

**KNOWLEDGE, ATTITUDES AND PRACTICES OF KANGAROO MOTHER
CARE AMONG HEALTH CARE PROFESSIONALS IN KEETMANSHOOP
DISTRICT IN //KHARAS REGION OF NAMIBIA**

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
MASTER DEGREE IN PUBLIC HEALTH
OF

THE UNIVERSITY OF NAMIBIA

BY

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APRIL 2019

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ABSTRACT

This study is aimed at assessing knowledge, attitudes, and practices (KAPs) of Kangaroo Mother Care among Health Care Professionals (HCPs) in the care of low birth weight babies in the Keetmanshoop district. The study was a quantitative, cross-sectional descriptive study that was conducted in 6 health facilities with 100 health care professionals in the Keetmanshoop district. A self-reported questionnaire was used to collect information and the Statistical Package for Social Sciences (SPSS), Version 24 was used to analyse the data. Demographic data revealed that 79 (79%) of the participants were females while 21(21%) were males. Thirty (30%) of the participants were between the ages of 20 to 30, while 20 (20%) were aged between 51 to 60 years. It was discovered that 99(99%) of the respondents believed that KMC promotes bonding between the mother and her baby, while 92(92%) believed that KMC improves the mothers' confidence in handling their babies. Moreover, 91(91%) agreed that, KMC promotes breastfeeding. Only 39% of health care professionals underwent training on KMC, while 61% never received any training. The majority of HCPs (87%) agreed that, the policy on Kangaroo Mother Care (KMC) practice is not displayed in their facilities and 58.9% believed that, the reasons for not practicing KMC was the lack of policy. The study recommends that training and education about Kangaroo Mother Care practice should be carried out on a regular basis. In addition, the Ministry of Health and Social Services (MoHSS) should ensure that the policy and guidelines on the implementation of Kangaroo Mother Care are available in all health facilities in the country.

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ABBREVIATIONS AND ACRONYMS

DHIS:	District Health Information System
KMC:	Kangaroo Mother Care
LBW:	Low Birth Weight
NDHS:	National Demographic Health Survey
RDS:	Respiratory Distress Syndrome
SPSS:	Statistical Package for Social Science
WCH:	Windhoek Central Hospital
WHO:	World Health Organization

ACKNOWLEDGEMENT

Completing this study would not be possible without the assistance and contributions from other people. Therefore, I would like to sincerely thank all those who contributed both directly and indirectly.

- Special thanks go to my lecturers at the University of Namibia for the knowledge and skills they impacted on me during my studies.
- I am grateful to my supervisors, Dr. Sabina Aishe David and Dr. Linda Nghipondoka Lukolo for guiding me throughout my research process.
- The Ministry of Health and Social Services for granting me permission to conduct my study in its facilities.
- My colleagues, Saara Kertu Hatupopi, Elizabeth Kateta, and Temptation Chigova for assisting me with data analysis.
- My husband, Sydney Mhlope, sons Ernesto Nghihepa Haufiku, Dineo Dumoluhle Mhlope, Sydney Mhlope Junior, Klaus Vamati Mhlope, and my niece Valentina Nanghanyata for assisting with house chores, while dedicating most of my time to my studies.

DECLARATION

I, Helena Ndahambelela Mhlope, hereby declare that “knowledge, attitudes and practices of Kangaroo Mother Care among health care professionals in the Keetmanshoop district, in Namibia” is my own original work and has not been submitted for any degree in any other institution of higher learning or to the University of Namibia. All the resources used have been acknowledged by means of a complete reference list.

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Signature: _____

Date: 04 March 2019

Helena Ndahambelela Mhlope

DEDICATIONS

I dedicate this work to all premature babies and their mothers.

CHAPTER ONE: INTRODUCTION

1.1 Orientation and background information

Pre-term birth according to the World Health Organization (WHO, 2012) has been defined as birth before 37 completed weeks of pregnancy. In addition, it is often mentioned in sub-categories based on weeks of gestational age, that is; extremely preterm (<28 weeks); very preterm (28 to <32 weeks); and moderate to late preterm (32 to <37 weeks) (WHO, 2012). Furthermore, the WHO (2012) posits that globally, 15 million babies are born preterm each year while 1.1 million die due to complications associated with preterm births. Of these, Beck et al. (2010) reported that 60% occur in Africa and South Asia. As mentioned by Schaaf, Mol Abu-Hanna & Ravelli (2011) and the WHO (2012), preterm birth rates are rising worldwide thus posing an array of risks to mothers. Nevertheless, the WHO (2012) report that Brazil, the United States of America, India and Nigeria are among the top ten countries with the highest numbers. In addition, of the 11 countries with preterm birth rates of over 15%, all but two are in sub-Saharan Africa. In the United States of America, about one in every ten babies is born too soon annually (Blencowe et al., 2012). The countries with the lowest rates of preterm births were: Belarus; Ecuador; Latvia; Finland, Croatia, Samoa; Lithuania, Estonia; Antigua/Barbuda; Japan and Sweden (Howson, Kinney, McDougall, & Lawn, 2013).

According to the Global Action Report on Preterm Births, “Born Too Soon”, preterm births in Namibia are recorded 14,4 per 100 births in 2010 (WHO, 2012). Additionally, preterm birth was one of the leading causes of neonatal mortality in Namibia, accounting for 39% deaths (WHO 2012). The head of the department of obstetrics and gynaecology at Katutura Intermediate Hospital, and Central Hospital, Dr. Mackenzie pointed out that, the growing number of preterm

birth was a cause of concern in Namibia (The Namibian, 2015). She further stated that, between April 2014 and May 2015, the Windhoek Central Hospital (WCH) admitted 1124 babies and 60% of them were low weight (LBW) babies (The Namibian, 2015). Similarly, Dr Pieper, a state neonatology at Windhoek Central Hospital said that, more than 150 babies in Namibia were ill and prematurely born every month (The Namibian, 2017). Half of these babies were referred to Windhoek for better management and about 20% of them did not make it due to long distances (The Namibian, 2017).

Preterm birth was one of the contributing factors to neonatal mortality at the Keetmanshoop hospital. According to the District Health Information System (DHIS), 2169 babies were born at the hospital between January and December 2012 and 190 were premature (9%), 2303 babies born between January to December 2013, 195 were premature (8%), in 2014, out of 2547 babies born, 201 were born prematurely (8%), between January to December 2015, 1305 babies were born and 156 were premature (12%), 2150 babies were born between January and December 2016 and 325 of them were premature (15%). There is a need to effectively implement evidence-based interventions to reduce complications of preterm births and associated neonatal mortality and one such evidence-based and life-saving intervention is Kangaroo Mother Care (KMC) (WHO, 2003).

Kangaroo Mother Care (KMC) is an evidence-based, life-saving intervention which is associated with 36% reduced risk of neonatal mortality among low birth weight (LBW) babies compared to conventional care (Boundy et al., 2016). According to the World Health Organization (WHO), this intervention was introduced by Dr Edgar Rey Senabria in 1979 in Bogota, Colombia as an alternative to incubators for LBW babies.

The term Kangaroo Mother Care is derived from how kangaroos care for their young; keeping them warm in the maternal pouch and close to the breasts for unlimited feeding until they are

mature (Standley & Wall, 2011). This intervention, KMC involves holding an infant with skin- to-skin contact, prone and upright on the chest of the parents and fosters the health and well- being of babies by promoting effective temperature control, breast feeding, infection control and bonding ((Baley, 2015). The WHO defines Kangaroo Mother Care within four components: Early, continuous, and prolonged skin-to-skin contact between infant and caregiver, exclusive breastfeeding, early discharge from hospital, and adequate support for caregiver and infant at home (WHO, 2003). The WHO's practical guide on KMC constitutes the following:

- Premature babies weighing less than 1200g (gestational age below 30 weeks) experience severe problems and death is very high among this group. Arrangements should be made on time for the mother to be transferred to the next level, where a neonatal intensive care unit is available before she gives birth. Kangaroo Mother Care can only be started when the baby is stable enough.
- The time of discharging premature babies would depend on the baby's size, availability of beds, conditions at home, and accessibility of follow-up care. They will continue to need support even though this will not have to be as intensive and frequent.
- The baby should meet the following criteria before being discharged: When the baby's general health condition is good and there is no apnoea or infection, the baby is feeding well, preferably exclusively breastfed, the baby is gaining weight (at least 15g/kg/day for at least three consecutive days). His/her temperature is stable in the KMC position for at least three consecutive days, the mother is confident in caring for the baby and is able to come regularly for follow-up.
- Regular follow-up by a skilled professional close to mother's home must be ensured. Frequency of visits may vary from daily at the beginning, to weekly and monthly later. The better the follow-up, the earlier the mother and her baby can be discharged from the facility. As a guide, services

must plan at least 1 visit for every preterm week. Those visits can also be carried out at home. These criteria are usually met by the time the baby weighs more than 1500g (WHO, 2003:9).



Figure 1.1 WHO, Symbol of Kangaroo Mother Care

Incubators are utilized in many countries; especially in developed countries to keep low birth weight babies warm (Standley & Wall, 2011). However, in developing countries, incubator care is hindered by unavailability of properly functioning incubators due to poor maintenance, power outages and the lack of replacement parts. In addition, incubator care is not an option in developing countries because, they are costly, lead to a decrease in breast milk production by the mother as well as poor bonding between the mother and her baby (Standley & Wall, 2011). Furthermore, a large number of LBW babies and inadequate incubators would result in babies sharing incubators (Standley & Wall, 2011). Another problem with incubators as identified by Standley and Wall (2011), is the lack of properly trained health care professionals (HCPs) and insufficient staff which can impact the quality of incubator care. According to USAID (2012), the following countries have more than 70 facilities practicing KMC: In South America (Bolivia,

Dominican Republic, El Salvador, Guatemala, Nicaragua, and Paraguay), in Asia (Bangladesh, Indonesia, Nepal, and Vietnam), in Africa (Democratic Republic of Congo, Ghana, Malawi, Mali, Nigeria, Rwanda, Senegal, Tanzania, Uganda, and Zimbabwe) (USAID, 2012). South Africa chose to integrate KMC with facility-based services for LBW babies, despite the fact that most of its health facilities have access to incubator care (USAID, 2012). Broughton, Gomez and Vindell (2013), felt that, although district and regional hospitals have skilled personnel as well as basic equipment and supplies to provide special care to LBW babies, they are usually not adequate. The above authors suggested that Kangaroo Mother Care should be implemented at all levels of care (Broughton, Gomez & Vindell, 2013). Another study done in Uganda concluded that, all facilities that practice KMC were only found in Kampala, the two central regions, Southwest and the East-Central region (Aliganyira et al., 2014). This indicates that Kangaroo Mother Care services are not equally distributed in the country.

Health care professionals (HCPs), such as Midwives and Doctors play a very important role in the process of childbirth, as well as the practice and implementation of KMC. Nahidi, Tavafian, Heidarzadeh, and Hajizadeh (2013), reported that 54.45% of deliveries (48.6% in urban areas, 64.32% in rural areas) are carried out by midwives, and these health care professionals are the first ones to make contact with infants after birth. Therefore, their knowledge and beliefs influence their encouragement and discouragement for KMC (Nahidi, et. al., 2013).

According to the WHO (2015), there has been evidence of improvement in the health outcomes of LBW babies who received kangaroo care, therefore, this practice should be a routine care for babies weighing less than 2000g. However, few countries have made the intervention accessible and available to families with low birth weight babies despite its recognition and benefits (WHO, 2015).

1.2 Problem statement

The Integrated Management of New-born and Childhood Illnesses (IMNCI) recommends that all LBW babies should be kept warm using skin to skin care (MoHSS, 2011a). Although the Ministry of Health and Social Services introduced Kangaroo Mother Care in 2000, only few hospitals are practicing it, especially those in urban areas, such as Windhoek Central Hospital (WCH), Katutura, Oshakati, Onandjokwe and Rundu hospitals. Dr Pieper also confirmed that, most of the low birth weight babies born in rural hospitals are referred to Windhoek Central Hospital for management and care (Namibian newspaper, 2015). This is an indication that KMC is not widely practiced despite the high number of low birth weight babies in the country. Cochrane review of 21 randomized control trials concluded that, KMC significantly reduces mortality among preterm babies and is safe and effective to baby care; but globally, the use of the technique remains low (Conde-Agudelo & Diaz-Rossello, 2016). In Namibia, the National Demographic Health Survey (NDHS) of 2013 indicates that, prematurity accounts for 39% of neonatal deaths. In addition, preterm births in Namibia were 14, 4 per 100 births in 2010 (WHO, 2012). According to the District Health Information System (DHIS), 2169 babies were born at Keetmanshoop hospital between January and December 2012 and 190 were premature (9%), while in 2016 of the 2150 babies who were born, 325 of them were premature (15%). During clinical follow-ups, the researcher observed that, even though preterm births are on an increase, Kangaroo Mother Care practice is not fully implemented in the Keetmanshoop district. The researcher has also observed that, low birth weight babies are nursed in incubators in the prem-unit, away from their mothers and mothers only see their babies during feeding times and babies stay in incubators even if they are stable. Although mothers are shown how to do kangaroo care, the researcher noted that, they do not practice it always and the staff do not enforce the practice. It is against this background that

this study sought to assess the knowledge, attitudes, and practices of health care professionals regarding KMC practice in the Keetmanshoop district, Namibia.

1.3 Purpose of the study

The study aimed at assessing the knowledge, attitudes and practices of KMC by HCPs in the care of low birth weight babies in the Keetmanshoop district.

