) study and this current study have some similarity, the results of this particular past study show that staff that indicate KMC is an outmoded sub-standard form of care for neonates.

Effectiveness of the practice of KMC was one of the perceptions that the midwives had about the practice of KMC. The views of the participating midwives were however varied. Some of the participants gave the indication that KMC is very effective in managing the neonate in the sense that it reduces the mortality rate of neonates in their facilities. They drummed home this effectiveness by exemplifying their own willingness to personally use it but for the fact that they have passed child bearing age. A case study by Lloyd-Nyunja (2011) showed that the participating neonatal nurse had the conviction that KMC is very effective especially in the regulation of temperature of the new born in reducing the neonatal mortality rate. This finding in the past study has therefore corroborated the findings in this current study.

Some participants in this study however doubted the effectiveness of the practice. They preferred the artificial warming system to the use of KMC. According to some of the participants, effectiveness of KMC in managing the newborn was in doubt. They expressed it as being dull leading to a decline in its use in their facility. They expressed the view that, the baby warmer is more effective. According to them, the baby warmer is virtually taking the place of KMC. They also expressed doubts in the survival of the newborn with the use of KMC especially if they are below 28 weeks of gestation. This finding in this study is confirmed in a similar study. The

efficacy of KMC is in doubt (Stikes & Barbier, 2013). The findings of this study suggests that the effectiveness of KMC in neonatal care cannot be guaranteed.

Some of the midwives in their narrations perceive KMC as extra work for them. They described it as tedious having to go through the pain of taking a woman through KMC after delivering them of their babies. This has led to some of the midwives failing to encourage mothers to practice KMC in their units. Strand et al., (2014) have contrasted this particular finding of this current study. In their work, midwives held the view that KMC did not add any extra work to them. They also provided further insight to how workload could be reduced. According to the previous study, this can be done by providing information on the KMC to the mothers. A finding in this current study also shows that, despite the fact that it increases their workload, some of these midwives still will engage in activities of KMC.

Bazzano et al., (2012) in their study involving midwives in the Brong-Ahafo region perceive KMC as an irregular practice and that it is unconventional. This study results are in consonance with the results of this current study. The participating midwives in this current study also perceive KMC as unconventional. They verbalized that, KMC is an unusual practice for the mothers. They alluded to the fact that KMC is not a normal practice of the women's surroundings. Moving further, the midwives in this study indicate that mothers are used to putting their babies at their back especially with previous children and sudden change to this type of care would present a challenge to them. To some of the midwives, KMC looks funny. The midwives in this study think that mothers might be ridiculed by members of their communities if they are seen practicing this in their communities.

### **5.7 Projected outcome of KMC**

Promotion of KMC was the one of the main results under the theme projected outcome of this study. The participants felt KMC should be promoted. They were however divided on which setting KMC should be promoted.

Some of the midwives said that it should be practiced in both richer and poorer communities. They held the view that, no baby can be nursed in hospital for a very long time. They also attested to the fact that, no one can afford a private incubator at home. They gave the indication that, even if a person can afford it acquisition will be a challenge. So eventually when discharged home, the option is KMC. The participants' narrations further indicated that, it does not matter whether one's setting is rich or poor. The most important thing is to care for the child and the mother. Usually those in communities that are perceived rich, people leave the little things that are necessary for the survival of the baby and concentrate on perceived bigger things that end up being detrimental to the child and mother. This finding from the present study was in contrast with the findings of a previous fifteen (15) country study. In that study Charpak & Ruiz-Pelaez, (2006) have actually provided some evidence to the effect that KMC should be reserved for poorer communities. In their study of 17 participants from 15 countries, the results indicated that KMC is seen as a below standard form of treatment that should be reserved for the developing world. The respondents in that study were made of staff at the helm of affairs in coordinating the activities of KMC.

Some results of Charpak & Ruiz-Pelaez (2006) were however corroborated by some of the findings of this present day study. The second group of participants in this study held the view that KMC should be the preserve of the poor communities like theirs (where they work). This according to them is due the fact that, the richer ones have health facilities that have incubators

and people are more likely to be able to pay for their services. The health facilities cited in the poor communities however do not have incubators. Even when mothers are referred, it becomes a burden on the family in having to look for money to pay for cost of transportation cost to where there are incubators.



## CHAPTER SIX

### SUMMARY, CONCLUSION, IMPLICATIONS AND RECOMMENDATIONS

This last chapter gives summary of the whole study and conclusion. Also in this chapter are the implication for midwifery/ nursing practice, policy and its implication for future research. The last of the items highlighted in this chapter are the limitations of study and personal experiences of the researcher in going through this study.

#### 6.1 Summary

In this study, the researcher sought to get the perspective of midwives about kangaroo mother care. The research setting was the west Mamprusi district of the northern region which is the last district of the northern region before one enters the upper east region geographically. The researcher did this using a qualitative approach and explorative descriptive design. The study was based on the KMC framework developed by Nirmala, Rekha and Washington (2006). The main constructs of the framework were in consonance with the specific objectives of the study. In all, fourteen (14) midwives were recruited for this study. There were six objectives in all for this study.

Interviews were done at the participants' facilities of work and at their homes according to their preferences. Data analysis was concurrent with its collection using thematic content analysis and at the end there were seven (7) main themes and twenty (20) sub-themes which centred on the main constructs of the framework for the study. The main themes were provision of conducive environment, role of health personal in KMC practice, neonatal requirements for KMC practice, maternal requirements for KMC practice, implementation, output of KMC practice and projected outcome of KMC. Neonatal requirements for KMC and maternal requirements for KMC fell under one objective whiles the rest of the themes fell under each of the other five objectives.

## **6.2 Conclusion**

The researcher in this study was interested in bringing to light what the perspective of midwives of the West Mamprusi District of the Northern Region is about the concept and practice of KMC.

This study exposed the researcher to many new learning experiences. The findings of this study brought to light that there needs to be certain things put in place before KMC can be practiced.

These according to the midwives were summarised as the conducive environment necessary for KMC practice. Under this, they mentioned the need for the mothers to be provided with information, assurance that there will be support for mothers and some resources for KMC.

The midwives also raised the issue of their role as far as the practice of KMC is concerned. They held the view that the responsibility acquiring knowledge about KMC lies with them. It is also worth concluding that midwives the midwives held the view that they should not allow companions to be involved in matters of KMC due for economic reasons. Also in their submissions emerged the neonatal criteria for the KMC practice. There were varying views on which a baby qualifies to be put to KMC position. Among the issues under criteria of baby are gestational age of baby, the weight of baby and health of baby. The midwives also brought to light the maternal criteria for the practice of KMC. Their submissions bothered on the fact that the mother should be healthy and willing to practice KMC.

Also data from the participants indicated that during the implementation phase of KMC, there should be dissemination of information to and involvement of co-workers. They also shed light on the output of KMC. They indicated that KMC brings about bonding and affection, improvement in the condition of the baby and a change in perception of midwives about KMC.

Lastly and in the view of some of the participating midwives, it should be promoted in poorer communities where there are limited resources for the management of neonates while others held that it should be promoted in both poorer and richer communities.

### **6.3 Implications for nursing / midwifery**

#### **6.3.1 Nursing/midwifery administration**

From the study, it can be seen that managers need to take steps to ensure that staff who work in the area of neonatal health acquire the necessary knowledge to be able to better care for neonates in the area of KMC. It is also imperative for managers to acquire some of the resources to be able to help mothers who need them in the area of KMC. It is also necessary for managers to regularise the training of other staff in health facilities for them to better be equipped to practice.

Another implication is that, managers need to develop protocols that discourage the warmer or incubators in neonatal units while making the use of KMC the primary choice of management for the neonate unless otherwise indicated. Managers should also design duty schedules such that at each shift there is a midwife who is well versed with the activities of KMC to serve as a lead person to ensure that the activities of KMC goes on.

#### **6.3.2 Nursing/ midwifery education and Practice**

The results of this study indicate that, the understanding of the concept of KMC by midwives is inadequate. What it means is that, the practice of KMC will suffer. The end result is that babies who need these will not benefit fully from this cost effective service. The bottlenecks therefore need to be addressed for a better practice of midwifery and neonatal nursing in this regard. It could also be seen from the results that the effectiveness of KMC was in doubt to some of the midwives. This has the tendency to reduce the enthusiasm to promote the practice of KMC. It is

also evident that some of the midwives also thought that it should be practiced in areas where there is lack of resources. It means that these midwives will never promote KMC where there are artificial warming systems regardless of the fact that their stay in the hospital is temporal and that acquisition of incubators for personal use at home is virtually impossible. Even when they find themselves at where there are no incubators they will be tempted to refer them to facilities that have them.

To help address some of the issues, the training institutions and by extension their tutors need to apt their efforts in inculcating into the midwives the requisite information about the practice of KMC even before these midwives graduate from these schools. It is also important for midwives in practice to liaise with management for them to be able to acquire the requisite knowledge and information for them to better manage neonates.