1.4 Objectives of the study

The objectives of the study were to:

- Assess the knowledge, attitudes, and practice of HCPs regarding KMC.
- Assess the extent to which HCPs practice KMC in the care of low birth weight babies
- Identify challenges in the implementation of KMC among HCPs

1.5 Significance of the study

The results of this study will contribute to the understanding of challenges experienced in the practice and implementation of KMC. Furthermore, the findings on the knowledge, attitudes and practice of health care professionals regarding KMC will be useful to policy makers in developing policies aimed at implementing KMC effectively. Recommendations will also be made to the Ministry of Health and Social Services and other stakeholders to assist in the improvement of child health and reduce neonatal mortality by introducing measures to implement and reinforce KMC practice. New knowledge will be brought by the study depending on the results of the research and this will result in better management of low birth weight babies in Keetmanshoop and the country at large.

1.6 Limitations of the study

Generalising the results of this study would not be possible because, the study focused only on health care professionals in the Keetmanshoop district. Some health facilities were as far as 120 km and the researcher had to use own financial resources and transport during data collection. Some HCPs were on leave at the time of data collection.

1.7 Delimitations of the study

Delimitations are those characteristics that limit the scope and define the boundaries of the study. Simon (2011) defines delimiting factors as those that include the choice of objectives, the research questions, variables of interest, theoretical perspectives that the researcher adopted and the population to be investigated. Health facilities included in the study are those in the Keetmanshoop district only because they are easily accessible to the researcher. Nurses who are not registered as midwives/ Accoucheurs did not partake in the study because they are not involved in the management of neonates.

1.8 Definitions of concepts

The concepts defined below are based on the research topic “*knowledge, attitudes, and practices of kangaroo mother care among health care professionals at Keetmanshoop district hospital*”.

Knowledge

The condition of knowing something with familiarity gained through experience or association. Retrieved October 29, 2017, retrieved from <https://www.merriam-webster.com/dictionary/knowledge>).

Attitude

An attitude is defined as a mental position about a fact or state, or a feeling or emotion towards a fact or state (Retrieved, October 29, 2017, from <https://www.merriam-webster.com/dictionary//attitude>).

Practice(s)

To practice is to perform or work repeatedly to become proficient (Retrieved October 29, 2017, from <https://www.merriam-webster.com/dictionary//practice>).

Health care professionals

A health care professional is a person associated with either a specialty or a discipline and who is qualified and allowed by regulatory bodies to provide health care service to a patient (Segen's medical dictionary, 2011) Retrieved October 29, 2017 from <https://medical-dictionary.thefreedictionary.com/healthcare+professional>.

Kangaroo mother care

Sellers (2012, p. 583), defines Kangaroo Mother Care as a skin-to skin between mother and baby.

Preterm

Sellers (2012, p. 760) defines preterm as a term used to refer to a 'viable' infant born before thirty- seven full weeks' gestation.

Low birth weight

Low birth weight (LBW) is defined by the World Health Organization (WHO) as weight at birth less than 2500g (5.5lb). Accessed 05 November 2018 from <https://www.google.com.na/search?rlz>.

1.9 Summary

The previous chapter dealt with the background and orientation to the study. The study problem, purpose, objectives, significance, limitations, and delimitations were explained. Key concepts in the study were defined to provide the readers with some insight about the study. The next chapter will deal with local and global literature about the practice of Kangaroo Mother Care.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Literature review is a process of finding relevant research reports, critically appraising the studies, and synthesizing the study results (Grove, Gray, & Burns, 2015, p. 163). This section deals with the review of literature which has been published both locally and globally about knowledge, attitudes and practices of KMC among HCPs. The World Health Organization recommended that, if the baby weighs 1800g or more, the mothers should provide Kangaroo Mother Care immediately after birth. Furthermore, the WHO recommends that, continuous skin-to-skin care must be provided during the transportation of the mother and the baby to the high centre where the baby can receive proper care, to prevent hypothermia (WHO, 2012).

The literature review was discussed according to the following headings; benefits of Kangaroo Mother Care, disadvantages of Kangaroo Mother Care, knowledge of health care professionals on KMC, attitudes of health care professionals towards KMC, the practice of KMC among HCPs and challenges experienced by HCPs in the implementation of KMC.

2.2 Benefits of Kangaroo Mother Care

Benefits of KMC include, empowering the mother to care for her low birth weight baby, reducing neonatal deaths, encouraging the mother to breastfeed and reducing the frequency of LBW babies visiting clinics after discharge from hospitals.

According to Campbell-Yeo, Disher, and Benoit (2015) placing the new-born skin-to-skin helps them to find the nipple and start breastfeeding because they instinctively have a high sense of smell. Furthermore, mothers who practice kangaroo care are more likely to breastfeed exclusively and, on average, they breastfed three months longer than those who didn't practice skin-to-skin

care (Campbell-Yeo, et al., 2015). Similarly, the study done in Kenya on motivation and barriers to Kangaroo Mother Care amongst health care providers, 98% agreed that the practice provides warmth to the baby, 93% believed KMC promotes exclusive breastfeeding, 99% affirmed that KMC promotes safety and bonding. Similarly, a study conducted by Baley (2015) on skin-to-skin care for a term and LBW infants in the neonatal ICU also confirms that, Kangaroo Mother Care increases milk production and mothers breastfeed for longer periods.

Kalhor, SamieeRad, Garshasbi, MohitAbadi and Sefollah (2016) stated that, Kangaroo Mother Care ensures that the mother is always in close contact with her baby to prevent prolonged separation. According to MohitAbadi and Sefollah (2016), mothers of LBW babies who practice skin-to-skin contact experienced that their babies sleep more deeply and wake up less often than those who didn't practice kangaroo care. Kangaroo care is associated with increased parental satisfaction, better sleep organisation, a longer duration of quiet sleep and decreased pain during procedures (Baley, 2015). Additionally KMC satisfies all five senses of the baby such as touch (skin to skin contact), hearing (listens to mother's voice and heart beat), taste (sucks on breast), vision (eye contact with mother), and olfactory (smells mother's odour) (Baley, 2015). Kangaroo Mother Care was proven to reduce preterm mortality significantly and to improve other outcomes including severe infection/sepsis, emotional attachment in mothers, and weight gain versus conventional neonatal care in LBW babies (Muddu, Boju, & Chodavarapu, 2013).

2.3 Disadvantages of Kangaroo Mother Care

Kangaroo Mother Care has some disadvantages, especially to the mother. As the baby grows bigger, the weight of the baby becomes problematic, especially for mothers who want to continue providing kangaroo care at home as the baby becomes heavy for the mother to carry around all the time (Sharma, Farahbakhsh, Sharma, Sharma, & Sharma, 2017).

Mothers who have other small children at home may not have anyone at home to care for them on her behalf, while they are caring for their new-born infants in hospital (Nguah et al., 2011). Moreover, mothers with twins or triplets would not be able to provide proper kangaroo care to their babies continuously (Nguah et al., 2011). In both cases, the mother needs family support to ensure proper kangaroo care (Nguah et al., 2011). Another disadvantage of KMC is that, mothers and their LBW babies remain in hospital for a long time and this is costly for both mothers and the Government.

2.4 Knowledge, attitudes, and practices of KMC among HCPs

Health Care Professionals require knowledge to successfully implement Kangaroo Mother Care and their attitudes could influence the way they practice it.

2.4.1 Knowledge of health care professionals regarding KMC

Health care professionals, especially nurses and doctors, being the fore-runners of health care provision play a vital role in the practice and implementation of KMC. Having good knowledge about KMC can influence behaviours and therefore, brings about positive changes in practice. Nahidi, Tavafian, Heidarzadeh and Hajlzadeh (2013) studied the influential factors of mother-infant skin to skin, and revealed that, most midwives had sufficient knowledge on the importance of KMC. The study further stated that, many medical professionals had poor knowledge of the benefits of KMC (Nahidi, et al., 2013). In a study done in Sweden, midwives viewed a lack of cooperation by other medical personnel as a major obstacle against performing skin-to-skin contact (Zwedberg, Blomquist & Sigerstad, 2015). For the implementation and promotion of KMC, the knowledge of health care professionals and community health workers such as extension health workers and birth attendants is important (Dalal et al., 2013).

2.4.2 Attitudes of health care professionals towards KMC

Attitude is one of the main determinants of behaviour; however, it is also of paramount importance for health care professionals to have confidence in their performance (Adeli & Azmoudeh, 2016). The above authors also stated that, attitude signifies the inclination of an individual towards a certain behaviour (Adeli & Azmoudeh, 2016). Moreover, different health care personnel share the same opinion on the importance of skin-to-skin contact in promoting the health of both the mother and infant (Adeli, & Azmoudeh, 2016). In a study done in Iran on the opinions of midwives about Kangaroo Mother Care, Nahidi et al. (2015) argued that, perceived self-efficacy was a significant factor in the appropriate implementation of skin-to-skin contact in the viewpoint of midwives. The study concluded that, the majority of midwives had favourable attitude towards the importance of KMC, but 90% of them refused to implement it (Nahidi et al., 2015).

2.4.3 The practice of Kangaroo Mother Care among HCP

Onubogu and Okoh (2016) investigated the implementation of Kangaroo Mother Care by health workers in health facilities in Nigeria and reported that, only 53.5% of the health workers practiced KMC, considering that these health workers are mostly from tertiary institutions and each tertiary institution is a referral centre for other secondary and primary facilities within their region. In addition, 43% of health workers reported that they do not practice KMC due to lack of policy, and 30% reported inadequate space for mothers to stay as a problem (Onubogu, & Okoh, 2016). The study concluded that, hospitals should have written policies on KMC and provide KMC wards to improve the implementation of KMC practice.

Additionally, a study conducted by Mwansa-Kambwafwile, Horta, Barros, and Cousens (2010), revealed that, the reason why KMC was not implemented in health facilities is because, there was no written policy and the space to accommodate mothers was inadequate. Similarly, the findings of

Higman, Wallace, Law, Bartle, and Blake (2015) indicated that trained personnel on KMC were not enough and registered protocols were lacking. These were the major barriers against skin-to-skin contact from the perspectives of midwives in neonatal intensive care unit (Higman, et al., 2015).

Furthermore, the study conducted by Nuuyoma, Swart, and Ashipala (2017) to explore the perceptions regarding the feasibility of implementing Kangaroo Mother Care at the Tsumeb district hospital, Namibia, also revealed that, KMC was not practiced because there were no directives on how to care for low birth weight babies and there was no policy or guideline on KMC. In addition, some participants found it difficult to practice it because they were not told to do it and they do not know when to start or how to start it (Nuuyoma, Swart, & Ashipala, 2017).

2.5 Challenges in the implementation of KMC among HCPs

Health Care Professionals can encounter challenges which hinder proper implementation of kangaroo mother care practice. The study done in Iran to investigate the barriers for the implementation of KMC found that, rooms to accommodate mothers who provided kangaroo care were insufficient, and some mothers have other children at home to take care of (Parikh, Banker, Shah & Bala, 2013). Furthermore, midwives viewed the lack of space and organizational barriers as the main challenges for skin-to-skin contact after caesarean section (Zwedberg et al., 2013). On the other hand, the study conducted in Sweden to investigate the parents' approach toward KMC facilitating factors indicated that there were needed facilities for the mothers to stay in the ward with their babies in respect to their privacy (Blomqvist, Frolund, Rubertsson & Nyqvist, 2011).

In a study by Seidman et al. (2015), nurses reported increased workload, staff shortages and lack of clear guidelines as the major barriers to the implementation of Kangaroo Mother Care. Similar

opinion was shared by nurses in a study conducted by Nuuyoma, Swart and Ashipala (2017), who revealed that, lack of staff was a barrier for implementing KMC and that, they nurse babies in the incubators instead of spending time teaching mothers on how to practice KMC. This is contrary to the WHO's practical guide on Kangaroo Mother Care which states that, KMC practice requires less staff as opposed to incubator care (WHO, 2003).

Blomqvist et al. (2011) reported that, lack of support from family members hinders the implementation of KMC. In addition, mothers must do other work at home and this leads to inadequate time left for them to stay with their infants constantly (Blomqvist et al., 2011). Furthermore, constant attendance by mother, father and other family members is made difficult by religious and cultural issues (Blomqvist et al., 2011). In their study about balancing LBW infants' developmental needs with parents' readiness for skin-to-skin care, Kryrmre and Boundas (2013) established that, HCPs were concerned about the stability and safety of infants, such as, dislodgement of arterial and venous lines, and endotracheal tubes. In addition, some HCPs argued that mothers complain of lack of eye contact with their babies due to the positioning for kangaroo care (Kryrmre & Boundas, 2013). It may also be a challenge to encourage mothers who underwent caesarean section, those who had pain from episiotomies (Kryrmre & Bondas, 2013), and those with general maternal illnesses to provide kangaroo care (Lee, Martin-Anderson, & Dudley, 2012). Furthermore, there is a fear of the possible spread of infections from the mothers and caregivers to infants; therefore, monitoring them for skin infections and cleansing of their skin before contact with the babies is of utmost importance (Lee, Martin-Anderson, & Dudley, 2012). These barriers suggest that practicing continuous Kangaroo Mother Care is likely to be very challenging for the mothers.

2.6 Summary

This chapter dealt with the relevant literature studied to provide an overview of the study problem. The benefits, disadvantages, knowledge, and attitudes of HCPs towards KMC, as well as the practices and challenges in the implementation of KMC were discussed. The next chapter will be focused on research methodology and design.