### **6.3.3 Policy**

It is evidenced from the study that most of the participants are at their terminal years of practice (the retirement age for midwives Ghana is 60 years). This means there will be a vacancy when these midwives are out of service. The effect of this shortage for the care of mothers and their newborns will be that of a negative one. This becomes serious with the ever increasing numbers of patient/client numbers in health facilities. Another reason why this will have a serious negative effect on neonatal care is the already low numbers of midwives in the district. This demands that, the policy makers take steps to bridge the patient/client-midwife ratio in the West Mamprusi District.

Another implication for policy is for policy makers to take steps to expand the net of KMC education. Though mention is made of KMC information for other health professionals, policy makers in the training of health professionals should move from an overconcentration on

midwives with regards the education on KMC to making every health professional an agent for the implementation and practice of KMC.

The Ministry of Health can also exploit the finding of this study to fashion out feasible guidelines for the care of newborns especially those that are born premature and low birth weight. These measures could help address the problem of misguided believes and practices among midwives in the area of KMC. These could be done in line with the prescription Goal 3 Target 2 of the Sustainable Development Goals that aims to end preventable deaths of newborns and those under-five children by 2030.

#### **6.3.4 Research**

This current study looked at perspective of midwives on KMC practice in one of the district of northern region. Further studies could be extended to the whole of the region. Parents are also major stakeholders in this KMC practice. A study could target parents to get an understanding of their perspective in order that steps could be taken to address any challenges that may be encountered. Another area that could be explored is to look at what midwives think are the barriers to the practice of KMC in the district or the whole region.

#### **6. 4 Recommendations**

The findings of this study suggest the following recommendations so as to help midwives have a more positive perspective about the concept and practice of KMC.

1. The ministry of health of Ghana should make it mandatory for every midwife, nurse and their cohorts to be educated comprehensively on all aspects of KMC.

2. Managers of the various Budget Management Centres (BMCs) should also make funding available for midwives to be updated on the practice of KMC instead of abdicating that responsibility to the individual midwives.
3. To achieve the goal of increasing a positive perspective, it must start with trainers of these midwives. The tutors at the midwifery training schools should be adequately informed as trainers. This will enable them to be able to impart on to these would be midwives what they need to know about KMC.
4. Managements of the various Budget Management Centres (BMCs) should regularise the refresher training for the midwives and their cohorts to update their knowledge about the concept of KMC.

### **6. 5 Limitations**

The first limitation of this study is that it concentrated on only midwives. However, there other categories of health staff that can also provide some useful information with regards to the practice of KMC.

Another limitation of this study is that, the difference between the sample size and population size was so small. In this study, the sample size was 14 and population size was 19. The implication is that, the results could have differed in some aspects if the researcher had lager population size to choose select his sample from.

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## APPENDICES

### Appendix A: Data Collection Tool

#### Section A: Background Information

Age: 20-29 [ ] 30-39 [ ] 40-49 [ ] 50-59 [ ] 50-59+ [ ]

Nationality.....

Type of midwife.....

Facility of midwife.....

Level of education.....

Number of years in practice.....

#### Section B: Interview Guide

**Main Question:** Please tell me what you think are some of the things the need to be put in place in before the implementation and practice of kangaroo mother care?

1. What do you think about information for mothers with regards to the practice of KMC?

Probe

-Explain more

2. What assurance should mothers get from staff before the introduction of kangaroo mother care?

Probe

-I want to hear more

3. What do you think are the resources for kangaroo mother care practice?

Probe

-Explain further

**Main question:** What do you think should be the role of the midwife in the practice of kangaroo mother care?

1. What do you think should be your responsibility in terms of your own knowledge and awareness about KMC?

Probe

-Can you elaborate more?

2. What support do you think the midwife should give to the family in the practice of kangaroo mother care?

Probe

-Tell me more of this support?

3. Tell me about what some of the things the midwife should be doing by way of teaching the parents of these newborns with regards to the practice of KMC?

Probe

- I want to hear more of this teaching

**Main question:** Tell me something about the neonatal requirements for the practice of kangaroo mother care.

1. What do you think are some of the disease conditions of the baby that can affect the practice of kangaroo mother care?

Probe

-Can you explain further?

2. What do think are the weight requirements of the baby in the practice of kangaroo mother care?

Probe

-That is interesting. I want to hear more.

**Main question:** What do you think are the maternal requirements of the practice of kangaroo mother care?

1. Let's talk about the willingness of the mother to practice kangaroo mother care.

2. What do you think are the requirements in terms of the health of the mother?

Probe

-I want to hear more of these maternal health requirements.