CHAPTER THREE: RESEARCH METHODOLOGY AND DESIGN

3.1 Introduction

The previous chapter dealt with the literature relevant to the topic under study. This chapter outlines the research method and design employed to conduct this study, as well as the research setting. The population under study is also defined. The chapter deals with sampling method, pilot testing, data collection and data analysis. Validity and reliability of the data collection tool, as well as the research ethics are also discussed in this chapter.

3.2 Research design and methodology

Gray, et al. (2015, p. 211) define a research design as a plan or blue print of how the researcher intends to conduct the study. In this study, the researcher aimed at assessing the knowledge, attitudes, and practice of KMC among HCPs using a quantitative, descriptive, cross-sectional study design. A quantitative method is a formal, objective, rigorous, systemic process in which numerical data are used to obtain information about the world (Gray, et al., 2015, p.32). A quantitative research approach is appropriate for this study as it involves the use of figures, statistics and percentages in analysing the data. A descriptive design describes the characteristics, opinions, attitudes, and/ or behaviours as they currently exist in the population (Polit & Beck, 2016). In this study, a descriptive design was used to describe the knowledge, attitudes, and practices of HCPs. According to Polit & Beck (2016), descriptive designs can either be cross-sectional or longitudinal. A cross-sectional design involves the collection of data at one point in time (Polit & Beck, 2016). In this study the researcher obtained data from the study sample and recorded it at the same time without manipulating the variables.

3.3 Research setting

Grove et al. (2015, p. 276) describe the research setting as the site or location used to conduct a study. Additionally, the setting was natural because, the researcher did not manipulate or change the environment for the study (Grove et al., 2015, p. 277). This study was conducted at public health care facilities in the Keetmanshoop district. Keetmanshoop town is situated in the southern part of Namibia, in the //Kharas region. According to the population census of 2011, the population of Keetmanshoop was 20,977. There are 8 public health care facilities in the district (5 primary health care clinics, 2 primary health care centres, and 1 district hospital). The clinics and health centres are involved in providing follow up care to mothers who are giving KMC to their LBW infants after being discharged from hospital. Therefore, the clinic staff will also need information and training in KMC. All LBW babies born at peripheral health facilities are referred to Keetmanshoop hospital for management and care. A maternity ward at Keetmanshoop hospital has a capacity of 28 beds. There is also a prem-unit equipped with 6 incubators. Only one room with two beds is reserved for mothers of low birth weight babies. If the room is full, mothers are placed in any room where there is space and the babies stay in incubators. There is no kangaroo ward at Keetmanshoop hospital.

3.4 Study population

A population is a group of individuals or elements who are the focus of the research (Grove et al., 2015, p. 250). In this study, the target population comprised of 105 HCPs. These included registered nurses, midwives/accoucheurs, enrolled nurses/midwives/accoucheurs, as well as medical doctors working at state health facilities in the Keetmanshoop district. These facilities are, the Keetmanshoop district hospital and clinics such as, Keetmanshoop, Dan Viljoen, Tses, Berseba, and Koes, as well as Bethanie and Aroab health care centres. The clinics are also

involved in providing follow up care to mothers of LBW infants after being discharged from hospital. In this study, the population and the sample size were the same since the population was small.

3.5 Sample and sampling technique

A sample is a portion or a smaller number of units of a population as representative of the total population (de Vos, et al., 2012, p. 223). In this study, the researcher used a census sampling method. A Census sampling is a sampling method in which the sampling frame consists of a list of all the known units in the universe, and each unit will need to be studied (Lavrakas, 2008). The researcher used a census sampling method due to the limited number of participants. The sample consisted of registered nurses/midwives/ccouchiers (n=40), enrolled nurses/midwives/accoucheurs (n=53), medical doctors (n=7). The total sample size was (n=100). Quantitative studies typically are based on samples of fewer than 200 participants, and many have fewer than 100 participants (Polit & Beck, 2017, p. 259).

3.5.1 Inclusion criteria

Inclusion criteria are defined as participants that are suitable to be included in the study's indispensable features that the participants must pose to participate in the study (Polit & Beck, 2017). This study focused on the following:

- All public health facilities in Keetmanshoop district
- Health Care Professionals (medical doctors and nurses who are registered as midwives or accoucheurs) working in state health facilities in the Keetmanshoop district.
- HCPs who consented to part take in this study.

3.5.2 Exclusion criteria:

- Private health facilities in the district were not included in this study
- Nurses who are not registered as midwives/accoucheurs
- Health Care Professionals, such as radiologists, dentists, laboratory technicians and pharmacists were excluded from this study.

3.6 Data collection

Data collection is the process of acquiring subjects and collecting the data for a study (Grove, et al., 2015, p. 310). Before data collection, the researcher obtained permission from all relevant authorities, as well as from all study participants to indicate their willingness to take part in the study. A self-administered questionnaire was used to collect data. Sometimes, the researcher had to wait for longer periods as participants had to complete their work first. Participants were ready to participate because they were informed beforehand about the researcher's visit. Data were collected during the month of September 2017.

3.6.1 Data collection instrument

A self-reported questionnaire was designed to obtain demographic data (age, gender, marital status), educational qualifications, work experience and to assess the knowledge, attitudes, and practices of kangaroo mother care. Attitudes towards kangaroo care were measured using a list of statements that reflected benefits of kangaroo care for mothers and infants and for each statement, participants were asked to state their opinions, using a 5-point Likert scale ranging from 1= agree, to 5= strongly disagree. Closed-ended questions requiring a 'yes' or 'no' answers were used to ascertain the kangaroo care practices and challenges. The supervisors reviewed and discussed the data collection instrument to ensure its validity. The questionnaire was made up of four sections: section A consisted of demographic characteristics of the participants, section B captured the

knowledge, attitudes and practices of KMC among HCPs, section C dealt with the practice of KMC by HCPs, and section D dealt with challenges experienced by HCPs in the implementation of KMC.

3.6.2 Data collection procedure

Grove, Burns & Gray (2015) assert that, data collection could be defined as the procedure of gathering data from participants. On receipt of the approval from the appropriate authorities, such as Post Graduate Research Committee of the University of Namibia, the Ministry of Health Research Committee, and the Keemanshoop district hospital management. Questionnaires were distributed to participants. A consent form and a cover letter detailing the study were attached to each questionnaire.

The researcher explained the objectives of the study to participants before obtaining informed consent from them. The questionnaires were written in English which is a language which all participants could read and understand. The researcher delivered questionnaires herself to the participants while they were on duty. Some respondents completed the questionnaires and returned them to the researcher at the same time, but some needed more time and only returned them the following day. The researcher had to travel to clinics and health centres outside Keetmanshoop to deliver the questionnaires. For the participants who were on leave or off-duty, the researcher made appointments to see them at their homes, but 2 could not be reached because they were out of town and 3 retired.

3.6.3 Validity

Validity has to do with whether the items in the tool are representatives of the content domain that the researcher intends to measure (LoBiondo- Wood et al., 2013). In this study, content and face validity were ensured. Face validity refers to whether the instrument looks like it is measuring the target construct, while content validity examines the extent to which an instrument's content adequately captures the construct, that is, whether an instrument has an appropriate sample of items for the construct being measured (Polit & Beck, 2017, p. 310). The subject experts/supervisors checked the data collecting instrument to determine whether it appears to measure what it is supposed to measure. The content was validated by reviewing literature on HCPs' knowledge, attitudes, and practices on Kangaroo Mother Care. Subject experts/supervisors assessed the instrument to make sure that it contains questions which address the study objectives. The supervisors also evaluated the instrument for clarity, relevance and simplicity of the content. The instrument was piloted on 5 HCPs before the actual study to ensure that all important areas of concern are reflected in it.

3.6.4 Reliability

According to LoBiondo- Wood et al., (2013), reliability means that all items in an instrument measure the same concept or characteristic and the stability of an instrument, even if the scores are obtained separate. Reliability occurs when an instrument measures the same thing more than once and results in the same outcomes (De Vos, et al., 2012, p. 177). Furthermore, if a measure yields a good estimate of the true scores of an attribute, ideally, it will do so comparably on two separate administrations (Polit & Beck, 2017, p. 303). A pilot study was conducted to eliminate possible ambiguity and assess the relevance, appropriateness, and comprehensiveness of the study instrument.

3.6.5 Pilot study

A pilot study was undertaken prior to the actual collection of data. This was done to ensure content validity and reliability. Data for pilot study was collected from subjects with the same characteristics as those under study. The pilot study was conducted at Karasburg district hospital on five HCPs (one medical doctor, two registered nurses/midwives and two enrolled nurses/midwives), who met the inclusion criteria, but did not partake in the main study. The participants completed a self-administered questionnaire to assess the existing knowledge, attitudes, and practices of KMC. The outcome of the pilot study is that, questions were well understood and no major amendments were made. The time taken to complete each questionnaire was noted (10 to 15 minutes) as anticipated by the researcher. Few changes were made to some questions, for example, correct numbering of questions.

3.7 Data analysis

Returned questionnaires were coded and data entered on computer for analysis using Statistical Package for Social Sciences (SPSS), Version 24. The researcher used descriptive statistics to provide answers to the research questions. Descriptive statistics allowed the researcher to organize the data in the way which gave meaning and facilitated insight and examine the phenomenon from different angles. Demographic data are presented as percentages. Descriptive measures were presented in the form of frequency tables and graphs for easy interpretation. The researcher made use of the professional statistician to analyse and summarize the data.

3.8 Research ethics

Ethical principles provide the necessary guidelines to make justified moral decisions and to evaluate the morality of actions (Pera & Van Tonder, 2012, p. 331). As this study was conducted on human beings, the researcher adhered to the following ethical principles:

3.8.1 Respect for human dignity

This principle is based on human rights that need to be protected in research. Researchers sometimes assure subjects of anonymity in their cover letters or by verbal communication, but secretly mark the questionnaire (de Vos et al., 2012, p. 119). In this study, anonymity of participants was ensured by avoiding the usage of names and addresses of participants. A unique number was allocated to each questionnaire for identification. This was done to ensure that the information provided was kept anonymous and no links could be made to individual participants. The completed questionnaires were kept at a secure place to ensure privacy and all the study subjects were reassured that the researcher will keep the information they gave to herself. All participants were informed that, they can only take part in this study if they were willing to and no one would be forced to participate. They were also informed of their right to withdraw from the study at any time, to refuse to give information or to ask for clarifications about the purpose of the study and the researcher respected their opinions.

3.8.2 Justice

Justice is the principle of being fair to participants and not giving preference to, or being discriminatory with, some participants over others (Moule & Goodman, 2014, p. 59). In this study, participants were treated equally irrespective of their race, religion, sex, age, sexual orientation, their statuses in the society, or their educational backgrounds. The researcher kept the data collected safe and confidential by locking them in a locked cabinet.

3.8.3 Informed consent

The consent of participants is accepted both legally and professionally only when a participant has been properly informed, has agreed without any coercion and is deemed competent to give consent

(Moule & Goodman, 2014, p. 63). In this study, the researcher explained the purpose as well as the research objectives to participants before obtaining consent from them.

3.8.4 Beneficence and Non-maleficence

These principles oblige the researcher to prevent evil or harm and not to inflict evil or harm on participants (Pera & Van Tonder, 2012, p. 331). The researcher refrained from actions that could cause harm and discomfort to participants by ensuring that no names were written on questionnaires. The researcher also assured participants that, the information they provided would never be used against them in any way.

3.9 Summary

The discussion in this chapter focused on research methodology and design, target population, sampling, pilot study, data collection instruments, data collection procedure, as well as research ethics.

CHAPTER FOUR: DATA ANALYSIS AND PRESENTATION

4.1 Introduction

The previous chapter focused on the research design and data collection methods used in this study. This chapter deals with presentation, analysis and interpretation of the research findings. The purpose of the study was to assess the knowledge, attitudes, and practices of Kangaroo Mother Care among health care professionals in the Keetmanshoop district. In this study, the researcher used a questionnaire to collect data from participants. Data were analysed according to objectives of the study in the following four sections: section A consists of demographic characteristics of participants, section B captured knowledge and attitudes of HCPs towards KMC, section C dealt with the assessment of the practice of KMC among HCPs, section D dealt with challenges faced by HCP in the implementation of KMC.

4.2 Sample realization

In this study, it was anticipated that all medical doctors, registered nurses/ midwives/accoucheurs and enrolled nurses/ midwives/accoucheurs 105 (n=105) would be included in the study. However, only 100 out of 105 HCPs actively participated in the study. This means that the rate of participation is at 95.0%.

The reasons for non-participation are indicated below:

Table 4.1 Sample realization (n=105)

Reason	Frequency	Percentage
Vocational leave	2	40.0%
Retirement	3	60.0%
Total	5	100.0%

The study shows that 40.0% (n=2) nurses were out of town on vocational leave, while the other 60.0% (n=3) nurses are retired.

4.3 Section A: Demographic characteristics of the participants

Demographic data was collected to determine the knowledge, attitudes, and practices of Kangaroo Mother Care among HCPs. This information included, sex, age, marital status, job title, years of experience and highest qualifications obtained by participants.

Table 4.2 Demographic data of participants (n=100)

Variables	Frequencies	Percentage
1. Gender		
Female	79	79%
Male	21	21%
Total:	100	100%
2. Age		
20 – 30	30	30%
31 – 40	29	29%
41 – 50	21	21%

51 – 60	20	20%
Total	100	100%
3. Marital status		
Never married	51	51%
Married	44	44%
Widow/widower	2	2%
Divorced	3	3%
Total	100	100%
4. Years of experience		
0-4	32	32%
5- 9	24	24%
10 above	44	44%
Total	100	100%
5. Job title/Rank		
Medical Doctor	7	7%
Registered Nurses/Midwives/ Accouchier	40	40%
Enrolled Nurses/Midwives/ Accouchiers	53	53%
Total	100	100%
6. Highest qualification obtained		
Certificate	53	53%
Diploma	28	28%
Degree	19	19%
Total	100	100%

a. Sex

In this study, 79% (n=79) participants were females, while 21% (n=21) were males. This is an indication that, the nursing profession is dominated by females. On the other hand, males are dominant in the medical profession as only one doctor out of seven is female. Traditionally, it has been believed that, the nursing profession is for females because they are more caring than men.

b. Age

The study revealed that, 30% (n=30) participants were between the ages of 20 – 30, 29% (n=29) were between the ages of 31 – 40, 21% (n=21) were between 41 – 50 years, and 20% (n=20) were between 51 – 60 years old.

c. Marital status

It is evident from this study that 51% (n=51) of the participants were never married, 44% (n=44) were married, 2% (n=2) were widows, while 3% (n=3) were divorced.

d. Years of experience

The study indicates that 32% (n=32) participants had an experience of 0-4years, 24% (n=24) have an experience of between 5-9 years, while 44% (n=44) have an experience of 10 years and more. It seems that older participants have more years of experience than the younger ones.

e. Job title/ Rank

The table above shows that 7% (n=7) participants were medical doctors, 41% (n=41) were registered nurse/midwives, 52% (n=52) were enrolled nurses/midwives. Most nurses in the district were enrolled nurses.

f. Highest qualification obtained

The table also depicts that 46% (n=46) of participants were certificate holders, 31% (n=31) were diploma holders, and 23% (n=23) were degree holders.

4.4 Section B: Knowledge of HCPs on KMC

Table 4.3 Knowledge about the policy on KMC (n=100)

	Frequency	Percentage
Yes	44	44.0%
No	56	56.0%
Total	100	100.0%

To the question whether participants know about the policy on KMC, 44% (n=44) responded that they know about the policy, while 56% (n=56) do not know about the policy.

Table 4.4 Training of participants in kangaroo mother care practice (n=100)

Job title	Trained	Frequency	Percentage
Medical doctor	Yes	2	2%
	No	5	5%
Registered Nurse/Midwife/Accouchiers	Yes	35	35%
	No	5	5%
Enrolled Nurse/Midwife/ Accouchiers	Yes	2	2%
	No	51	51%
Total		100	100%

The table above shows that only 2% (n=2) medical doctors, 35% (n=35) registered nurses, and 2% (n=2) enrolled nurses received training on KMC. Five (5) medical doctors, five (5) registered nurses, and 51% (51) enrolled nurses revealed that they have never received training on KMC.

Table 4.5 Knowledge of participants about the components of KMC (n=100)

Number of Listed components	Frequency	Percent
0 component	84	84.0%
1 component	8	8.0%
2 components	5	5.0%
3 components	3	3.0%
4 components	0	0.0%
Total	100	100.0%

The table above shows that 84% (n=84) of participants could not list the components of Kangaroo Mother Care, 8% (n=8) could list only one component, 5% (n=5) listed two components, 3% (n=3) of participants managed to list 3 components, while no participant could list all four components of Kangaroo Mother Care.

4.5 Section C: Low birth weight babies need KMC the most

Table 4.6 Low birth weight babies need KMC the most (n=100)

	Frequency	Percentage
Agreed	28	28.0%
Strongly agreed	71	71.0%
Strongly disagreed	1	1.0%
Total	100	100.0%

The study shows that 28% (n=28) participants agreed that low birth weight babies need Kangaroo Mother Care the most, 71% (n=71) strongly agreed, while 1% (n=1) strongly disagreed.

Table 4.7 Provision of KMC while transporting the baby to the high level to prevent hypothermia

	Frequency	Percentage
Agreed	20	20.0%
Strongly disagreed	28	28.0%
Not sure	17	17.0%
Disagreed	18	18.0%
Strongly disagreed	17	17.0%
Total	100	100 %

The table above shows that 20% (n=20) participants agreed that KMC should be given when transporting the baby to the high level to prevent hypothermia, 28% (n=28) of them strongly agreed, 17% (n=17) were not sure, 18% (n=18) disagreed, and 17% (n=17) strongly disagreed.

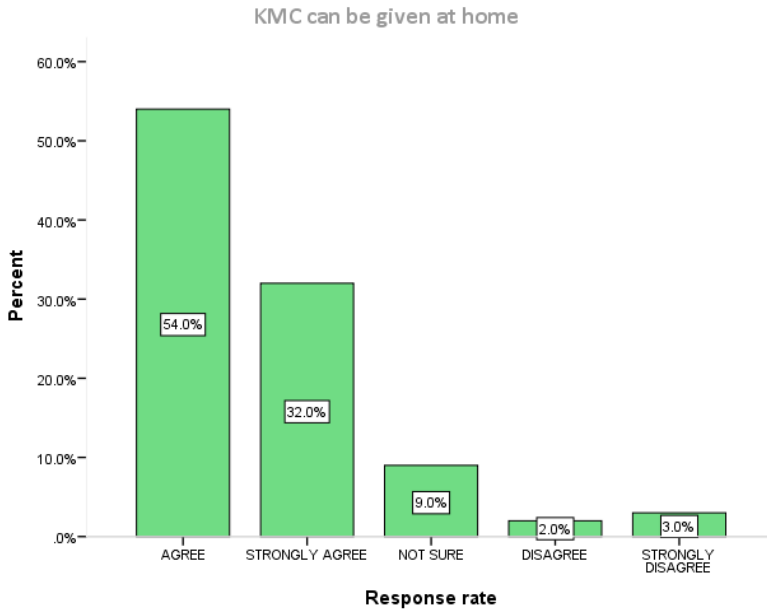


Figure 4.1 Provision of KMC at home (n=100)

The bar graph above shows that 54% (n=100) of participants agreed that Kangaroo Mother Care can be given at home, 32% (n=32) strongly agreed, 9% (n=9) were not sure, 2% (n=2) disagreed and 3% (n=3) strongly disagreed.

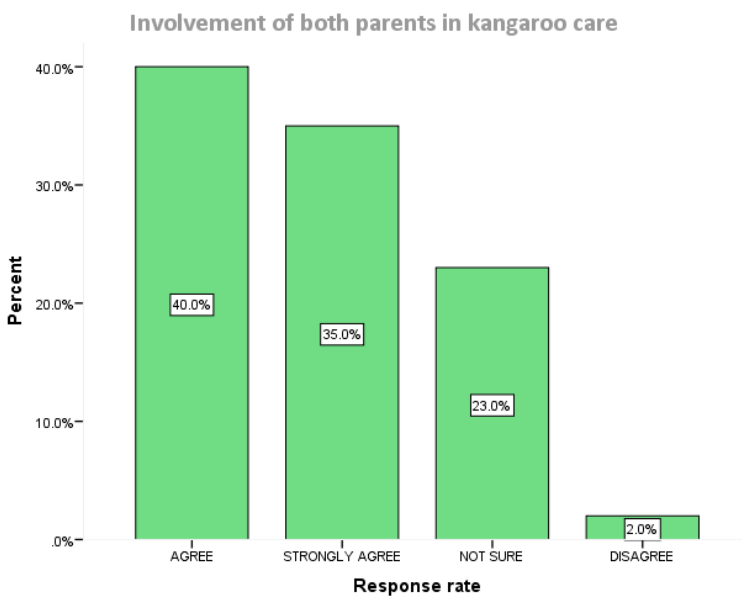


Figure 4.2 Involvement of family members in kangaroo care (n=100)

According to the bar graph above, 40% (n=40) participants agreed that family members should be involved in providing KMC, 35% (n=35) strongly agreed, 23% (n= 23) were not sure, and 2% (n=2) disagreed.

4.6 Section D: Attitudes of HCPS towards KMC

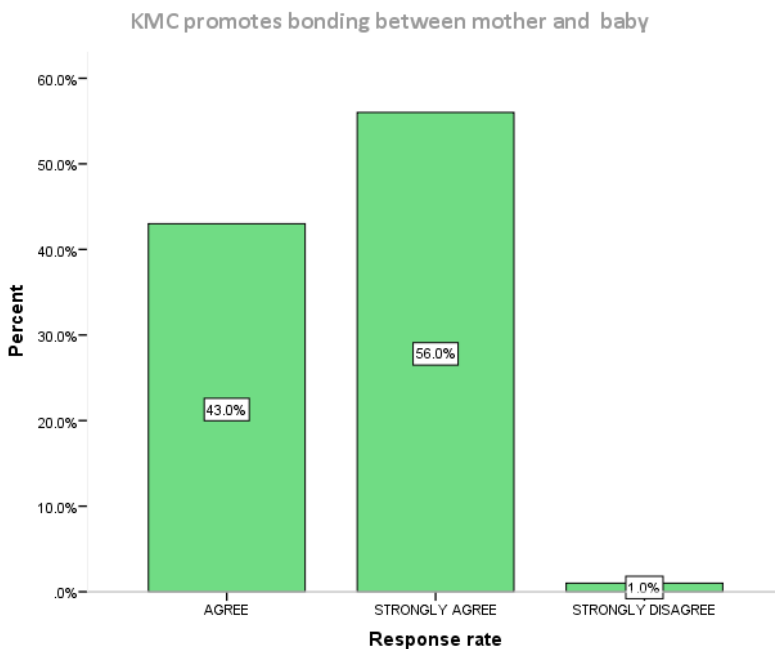


Figure 4.3 Promotion of bonding between mother and baby by KMC (n=100)

The study indicates that 43% (n=43) agreed that KMC promotes bonding between the mother and the baby, 56% (n=56) participants strongly agreed that KMC promotes bonding between mother and the baby, while (n=1) 1% strongly disagreed that KMC promotes bonding between mother and baby.

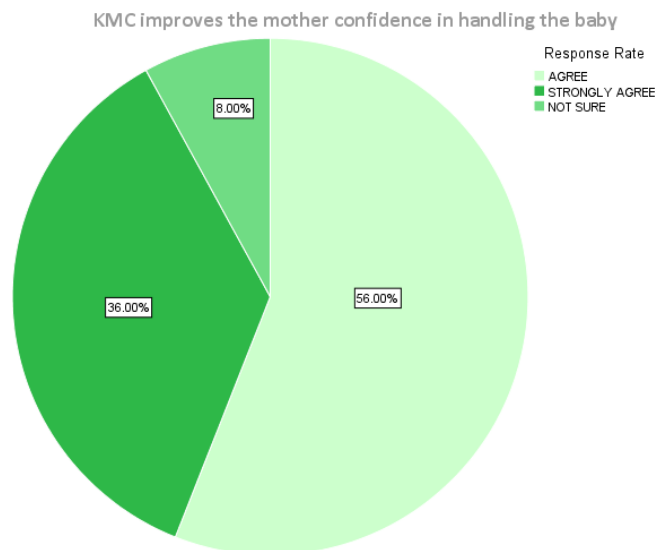


Figure 4.4 Improvement of the mother's confidence in handling her baby by KMC (n=100)

The pie chart above indicates that most HCPs 56% (n=56) agreed that KMC improves the mother's confidence in handling her baby, 36% (n=36) strongly agreed, while 8% (n=8) were not sure.

Table 4.8 KMC promotes breast feeding (n=100)

	Frequency	Percentage
Agreed	25	25.0%
Strongly agreed	66	66.0%
Not sure	7	7.0%
Disagreed	2	2.0%
Total	100	100.0%

The table above indicates that 25% (n=25) participants agreed that KMC promotes breast feeding, 66% (n=66) strongly agreed, 7% (n=7) were not sure, while 2% (n=2) disagreed.

Table 4.9 KMC promotes the baby's mental development (n=100)

	Frequency	Percentage
Agreed	49	49.0%
Strongly agreed	23	23.0%
Not sure	26	26.0%
Disagreed	2	2.0%
Total	100	100.0%

The study indicates that 49% (n=49) participants agreed that KMC promotes mental development of the baby, 23% (n=23) strongly agreed, 26% (n=26) were not sure, while 2% (n=2) disagreed.

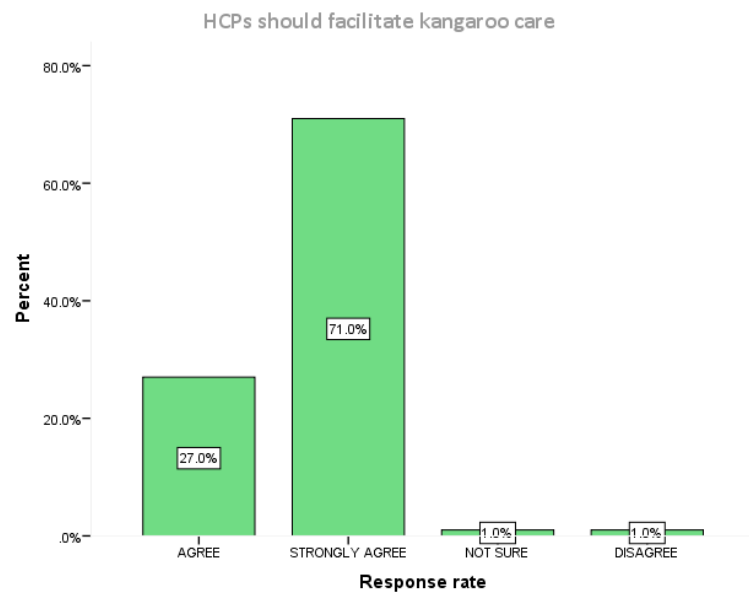


Figure 4.5 Facilitation of Kangaroo Mother Care by HCPs (n=100)

In this study, 27% (n=27) participants agreed that HCPs should facilitate Kangaroo Mother Care, 71% (n=71) strongly agreed, 1% (n=1) were not sure, while 1% (n=1) disagreed. This is indicated in the bar graph above.