**Main question:** What do you think constitutes the kangaroo mother care practice?

1. What should you see between mother and baby to indicate that KMC is been practiced or implemented?
2. During the implementation of kangaroo mother care, what do you think about the involvement of the other health professionals?

Probe

- That is interesting, please go on.

**Main question:** What do you think are the results of kangaroo mother care practice?

1. What do you think are the physiological changes that can take place in the baby with kangaroo mother care practice?

Probe

-I am interested in hearing more.

2. What is your own perception on about the practice of kangaroo mother care?

Probe

-Please explain further.

**Main question:** Tell me which places you think Kangaroo mother care should be promoted.

1. Do you think that KMC should practiced in places that have modern equipments for the management of premature and preterm babies or places that do not have?

Probe

-This is interesting. Explain further.

**Appendix B: Application for Ethical Clearance**

Department of Maternal and Child Health  
School of Nursing  
P. O. Box LG 43  
Legon  
6<sup>th</sup> October, 2015

The Chairperson  
Institutional Review Board  
Noguchi Memorial Institute for Medical Research  
Legon

Dear Chairperson

**Application for Ethical Approval**

Protocol Name: **Kangaroo Mother Care: the perspective of midwives at Mamprusi West District of the Northern Region**

I wish to submit to you the above-named protocol and essential documents for approval by your committee.

I look forward to receiving any comments that you may have in relation to the above.

Thank you for your co-operation.


Yours sincerely



AGANA FRANCIS ANABA

Enclosed:

1. Initial Submission Form A
2. CVs of PIs and Co-PIs
3. Patient Information and Informed Consent Form – English version
4. Topic approval letter from the dean;
5. Data Collecting Tool



INTEGRI PROCEDAMUS

**Appendix C: Introductory Letter**

**SCHOOL OF NURSING  
COLLEGE OF HEALTH SCIENCES  
UNIVERSITY OF GHANA  
LEGON**

Telephone: 0302-513255 (Dean)  
              Ext. 6206  
              0302-513250 } Secretary  
              028 9531213 }  
Fax: 513255  
E-mail: nursing@ug.edu.gh



P. O. Box LG 43  
LEGON, GHANA

Our Ref:.....SON/F:11.....  
Your Ref:.....

November 27, 2015

The District Director of Health Services  
Ghana Health Service  
West Mamprusi District  
Walewale  
N/R

Dear Sir/Madam,

**INTRODUCTORY LETTER**

I write to introduce to you Agana Francis Anaba, an M.Phil Year II student of the School of Nursing, University of Ghana, Legon. He is conducting a research on **“Kangaroo Mother Care: The Perspective of Midwives at Mamprusi West District of the Northern Region.”**

I would be grateful if you could kindly offer him the necessary information needed.

Thank you.

Yours faithfully,

A handwritten signature in blue ink, appearing to read 'ED'.

Prof. Ernestina Donkor  
Ag. Dean

INTEGRI PROCEDAMUS

**Appendix D: Ethical Clearance**

**NOGUCHI MEMORIAL INSTITUTE FOR MEDICAL RESEARCH**  
*Established 1979* *A Constituent of the College of Health Sciences*  
University of Ghana

**INSTITUTIONAL REVIEW BOARD**

Phone: +233-302-916438 (Direct)  
+233-289-522574  
Fax: +233-302-502182/513202  
E-mail: [nirb@noguchi.mimcom.org](mailto:nirb@noguchi.mimcom.org)  
Telex No: 2556 UGL GH



Post Office Box LG 581  
Legon, Accra  
Ghana

My Ref. No: DF.22  
Your Ref. No:

13<sup>th</sup> November, 2015

**ETHICAL CLEARANCE**

**FEDERALWIDE ASSURANCE FWA 00001824**

**IRB 00001276**

**NMIMR-IRB CPN 017/15-16**

**IORG 0000908**

On 13<sup>th</sup> November 2015, the Noguchi Memorial Institute for Medical Research (NMIMR) Institutional Review Board (IRB) conducted an expedited review and approved your protocol titled:

**TITLE OF PROTOCOL : Kangaroo mother care: The perspective of midwives at Mamprusi West District of the Northern Region**

**PRINCIPAL INVESTIGATOR : Agana Francis Anaba, Mphil Cand.**

Please note that a final review report must be submitted to the Board at the completion of the study. Your research records may be audited at any time during or after the implementation.

Any modification of this research project must be submitted to the IRB for review and approval prior to implementation.

Please report all serious adverse events related to this study to NMIMR-IRB within seven days verbally and fourteen days in writing.