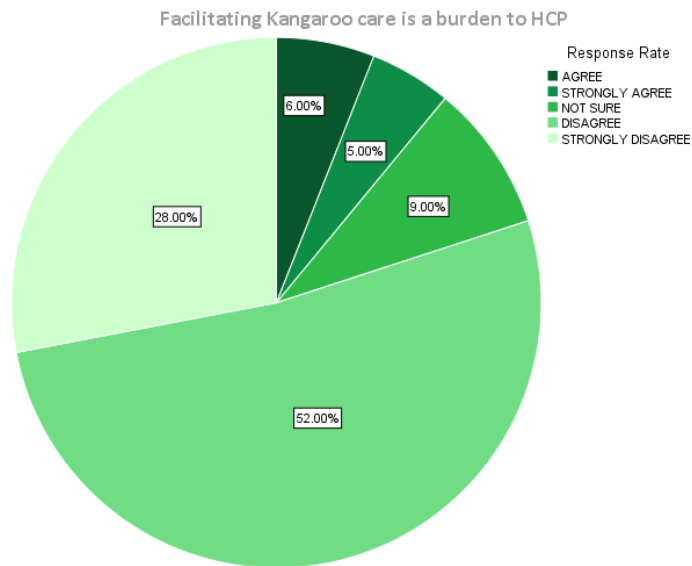


Figure 4.6 Facilitation of KMC is a burden to HCPs (n=100)

The pie chart above shows that 6% (n=6) participants agreed that, facilitating KMC is a burden to HCPs, (n=5) 5% strongly agreed, 9% (n=9) were not sure, 51% (n=51) disagreed, and 29% (n=29) strongly disagreed.

Table 4.10 Babies who are kangarooed sleep deeply (n=100)

	Frequency	Percentage
Agreed	47	47.0%
Strongly agreed	28	28.0%
Not sure	22	22.0%
Disagreed	2	2.0%
Strongly disagreed	1	1.0%
Total	100	100.0%

The table above indicates that 47% (n=47) participants agreed that babies who are given KMC sleep deeply, 28% (n=28) strongly agreed, 22% (n=22) were not sure, 2% (n=2) disagreed, and 1% (n=1) strongly disagreed.

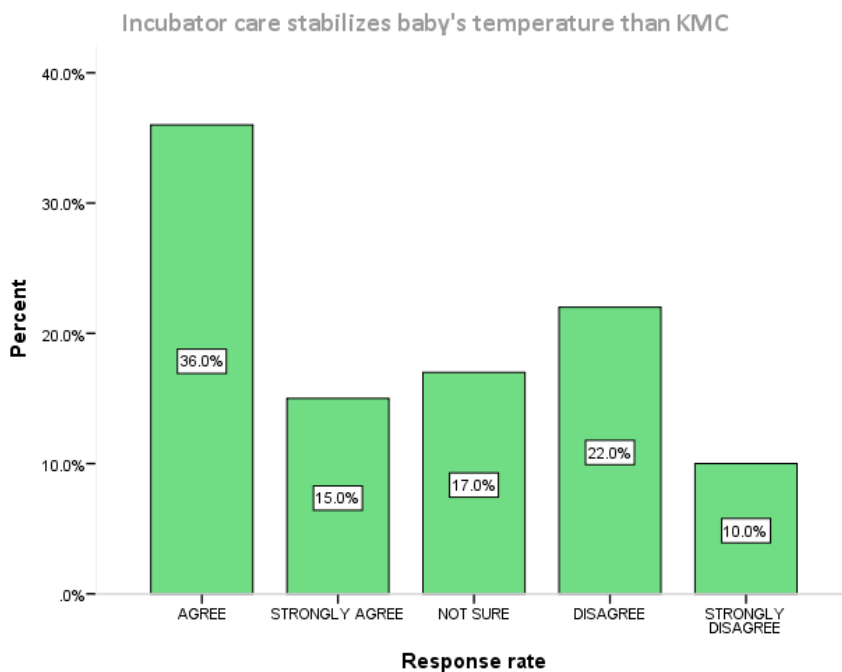


Figure 4.7 Incubator care stabilizes baby's temperature than KMC (n=100)

In the bar graph above participants expressed their opinions on whether incubator care stabilizes the babies' temperature than KMC. Thirty six percent (n=36) agreed, 15% (n=15) strongly agreed, 18% (n=8) were not sure, 21% (n=21) disagreed, and 10% (n=10) strongly disagreed.

Table 4.11 KMC prevents postpartum depression (n=100)

	Frequency	Percentage
Agreed	33	33.0%
Strongly agreed	12	12.0%
Not sure	50	50.0%
Disagreed	5	5.0%
Total	100	100.0%

The table above shows that 33% (n=33) participants agreed that KMC prevents postpartum depression, 12% (n=12) strongly agreed, 50% (n=50) were not sure, and 5% (n=5) disagreed.

Table 4.12 Babies who are given kangaroo care cry less (n=100)

	Frequency	Percentage
Agreed	46	46.0%
Strongly agreed	34	34.0%
Not sure	15	15.0%
Disagreed	3	3.0%
Strongly disagreed	2	2.0%
Total	100	100.0%

This study indicates that 46% (n=46) participants agreed that babies who are given kangaroo care cry less than those who are not given kangaroo care, 34% (n=34) strongly agreed, 15% (n=15) were not sure, 3% (n=3) disagreed, while 2% (n=2) strongly disagreed. This is indicated in the table above.

Table 4.13 KMC promotes the baby's growth and development (n=100)

	Frequency	Percentage
Agree	27	27.0%
Strongly agree	70	70.0%
Not sure	2	2.0%
Disagree	1	1.0%
Total	100	100.0%

In the table below, 27% (n=27) of participants agreed that KMC promotes baby's growth and development, those who strongly agreed were 70% (n=70), 2% (n=2) were not sure, and 1% (n=2) disagreed.

Table 4.14 KMC reduces infection in the baby (n=100)

	Frequency	Percentage
Agree	42	42%
Strongly agree	24	24%
Not sure	21	21%
Disagree	11	11%
Strongly disagree	2	2%
Total	100	100%

The table above indicates the views of participants on the relationship between KMC and infection. Forty two percent (n=42) participants agreed that Kangaroo Mother Care reduces infections in the baby, 24% (n=24) strongly agreed, 21% (n=21) were not sure, 11% (n=11) disagreed, and 2% (n=2) strongly disagree.

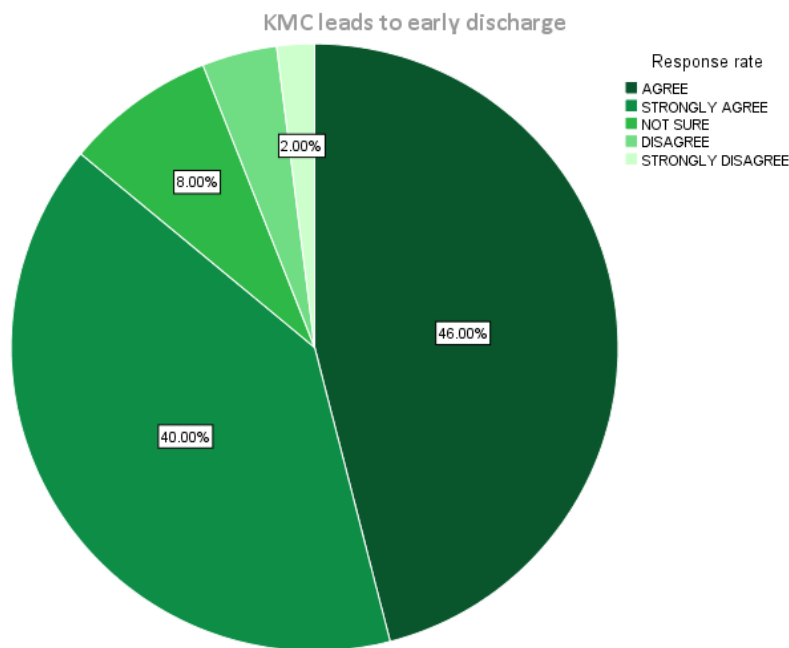


Figure 4.8 KMC leads to early discharge

In this study 46% (n=46) of participants agreed that KMC leads to early discharge, 40% (n=40) strongly agreed, 8% (n=8) were not sure, those who disagreed were 4% (n=4), while 2% (n=2) strongly disagreed. This is indicated in the pie chart above.

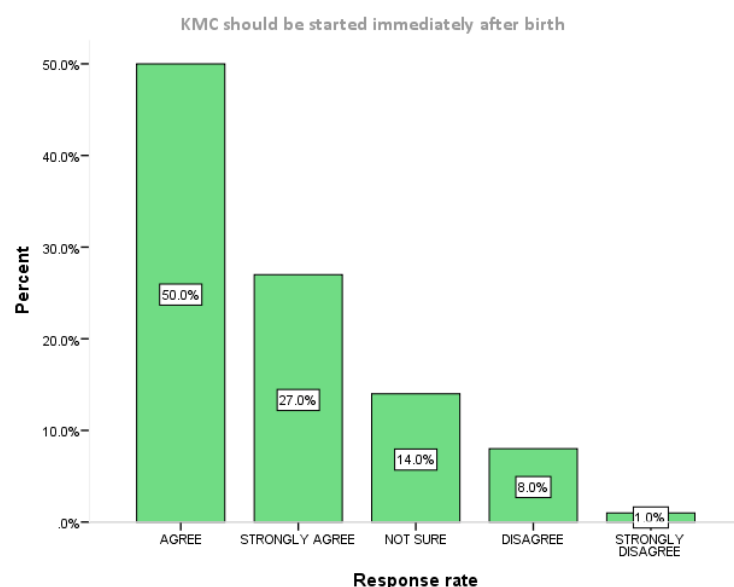


Figure 4.9 KMC should be started immediately after birth (n=100)

The bar graph above shows the opinions of participants on whether KMC should be started immediately after birth. Fifty percent (n=50) of participants agreed that KMC should be started immediately after birth, 27% (n=27) strongly agreed, 14% (n=14) were not sure, those who disagreed were 8% (n=8), and 1% (n=1) strongly disagreed

4.7 Section E: Practice of KMC among HCPS

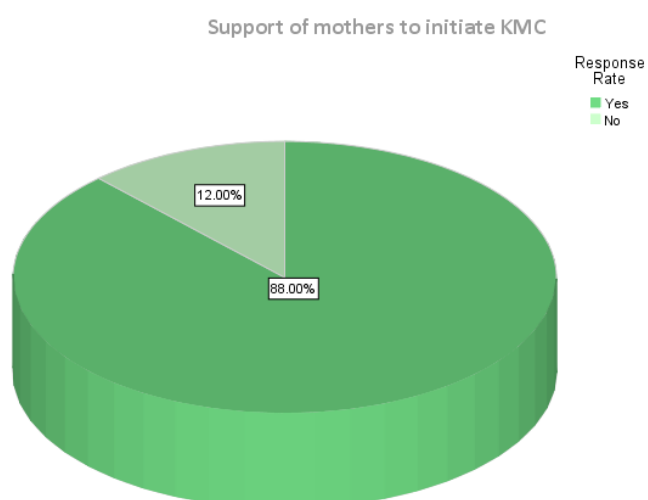


Figure 4.10 Support of mothers to initiate KMC (n=100)

The pie chart above illustrates the support of mothers to initiate KMC. Eighty-eight percent(n=88) of participants stated that they do support mothers to initiate KMC while 12% (n=12) said that they do not support mothers to initiate KMC.

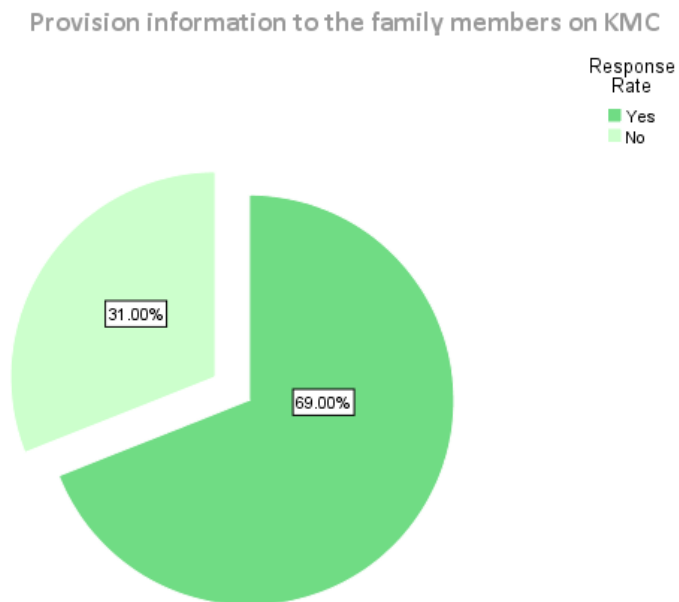


Figure 4.11 Provision of information on KMC to family members

The pie-chart above shows that 69% (n=69) of participants provide information on KMC to family members and 31% (n=31) confirmed that they do not provide information.

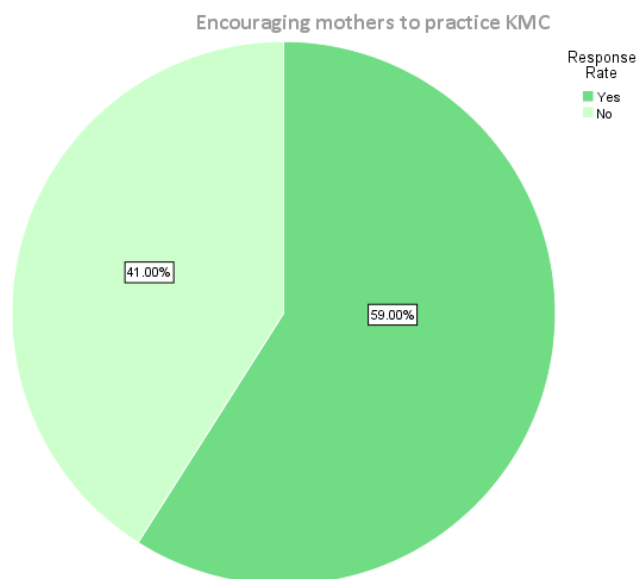


Figure 4.12 Encouragement of mothers to practice KMC (n=100)

The pie chart above indicates that 59% (n=59) of participants encourage mothers to practice KMC, while 41% (n=41) of them do not encourage mothers to practice KMC.

Table 4.15 Assistance of mothers to practice KMC (n=100)

	Frequency	Percentage
Yes	68	68.0%
No	32	32.0%
Total	100	100.0%

Sixty eight percent (n=68) of participants revealed that they assist mothers to practice Kangaroo Mother Care and 32.0% (n=32) indicated that they do not assist mothers to practice KMC.

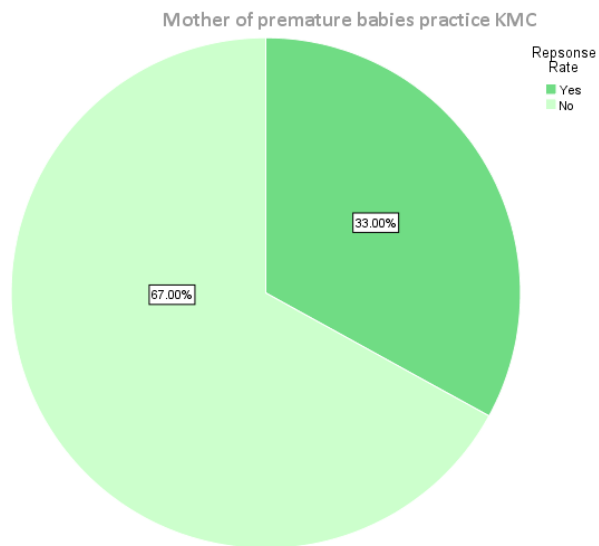


Figure 4.13 Mothers of premature babies practice KMC

Most participants agreed that mothers do not practice KMC 77% (n=77) and 33% (n=33) related that the mothers do practice KMC.

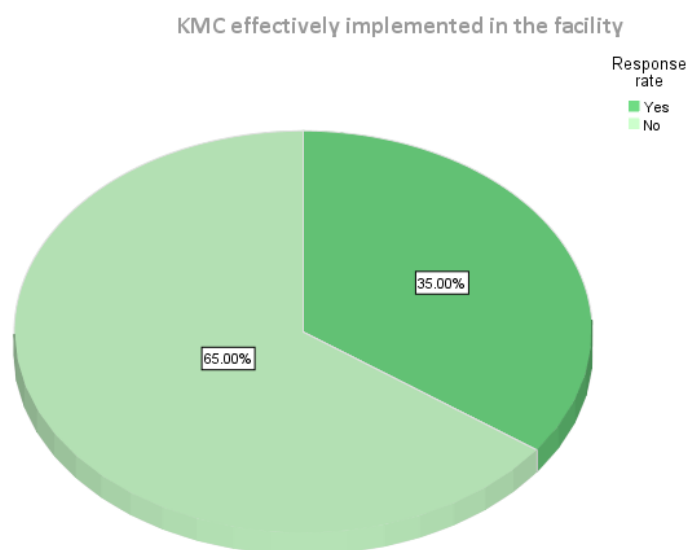


Figure 4.14 Implementation of KMC (n=100)

About 35% (n=35) participants said that KMC is effectively implemented in their facilities, the rest, 65% (n=65) show that KMC is not effectively implemented in their facilities.

4.8 Section F: Challenges experienced by HCPs in implementing KMC

Table 4.16 Displaying of the policy on KMC in the facilities (n=100)

	Frequency	Percentage
Yes	13	13.0%
No	87	87.0%
Total	100	100.0%

Most participants 87% (n=87) stated that, the policy on KMC is not displayed in their facilities while 13% (n=13) agreed that the policy is displayed in their facilities.

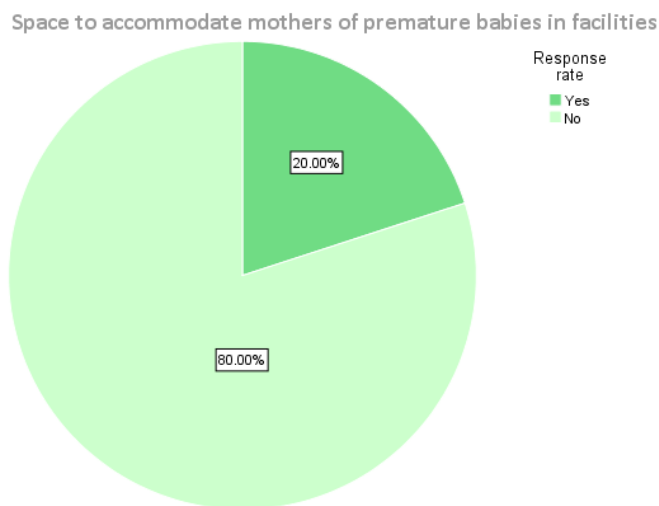


Figure 4.15 Space to accommodate mothers of low birth weight babies in facilities (n=100)

The pie chart above illustrates that, 80% (n=80) of participants pointed out that there is no enough space in their facilities to accommodate mothers of LBW babies and there other 20% (n=20) agreed that the space in their facilities is adequate to accommodate mothers.

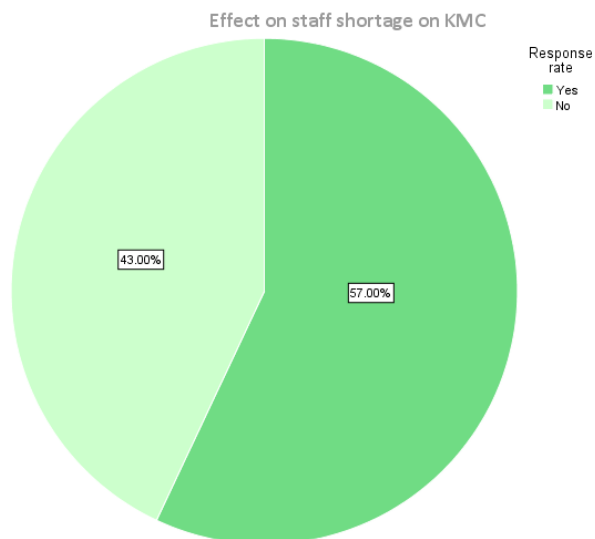


Figure 4.16 the effects of staff shortage on KMC (n=100)

It is evident from the pie chart above that 57% (n=57) participants agreed that staff shortage has effects on KMC, whereas 43% (n=43) disagreed.

Table 4.17 Influence of religion and culture on KMC practice (n=100)

	Frequency	Percentage
Yes	46	46.0%
No	54	54.0%
Total	100	100.0%

The researcher found out that 46% (n=46) believed that religion and culture have a negative influence on KMC, while 54% (n=54) disagreed.

Table 4.18 Effect of caesarean section on initiation of KMC (n=100)

	Frequency	Percentage
Yes	70	70%
No	30	30%
Total	100	100%

It is apparent from the table above that 70% (n=70) of participants believe caesarean section negatively affects the initiation of KMC, while 30% (n=30) disagreed.

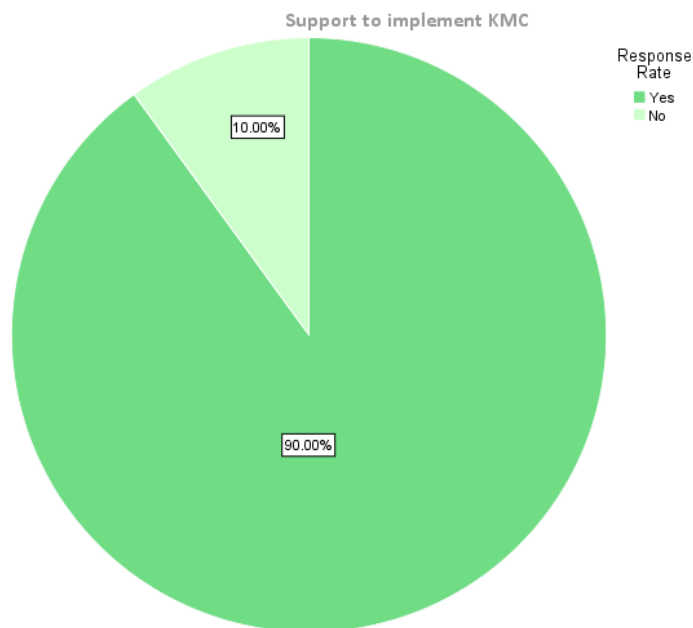


Figure 4.17 Support HCPs to implement KMC (n=100)

The study shows that most participants 90% (n=90) need support to implement KMC, and 10% (n=10) indicated that they do not need support.

4.9 Summary

Data presentation and analysis were presented in this chapter. The results indicate that, although health care professionals had good knowledge about Kangaroo Mother Care, some of them lack sufficient knowledge and positive attitudes towards the practice. Most health care facilities in the district have no policies and guidelines on KMC practice. In the next chapter, discussion of the results, conclusions, recommendations as well as study limitations will be presented.

CHAPTER 5: DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The previous chapter focused on the analysis and presentation of the results, regarding the health care professionals' knowledge, attitudes, and practices in relation to Kangaroo Mother Care practice in the Keetmanshoop district.

In this chapter the research findings are discussed, conclusions are drawn based on these findings, from which recommendations for further practice and research are formulated. The study was meant to address the following objectives: to assess the knowledge, attitudes, and practices of Kangaroo Mother Care (KMC) in the Keetmanshoop district, to assess the practice of KMC among health care professionals, and to identify challenges in the implementation of KMC among health care professionals.

5.2 Discussion

This chapter presents the discussion of data based on the analysis of the data collected using self-administered questionnaires. The researcher's own reflective thoughts will also be presented.

5.2.1 Demographic characteristics of the participants

Demographic data was collected to determine the knowledge, attitudes and practices of Kangaroo Mother Care among HCPs. This information included, sex, age, marital status, years of experience, job title, and highest qualification obtained.

Participants who took part in this study were 100 (100%). Female nurses were 79 (79%), male nurses were 14 (14.0%), and male doctors were 7 (7.0%). The reason for a high number of female nurses might be that nursing is still regarded as a profession for women. According to Twomey and Meadus (2016), men remain a minority within the nursing profession, despite the repeated call

for a greater effort on the recruitment and retention of male nurses to aid in alleviating the nursing shortage. The above authors also reported that, less than 7% of the nursing workforce in Canada is men (Twomey, & Meadus, 2016). In their study, Zamazadeh, Valizadeh, Nagarandeh, Monadi, and Azadi (2013), reported that gender role perceptions influence societies' views of male nurses. Furthermore, a recent study by the American Society of Registered Nurses found nurses being stereotyped both outside and within the profession as homosexuals, low achievers and feminine-like (Zamazadeh, et al., 2013). Such stigmatizing factors form barriers to patient care, prevent men from entering the profession and play a major role in problems related to male nurses' retention (Zamazadeh, et al., 2013).

Looking at the age categories, most participants 70 (70%) are between the ages of 31-60, while 30 (30%) of them are between the ages of 20-30. This indicates that, most participants are adults. The study done by Glerean, Hupli, Talman and Haavisto (2017) found that, young people associate the nature of nursing work with poor working conditions, shift work and a limited level of autonomy. In addition, young people do not recognize the educational requirements or the career pathways in the nursing and described the status of nursing as low in the society (Glerean, et al., 2017). Most young nurses prefer to work in big towns, such as Windhoek. This situation can be reversed with the introduction of incentives, such as bush allowance.

The study revealed that, 51% of participants were single, 44% were married, and 2% were widows /widowers, while 3% were divorced. The data shows that, 32% of participants have an experience of 0-4 years, 24% have an experience of 5-9 years, and 44% have an experience of 10 years and more. This indicates that many HCPs had experience in health care because of their long service as health care workers. According to their job titles, 7% were medical doctors, 40% were registered nurse/midwives/accoucheurs, while 53% were enrolled nurse/midwives/accoucheurs. Most

participants (53%) were certificate holders, those with diplomas were 28% and 19% were degree holders. This indicates that much still needs to be done to accelerate the upgrading program for enrolled nurses as this would enhance their knowledge and skills in managing LBW infants.