This certificate is valid till 12<sup>th</sup> November, 2016. You are to submit annual reports for continuing review.

Signature of Chair: .....

Mrs. Chris Dadzie  
(NMIMR – IRB, Chair)

cc: Professor Kwadwo Koram  
Director, Noguchi Memorial Institute  
for Medical Research, University of Ghana, Legon

## Appendix E: Informed Consent

### NMIMR-IRB CONSENT FORM TEMPLATE

Title: **Kangaroo Mother Care: the perspective of midwives at Mamprusi West District of the Northern Region**

Principal Investigator: Agana Francis Anaba

Address: School of Nursing  
College of Health Sciences  
University of Ghana

#### General Information about Research

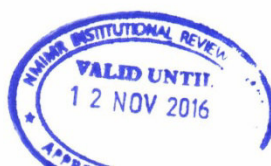
This study aims at exploring the perspectives of midwives about kangaroo mother care at the Mamprusi West District of the northern region. You must be a midwife working in any health facility in the Mamprusi West District to take part in this study. The midwife must have had at least two years in midwifery practice. Participation in this study is optional. You will be given a consent form to sign if you decide to take part in this study. All interaction with you regarding this study will be in English language. The researcher will interview you for a period of 45 minutes to one hour. You are free to express yourself in any way without fear of being wrong. Infact there is no right or wrong way of expressing yourself. The interview will be recorded. The schedule of the interview will be at the convenience of the participant.

**Possible risks and discomfort:** This study does not envisage any harm to you. You can opt out if you feel any discomfort at any time of the study.

**Possible Benefits:** Direct benefit and risks of this study are not envisaged. Payment and compensation will not be done to you for taking part in this study. The findings of this study will however help design measures to improve the practice of kangaroo mother care.

#### Confidentiality

The interview will be conducted at a venue such that no one will have the opportunity to hear what is being discussed. You will not be required to mention or provide any personal information during the recording process. You will however be required to provide your name in the consent form. However, only the researcher and supervisor will have access to this information. Unless otherwise stated by law any information given will be held with confidentiality. All materials like the tapes of



recordings, transcribed data and consent forms will be kept under lock and key and destroyed after five (5) years. Further use of the materials will have to seek ethical clearance.

**Compensation:** The researcher shall not pay any compensation to participants as far as this study is concerned.

**Contact for additional information:**

For further information about this study, contact the following

Agana Francis Anaba 0245300007 or [agana\\_f@yahoo.com](mailto:agana_f@yahoo.com)

Prof. Ernestina Donkor 0243114968 or [esdonkor@ug.edu.gh](mailto:esdonkor@ug.edu.gh)

Dr. Abdallah Ibrahim 0266450012 or [aibrahim@ug.edu.gh](mailto:aibrahim@ug.edu.gh)

**Your rights as a participant**

This research has been reviewed and approved by the Institutional Review Board of Noguchi Memorial Institute for Medical Research (NMIMR-IRB). If you have any questions about your rights as a research participant you can contact the IRB Office between the hours of 8am-5pm through the landline 0302916438 or email addresses: [nirb@noguchi.mimcom.org](mailto:nirb@noguchi.mimcom.org)



**VOLUNTEER AGREEMENT**

The above document describing the benefits, risks and procedures for the research title, **Kangaroo Mother Care: the perspective of midwives at Mamprusi West District of the Northern Region** explained to me. I have been given an opportunity to have any questions about the research answered to my satisfaction. I agree to participate as a volunteer.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Date

Name and signature or mark of volunteer

**If volunteers cannot read the form themselves, a witness must sign here:**

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered and the volunteer has agreed to take part in the research.

\_\_\_\_\_

\_\_\_\_\_

Date

Name and signature of witness

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

\_\_\_\_\_

\_\_\_\_\_

Date

Name Signature of Person Who

Obtained Consent





**Appendix H: Demographic Data**

<b>Characteristic</b>	<b>Number</b>
Age limits	
20-29	1
30-39	3
40-49	1
50-59+	9
<b>Total</b>	<b>14</b>
Nationally	
Ghanaian	14*
Burkinabe	1*
<b>Total</b>	<b>15*</b>
Type of midwife	
Community	7
Enrolled	3
SRN	2
Staff Midwife (diploma)	2
BSc	0
<b>Total</b>	<b>14</b>
Level of education	
Certificate	12
Diploma	2
Tertiary	0
<b>Total</b>	<b>14</b>
Number of years in practice	
1-9	4
10-19	5
20-29	3
30-39	2
<b>Total</b>	<b>14</b>

\*One midwife had dual Citizenship