5.2.2 Knowledge

The discussion in this section is based on the findings on the knowledge of HCPs about KMC practice. In this section, the five-point knowledge and attitudinal scale was converted into a three-point scale, that is, agree, disagree and not sure. This means that, “agree and strongly agree” were combined to form an agreement, while disagree and strongly disagree were combined to form a disagreement.

Pertaining to the knowledge about the Ministry’s policy on Kangaroo Mother Care, 44 (44%) responded that they know about the policy, while 56 (56%) do not know about the policy. The training of HCPs in KMC practice is aimed at offering HCPs a chance to acquire the necessary theoretical knowledge and practical skills which can enable them to manage low birth weight babies effectively. The study revealed that only 2 (2%) of the medical doctors received training on KMC, while 5 (5%) did not receive training on KMC. Thirty five (35%) of registered nurses/midwives/accoucheurs were trained on KMC while 5 (5%) were not trained. When it comes to enrolled nurses/midwives/accoucheurs, 2 (2%) of them received training and 51 (51%) did not receive training. During training, the curriculum for registered nurses included both normal and abnormal labor. This might be the reason why most registered nurses were trained on KMC. On the other hand, the curriculum for enrolled nurses training program covers normal labor only, hence most enrolled nurses did not receive any training on KMC. In a study done by Haxton, Doering, Gingras, and Kelly (2012) about the implementation of skin-to-skin contact at birth using Iowa model, most nurses reported that, integration of Kangaroo Mother Care into pre-service and

training curricula was beneficial. There is a need for in-service education to provide HCPs with up-to-date information of efficacy and beneficial effects of kangaroo care for infants and parents. Simulation training programs for HCPs may also assist in promoting the acceptance of KMC.

When participants were asked to list the four components of KMC, 84 (84%) of them could not list the components of Kangaroo Mother Care, 8% (n=8) could list only one component, 5 (5%) listed two components, 3 (3%) of participants managed to list 3 components, while no participant could list all four components of Kangaroo Mother Care. This is an indication of poor knowledge about the components of KMC. This was followed by 99 (99%) of participants who agreed that low birth weight babies need Kangaroo Mother Care the most, while only 1 (1%) disagreed. This concurs with the World Health Organization's recommendation that, mothers whose babies weigh 1800g or more should provide Kangaroo Mother Care immediately after birth, while Lawn et al., (2010) believe that Kangaroo Mother Care should be initiated once the infant is stable, irrespective of age. Baley (2015), argued that a modified version of kangaroo care is now offered in resource-rich countries to infants who need neonatal intensive care, including those on ventilator support or extremely premature. Furthermore, the WHO (2003), recommends that when transporting the mother and the baby to the high centre where the baby can receive proper care, it is important to keep the baby in continuous skin-to-skin with the mother to prevent hypothermia. In this study, 72 (72%) of participants agreed, 17 (17%) were not sure, and 10 (10%) disagreed that the latter is very important. This result indicates that most participants are knowledgeable about the KMC practice.

To the question whether KMC can be provided at home, the majority 86% of participants agreed, 9% were not sure, while 5% disagreed. Establishing KMC support groups in the community comprising of mothers who have given kangaroo care to their babies would be of great importance

because, they can teach others how to express breast milk and how to do cup feeding. This assistance can be of enormous help to the nursing staff, especially in hospitals and clinics where staffing is inadequate. When enquired whether family members should be involved in the provision of KMC, 75 (75%) participants agreed that family members should be involved in providing KMC, 23 (23%) were not sure and 2 (2%) disagreed. A lack of support from family members hinders the implementation of KMC (Blomqvist, et al., 2012). In Malawi, grandmothers of LBW babies are involved to ensure that kangaroo care continues at home (Bazzano, et al., 2012). Similarly, cultural roles of family members providing emotional support were documented in Ghana (Bazzano et al., 2012). Despite a high positive response on this statement, the researcher has observed a lack of support from other family members at the facilities under study when it comes to the provision of kangaroo care. Only the babies' fathers are allowed in the prem-unit during visiting hours but other family members are not allowed to enter.

Although, most participants had adequate knowledge on KMC, the practice has not improved in the Keetmanshoop district.

5.2.3 Attitudes of HCPs towards KMC

The overall results of this study show that most participants have positive attitudes towards KMC. 99 (99%) of participants believe KMC promotes bonding between the mother and the baby, while only 1 (1%) was not in agreement with the statement. When the participants were asked whether KMC improves the mothers' confidence in handling their babies, 92 (92%) of them agreed, and 8% (n=8) were not sure. Most participants 91 (91%) agreed that, KMC promotes breastfeeding, 7 (7%) indicated that they were not sure, while 2 (2%) felt that KMC does not promote breastfeeding. The result of this study correlates with the previous study conducted by Campbell-Yeo, et al. (2015) which found out that, mothers who practice kangaroo care are more likely to

breastfeed exclusively and, on average, they breastfeed three months longer than those who didn't practice KMC.

Meanwhile, 72 (72%) of the participants agreed that KMC promotes the baby's mental development, 26 (26%) were not sure, and 2 (2%) disagreed. These study findings are consistent with the findings of a study by Donald (2016), who reported that low birth weight babies who received kangaroo care have better brain functioning at 15 years old, compared to those who had been placed in incubators. Aliganyira et al. (2014) believe that, nurses and doctors, being the fore-runners of care provision play a vital role in the practice and implementation of KMC. In this study, 98 (98%) of participants agreed that HCPs should facilitate Kangaroo Mother Care, 1 (1%) was not sure, while 1 (1%) disagreed. This was followed by 80 (80%) of participants who believed that the KMC practice is not a burden to HCPs, only 11 (11%) disagreed, while 9 (9%) were not sure.

Kalhor et al. (2016) reported that, low birth weight babies who are given kangaroo care sleep more deeply and wake up less often than those who sleep in incubators. In this study, 75 (75%) of participants agreed that babies who are given KMC sleep deeply, 22 (22%) of them were not sure, while 3 (3%) disagreed. These study findings are consistent with the results of a study by Baley (2015), who agreed that kangaroo care promotes better sleep organization and a longer period of quiet sleep. On average 51 (51%) HCPs agreed that, incubators stabilize babies' temperature than KMC, 18 (18%) were not sure, and 31 (31%) disagreed. This confirms the researcher's opinion that, most of the time, low birth weight babies are kept in the incubators and mothers do not provide kangaroo care continuously. Sellers (2012), reported that, skin to skin contact makes it easier for the baby to adapt to its post-birth environment; therefore, LBW babies nursed in incubators are prone to hyperthermia or hypothermia due to improper temperature regulation.

According to Sarparast, Farhadi, Sarparast, and Shafai (2015), Kangaroo Mother Care prevents postpartum depression by reactivating the activities in the mother's adrenal axis which was negatively influenced during delivery. The percentage of HCPs who agreed that KMC prevents post-partum depression were 45 (45%), 50 (50%) were not sure, and 5 (5%) disagreed. Bigelow et al. (2012) believes that mothers who practice Kangaroo Mother Care may experience a reduction in post-partum depressive symptoms. The percentage of HCPs who agreed that babies who are given kangaroo care cry less than those who are not given kangaroo care was 80 (80%), those who were not sure about the statement were 15 (15%), and 5 (5%) disagreed with the statement. For this study 80% is a good outcome which shows that HCPs have good insights in the practice of kangaroo care. Donald (2016) also confirmed that, new-born babies who received kangaroo care tend to cry less, therefore, the stress hormones in their blood are reduced.

When asked whether KMC promotes baby's growth and development 97 (97%) of participants agreed, 2 (2%) were not sure, and 1 (1%) disagreed. Most HCPs believe that, KMC contributes to the growth and development of the baby, which is a positive outcome for this study. The study conducted by Muddu et al. (2013) revealed that, KMC reduces preterm mortality significantly and improves other outcomes including severe infection/sepsis and emotional attachment in mothers. In this study, 66 (66%) participants agreed that Kangaroo Mother Care reduces infections in the baby, 21 (21%) were not sure, while 13 (13%) disagreed. Meanwhile 86 (86%) of participants agreed that KMC leads to early discharge, 8 (8%) were not sure; those who disagreed were 6 (6%). Furthermore, 77 (77%) of participants agreed that KMC should be started immediately after birth, 14 (14%) were not sure, and those who disagreed were 9(9%). These results are in line with recommendations by WHO.

5.2.4 The practice of KMC among HCPs

In this study, 88 (88%) of the participants stated that they support the fact that mothers should initiate KMC and 12 (12%) said that they do not support mothers to initiate KMC. The study established that, 69 (69%) of the participants provide information on KMC to family members and 31 (31%) confirmed that they do not provide information. If kangaroo care is to be implemented successfully, all those involved in the practice should be well informed. Most participants 59 (59%) indicated that they encourage mothers to practice KMC, while 41 (41%) of them do not encourage mothers to practice KMC. Sixty eight (68%) of the participants revealed that they assist mothers to practice Kangaroo Mother Care and 32 (32%) said that they do not assist mothers to practice KMC, while 77 (77%) alleged that mothers do not practice KMC and 33 (33%) related that the mothers do practice KMC. In this study, 35 (35%) participants said that KMC is effectively implemented in their facilities, while the rest 65 (65%) were of the opinion that KMC is not effectively implemented in their facilities.

5.2.5 Challenges experienced by HCPs in the implementation of KMC

In this study, 87 (87%) of participants stated that, the policy on KMC is not displayed in their facilities, while 13 (13%) agreed that the policy is displayed in their facilities. Without uniform knowledge and protocols within a facility, HCPs were uncomfortable to promote Kangaroo Mother Care (Bergh, Kerbal, Abwao, de-Graft Jonhson, Aliganyira, & Davy, 2014). Similarly, a study conducted by Onubogu and Okoh (2016) on the implementation of Kangaroo Mother Care by health workers in Nigeria also concluded that, 58.9% of health care workers believed, the reasons for not practicing KMC was a lack of policy and 41% felt that, there was inadequate place for the mothers to stay. Many guidelines on Kangaroo Mother Care practice have been published and each facility should consider staffing experience, and resource in the development of its institutional

guidelines. In the implementation of KMC practice, having written protocols would assist in standardizing the decision of who qualifies for the care, the place where it should be carried out, and the procedure to be followed during discharge. In this study, 80 (80%) of participants pointed out that there is no enough space in their facilities to accommodate mothers of low birth weight babies and 20 (20%) agreed that the space in their facilities is adequate to accommodate mothers.. No health care facility in the district has a special ward to accommodate mothers and their babies. Bergh, Banda, Lipato, Ngwira, Luhanga, and Ligowe (2012), were also of the opinion that, lack of private space for the mothers to perform kangaroo care and to remain in the hospital with their babies hinders the practice of KMC.

In this study, 57 (57%) participants agreed that staff shortage has negative effects on KMC and 43 (43%) disagreed. The results presented by the study conducted by Nuuyoma, Swart, and Ashipala (2017) to explore the perceptions regarding the feasibility of implementing Kangaroo Mother Care at the Tsumeb district hospital in Namibia are like those of this study as they identified the lack of staff as a barrier for implementing KMC. These findings disagree with the statement by the World Health Organization that, KMC practice requires less staff. The reality is that KMC is inexpensive, easy to implement, and can reduce the workload of HCPs. When it comes to religion and culture, 46 (46%) believed that they have a negative influence on KMC and 54 (54%) disagreed. This result is in contrast with that of the study done in Ghana by Hill, Tawiah-Agyemang, Mann, Okyere, and Kirkwood (2010) which revealed that traditional new-born practices such as bathing and wrapping infants soon after birth were the barrier to Kangaroo Mother Care implementation.

The medical effects of delivery for the mother, which include fatigue, depression, and postpartum pain, especially after caesarean section can reduce the uptake of KMC (Farrarero & Halfield, 2014). In this study, 70 (70%) of the participants believe that caesarean section negatively affects

the initiation of KMC, while 30 (30%) disagreed. Almost all participants, 90 (90%) indicated that they need support to implement KMC, whereas only 10 (10%) do not need support to implement KMC. This support can be in the form of on-the-job trainings and workshops for the staff, to keep them up-to-date with the practice.

5.3 Conclusions

The study revealed that most HCPs have not received training on KMC. Only 39% of health care professionals underwent training on KMC, while 61% never received training. However, most HCPs demonstrated knowledge and understanding of the Kangaroo Mother Care practice, which may be attributed to their long time of service and experience. It also emerged that, HCPs had some positive attitudes towards KMC. It further emerged that the lack of space to accommodate mothers and family members of LBW babies as well as the lack of policy and guidelines are the major obstacle to the successful implementation of Kangaroo Mother Care in the Keetmanshoop district.

5.4 Recommendations

Based on this study, the following recommendations appear to be appropriate for the improvement of the knowledge and understanding of the KMC practice and contributing to the development of programs and guidelines to ensure that KMC is successfully implemented.

5.4.1 Recommendations for the knowledge, attitudes, and practices of KMC

- There is a need for strengthening in-service education not only for HCPs based in health care facilities, but for community based health workers as well; including extension health workers and traditional birth attendants to provide information of the efficacy and beneficial effects of kangaroo care for infant and parents.

- During health education sessions, health care professionals including student nurses should stress the importance of KMC to all mothers attending antenatal and postnatal clinics and their partners should also be involved.
- Establishing a community-based program on kangaroo care may encourage community members to play a critical role in promoting Kangaroo Mother Care practice in the community. The program should be placed under the governor's office to ensure political involvement. Community midwives can play a role in training birth attendants and health extension workers on the implementation of KMC. These community health workers are the first contact persons between the community and the health services. Utilizing mothers who have given KMC to their infants can be very beneficial in promoting KMC and helping other mothers to provide KMC. The program should be monitored and evaluated to assess the progress of low birth weight babies after being discharged and to ensure their survival.

5.4.2 Recommendations for the practice of Kangaroo Mother Care among HCPs

- Health service managers should ensure that the staff attend on-the-job training sessions and workshops to keep them updated regarding the kangaroo care practice.
- The Ministry of Health and Social services should provide policies and guidelines on KMC in all health care facilities to provide guidance to HCPs for the successful implementation of KMC. It is important that, the policy is well explained to the HCPs.

5.4.3 Recommendations for challenges in implementing KMC

- To successfully implement kangaroo care, adequate space to accommodate parents of low birth weight babies should be made available. This can be achieved by establishing Kangaroo Mother Care wards/rooms in health care facilities in the district.

5.5 Further research

The researcher observed that only one study was done in Namibia regarding the perceptions of health workers on Kangaroo Mother Care, in Tsumeb, Oshikoto region. Therefore, further extensive studies need to be conducted to identify the gap in the practice of Kangaroo Mother Care to improve this very important practice in Namibia.

5.6 Summary

This chapter provided the discussion, conclusions, recommendations and study limitations. The study findings were discussed and compared with results of previous studies which were conducted globally about KAPs of Kangaroo Mother Care. Conclusions and recommendations provided in this chapter could be used by health care providers in the district and countrywide to improve the management of LBW infants, thereby reducing neonatal mortality.

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Annexure A: Ethical clearance from UNAM Post Graduate Research Committee

CENTRE FOR POSTGRADUATE STUDIES

University of Namibia, Private Bag 13301, Windhoek, Namibia
340 Mandume Ndemufayo Avenue, Pioneers Park
☎ +264 61 206 3275/4662; Fax +264 61 206 3290; URL: <http://www.unam.edu.na>



RESEARCH PERMISSION LETTER

Student Name: Helena Mhlope

Student number: 9416056

Programme: MPH

Approved research title: Knowledge, attitudes and practice of Kangaroo mother care among health care professionals at Keetmanshoop district hospital.

TO WHOM IT MAY CONCERN

I hereby confirm that the above mentioned student is registered at the University of Namibia for the programme indicated. The proposed study met all the requirements as stipulated in the University guidelines and has been approved by the relevant committees.

The proposal adheres to ethical principles as per attached Ethical Clearance Certificate. Permission is hereby granted to carry out the research as described in the approved proposal.

Best Regards

A handwritten signature in dark ink, appearing to read 'Marius Hedimbi', is written over a horizontal dashed line.

23/06/17

Name: Dr Marius Hedimbi

Date

Director: Centre for Postgraduate Studies

Tel: +264 61 2063275

E-mail: directorpgs@unam.na

Centre for Postgraduate Studies
Office of the Director
2017 -06- 23
University of Namibia
UNAM

Annexure B: Permission letter from the Ministry of Health and Social Services



REPUBLIC OF NAMIBIA

Ministry of Health and Social Services

Private Bag 13198
Windhoek
Namibia

Ministerial Building
Harvey Street
Windhoek

Tel: 061 – 203 2562
Fax: 061 – 222558
E-mail: hnangombe@gmail.com

OFFICE OF THE PERMANENT SECRETARY

Ref: 17/3/3 HM

Enquiries: Dr. H. Nangombe

Date: 29 August 2017

Ms. Helena N. Mhlope
PO Box 2048
Keetmanshoop

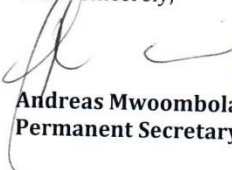
Dear Ms. Mhlope

Re: Knowledge, attitudes, and practices of kangaroo mother care among health care professionals in Keetmanshoop District

1. Reference is made to your application to conduct the above-mentioned study.
2. The proposal has been evaluated and found to have merit.
3. **Kindly be informed that permission to conduct the study has been granted under the following conditions:**
 - 3.1 The data to be collected must only be used for academic purpose;
 - 3.2 No other data should be collected other than the data stated in the proposal;
 - 3.3 Stipulated ethical considerations in the protocol related to the protection of Human Subjects should be observed and adhered to, any violation thereof will lead to termination of the study at any stage;

- 3.4 A quarterly report to be submitted to the Ministry's Research Unit;
- 3.5 Preliminary findings to be submitted upon completion of the study;
- 3.6 Final report to be submitted upon completion of the study;
- 3.7 Separate permission should be sought from the Ministry for the publication of the findings.

Yours sincerely,


Andreas Mwoombola
Permanent Secretary



"Health for All"

Annexure C: Permission letter from the Principal Medical Officer of Keetmanshoop district Hospital.



REPUBLIC OF NAMIBIA
Ministry of Health and Social Services

Private Bag 2101
Keetmanshoop State Hospital
Keetmanshoop
Namibia

Tel: 063 – 2209000
Fax: 063 - 223981

Enquiries: Dr H.K. Sabwa

Date: 1 September 2017

TO: Ms. Helena N Mhlope
P.O. Box 2048
Keetmanshoop

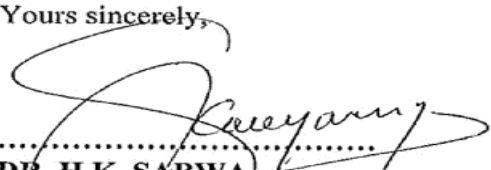
Dear Madam

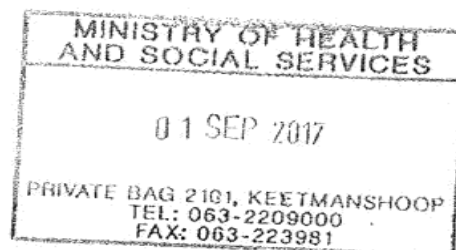
RE: KNOWLEDGE, ATTITUDES AND PRACTICES OF KANGAROO MOTHER HEALTH CARE

Your application to conduct the abovementioned research at Keetmanshoop district has been received and approved.

You are allowed to conduct your research from the 1 -30 of September 2017.

Yours sincerely,


.....
DR. H.K. SABWA
ACTING SENIOR MEDICAL OFFICER



Annexure D: Consent form

TITLE: KNOWLEDGE, ATTITUDE AND PRACTICE OF KANGAROO MOTHER CARE AMONG HEALTH CARE PROFESSIONALS IN KEETMANSHOOP DISTRICT, KARAS REGION, NAMIBIA

Researcher: Helena Ndahambelela Mhlope

Dear participant,

I am Helena Mhlope, a student at the University of Namibia. I am doing a master's degree in public health. I wish to conduct a research project entitled: "knowledge, attitude and practice of kangaroo mother care among health care professionals in Keetmanshoop district. The study will be conducted under the supervision and guidance of Dr. S. A. David and Dr. L. Nghipondoka-Lukolo, from the School of Nursing and Public Health, University of Namibia.

The objectives of this study are to assess the knowledge and attitudes of health care professionals (HCPs) regarding kangaroo mother care (KMC), assess the extent to which HCPs practice KMC in the care of low birth weight babies and to identify challenges in the implementation of KMC among HCPs.

Your participation will provide information required by decision makers to assist in this regard. Participation in this study will take approximately 25-30 minutes. The procedure includes responding to questions on demographic, knowledge and practices. Your participation in this study is voluntary and you have the right to withdraw at any time should you wish to do so.

While completing the questionnaire, the researcher will be available, in case you might need to ask questions. You will be expected to answer all questions. No names will be written on

questionnaires, codes will be used instead. Your identity will not be revealed during the study or when the study is being reported or published with the permission granted by the Ministry of Health and Social Services for the benefit of improving the management of low birth weight babies to reduce neonatal mortality. The researcher and the supervisors are the only people that will have access to the data collected.

The study focuses on Kangaroo mother care which is a practice used in the management of premature babies. The reason why you are among the study population is because, as a midwife, you are involved in the care of premature babies.

Should you agree to participate in this study, please sign your consent with full knowledge of the nature and purpose of the study.

If you have any questions or concerns about the study, feel free to contact Mrs Helena Mhlope at (063-223000), cell 0812723724 or E-mail hmhlope@unam.na, Main supervisor Dr. S. A. David E-mail sdavid@unam.na and Co-Supervisor: Dr. Linda Nghipondoka- Lukolo llukolo@unam.na Faculty of Health Science, School of Nursing and Public Health, at the University of Namibia.

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims or rights because of your participation in this research study.

Should you agree to participate, please sign the consent provided. If you have any question that need clarification you are welcome to contact me.

I.....

Agree to participate in this research project on my own will.

Signed at

.....

Participant signature

.....

Date

Annexure E: Questionnaire

QUESTIONNAIRE

Title: Knowledge, attitude, and practice of kangaroo mother care among health care professionals at Keetmanshoop district hospital

Compiled By: H. N Mhlope

Student No: 9416056

Course: Master of Public Health

Institution: University of Namibia (UNAM)

Qualifications: (1) Diploma in Nursing (General, Community, Psychiatry) and Midwifery

Science (UNAM)

(2) Diploma in Clinical Ophthalmology (Lilongwe College of Health Sciences)

Malawi

(3) Bachelor's Degree in Nursing Education and community health (UNAM)

Main Supervisor: Dr. Aishe David (Senior Lecturer Nursing Department) UNAM

Co- Supervisor: Dr. Linda Nghipondoka – Lukolo (Senior Lecturer) UNAM

Dear participants

The aim of this questionnaire is to assess the knowledge, attitudes, and practices of kangaroo mother care among health care professionals in Keetmanshoop district.

The objective of this study is to:

- Assess the knowledge and attitudes of HCPs towards KMC
- Assess the practice of KMC among HCPs
- Identify challenges in the implementation of KMC among HCPs.

INSTRUCTIONS:

- (1) Please complete the questionnaire by making an X in the applicable box where applicable.
- (2) Answer all questions in Section A, B, C, and D
- (3) Be open, honest and objective in your answers, as this will determine the results of this study and the recommendations resulting from this research study.
- (4) Please do not write your name on the questionnaire to guarantee anonymity.

Your participation in this research study is highly appreciated.

Yours,

Helena Mhlope

SECTION A

Demographic characteristics of HCPs: Make a cross in the appropriate box:

1. Sex

Male	
Female	

2. Age

20 – 30 yrs	
31 – 40 yrs	
41 – 50 yrs	
51 – 60 yrs	

3. Marital status

Single	
Married	
Widow/ Widower	
Divorced	

4. Years of experience as a Nurse/doctor

0 -4	
5- 9	
10 above	

5. Job title/ Rank

Doctor	
RN Midwife/Accouchier	
EN Midwife/Accouchier	

6. Highest qualification obtained

Certificate	
Diploma	
Degree	
Master's degree	
Doctorate	

SECTION B

KNOWLEDGE OF HCPS ABOUT KMC

Answer yes/no to the following questions

7. Do you know about the policy of the MOHSS on kangaroo mother care?

Yes	
No	

8. Have you ever received training on kangaroo mother care?

Yes	
No	

Indicate whether you agree, strongly agree, not sure, disagree, or strongly disagree

<u>Item</u>	Agree	Strongly agree	Not sure	Disagree	Strongly disagree
9.Low birth Weight babies need KMC the most					
10. KMC should be given while transporting the baby to a higher center to prevent hypothermia					
11. KMC can be given at home.					
12. KMC can be provided by mother or any family member					

ATTITUDES OF HCPs TOWARDS KMC

Indicate whether you agree, strongly agree, not sure, disagree, or strongly disagree

ITEM	AGREE	STRONGLY	AGREE	NOT SURE	DISAGREE	STRONGLY	DISAGREE
13. KMC promotes bonding between mother and baby							
14. KMC improves the mother's confidence in handling her baby							
15. KMC promotes breast feeding							
16. KMC promotes mental development of premature babies.							
17. Both parents should be involved in kangaroo care.							
18. HCPs should facilitate kangaroo care							
19. Facilitating kangaroo care is a burden to HCPs							
20. Babies who are given kangaroo care sleep deeply and wake up less often							
21. Incubator care stabilizes baby's temperature than KMC							
22. KMC prevents postpartum depression							
23. Babies are who given kangaroo care cry less							
24. KMC promotes baby's growth and development							
25. KMC results in reduced infection in the baby							
26. KMC leads to early discharge							
27. KMC should be started immediately after birth							

PRACTICE OF KMC BY HCPs

Answer Yes or No to the following questions

28. Do you support mothers to initiate KMC?

Yes	
No	

29. Do you provide information to the parents/family members on kangaroo mother care?

Yes	
No	

30. Do you encourage mothers to practice KMC?

Yes	
No	

31. Do you always assist mothers to practice KMC?

Yes	
No	

32. Do mothers of low birth weight babies practice KMC continuously?

Yes	
No	

33. In your view, has the practice of kangaroo mother care effectively implemented in facility?

Yes	
No	

CHALLENGES EXPERIENCED BY HCPs IN IMPLEMENTING KMC

34. Is the Ministry's policy on kangaroo mother care displayed in your facility?

Yes	
No	

35. Is there adequate space in the ward to accommodate mothers of low birth weight babies?

Yes	
No	

36. Does staff shortage have any effect on KMC?

Yes	
No	

37. Do religion and culture have a negative influence on KMC practice?

Yes	
No	

38. Does Caesarian section negatively affects the initiation of KMC

Yes	
No	

39. Do you need support to implement KMC?

Yes	
No	